

# Cell and Animal Experiments

|                        |  |        |        |            |         |          |        |
|------------------------|--|--------|--------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |        | Grades     | 1 grade | Semester | Spring |
| Subject                | Required   | Mehods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU   |        |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, YAMASAKI RYOUTA, TAKEUCHI HIROSHI, YOSHINO KENICHI, ARIYOSHI WATARU, SETA YUUJI, YADA NAOMI, MATSUBARA TAKUMA, TOYONO TAKASHI, NAKATOMI CHIHIRO |        |        |            |         |          |        |

## Course Description

This course teaches the fundamental aspects of cell and animal experimentation.

## Attainment Objectives

By gaining an overview of basic research using cells and animals, students will be able to conduct experiments in practice based on theoretical principles.

## Grading Criteria and Method of Evaluation

| Evaluation item      | Ratio |
|----------------------|-------|
| Moodle Online Tests  | 66%   |
| Lecture Video Survey | 34%   |

## Etc

Since questions related to the course content should be shared among participants and instructors, please post them as Class-wide questions in the designated Teams channel. Be sure to "mention" the assigned instructor using "@" when posting. For personal questions, such as those regarding grades, please contact the course coordinator via Teams chat as a Private question, rather than messaging the instructor of each lecture video.

## Study Method

| Lecture | Contents          | Methods | Instructor                          | before-and-after Le   | Lecture rooms |
|---------|-------------------|---------|-------------------------------------|---|---------------|
| 1       | Culture           | Lecture | YAMASAKI RYOUTA<br>TAKEUCHI HIROSHI | Bacteriology<br>Experiments and<br>Bacterial<br>Cultures, Cell<br>Culturing | Moodle        |
| 2       | Microbial Testing | Lecture | YAMASAKI RYOUTA<br>ARIYOSHI WATARU  | Bacteria counts<br>and Antibacterial<br>test, Examination<br>of microbiota  | Moodle        |

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| Lecture | Contents                            | Methods | Instructor                                    | before-and-after Le  | Lecture rooms |
|---------|-------------------------------------|---------|---|--|---------------|
| 3       | Laboratory Animals                  | Lecture | ONO KENTAROU<br>YOSHINO KENICHI               | Management and Care of Experimental Animals, Dissection of mice, Anesthesia for Experimental Animals | Moodle        |
| 4       | Tissue Fixation and Sampling        | Lecture | SETA YUUJI                                    | Tissue Fixation Methods, Perfusion Fixation and Sample Extraction                                    | Moodle        |
| 5       | Tissue Section Preparation          | Lecture | YADA NAOMI<br>SETA YUUJI                      | Sectioning of Paraffin-embedded tissue and HE Staining, Preparation of Frozen Sections               | Moodle        |
| 6       | Microscopy                          | Lecture | SETA YUUJI<br>ONO KENTAROU<br>YOSHINO KENICHI | Use of Light Microscopes, Electron Microscopes   | Moodle        |
| 7       | Antibody-based Experimental Methods | Lecture | SETA YUUJI<br>ARIYOSHI WATARU                 | Immunostaining, ELISA and Western blotting   | Moodle        |
| 8       | Molecular Biological experiments    | Lecture | MATSUBARA TAKUMA<br>TOYONO TAKASHI            | RT-PCR and Electrophoresis, Quantitative PCR, Reporter and Gel Shift Assays                          | Moodle        |
| 9       | Genetic Engineering                 | Lecture | MATSUBARA TAKUMA                              | Microbial Genetic Engineering, Genetic Modification  | Moodle        |
| 10      | Disease Model Animals               | Lecture | MATSUBARA TAKUMA<br>ONO KENTAROU              | Systemic Disease Models, Dental Disease Models   | Moodle        |

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| Subject                | Required   | Methods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU   |         |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, YAMASAKI RYOUTA, TAKEUCHI HIROSHI, YOSHINO KENICHI, ARIYOSHI WATARU, SETA YUUJI, YADA NAOMI, MATSUBARA TAKUMA, TOYONO TAKASHI, NAKATOMI CHIHIRO |         |        |            |         |          |        |

| Lecture | Contents                           | Methods | Instructor                       | before-and-after Le  | Lecture rooms |
|---------|------------------------------------|---------|----------------------------------|--|---------------|
| 11      | Cell Physiology                    | Lecture | ONO KENTAROU                     | Isolation of Primary Cells, Ion Imaging Techniques, Patch Clamp Technique                  | Moodle        |
| 12      | Drug Administration                | Lecture | ONO KENTAROU                     | Oral gavage, Intraperitoneal Injection, Intravenous Injection                              | Moodle        |
| 13      | Blood Sampling and Pain Evaluation | Lecture | ONO KENTAROU<br>NAKATOMI CHIHIRO | Blood Sampling from Experimental Animals, Methods for Evaluation of Pain-related Behaviors | Moodle        |
| 14      | General Behavioral Assessments     | Lecture | NAKATOMI CHIHIRO                 | Methods for Assessing Anxiety-related Behaviours, Conditioned taste avasion                | Moodle        |
| 15      | Optogenetics and Chemogenetics     | Lecture | NAKATOMI CHIHIRO                 | Optogenetics, Chemogenetics  | Moodle        |

# Human Research and Statistical Analysis

|                        |  |        |        |            |         |          |        |
|------------------------|--|--------|--------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |        | Grades     | 1 grade | Semester | Spring |
| Subject                | Required   | Mehods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU   |        |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, ANSAI TOSHIHIRO, MASAKI CHIHIRO, NAKATOMI CHIHIRO, ONO KENTAROU, ODA MASAFUMI, ONIZUKA SATORU |        |        |            |         |          |        |

## Course Description

This course covers the fundamental principles of clinical research and statistical analysis. In addition, academic rhetoric will be taught.

## Attainment Objectives

Students will learn to understand the key considerations for human-based surveys, questionnaires, and sample collection, enabling them to carry out clinical research in practice. In addition, they will develop the ability to apply appropriate statistical analyses to the experimental results. Through the study of academic rhetoric, students will learn to appropriately compose scholarly papers.

## Grading Criteria and Method of Evaluation

| Evaluation item      | Ratio |
|----------------------|-------|
| Moodle Online Tests  | 61%   |
| Lecture Video Survey | 39%   |

## Etc

Since questions related to the course content should be shared among participants and instructors, please post them as Class-wide questions in the designated Teams channel. Be sure to "mention" the assigned instructor using "@" when posting. For personal questions, such as those regarding grades, please contact the course coordinator via Teams chat as a Private question, rather than messaging the instructor of each lecture video.

## Study Method

| Lecture | Contents                   | Methods | Instructor                        | before-and-after Le   | Lecture rooms |
|---------|----------------------------|---------|-----------------------------------|---|---------------|
| 1       | Types of Clinical Research | Lecture | ANSAI TOSHIHIRO<br>MASAKI CHIHIRO | Field Survey Flow and Protocol, Intervention Studies, Case Report | Moodle        |

# Human Research and Statistical Analysis

|                        |   |         |        |            |         |          |        |
|------------------------|---|---------|--------|------------|---------|----------|--------|
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| Subject                | Required  | Methods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU  |         |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, ANSAI TOSHIHIRO, MASAKI CHIHIRO, NAKATOMI CHIHIRO, ONO KENTAROU, ODA MASA FUMI, ONIZUKA SATORU |         |        |            |         |          |        |

| Lecture | Contents                            | Methods | Instructor                          | before-and-after Le  | Lecture rooms |
|---------|-------------------------------------|---------|-------------------------------------|--|---------------|
| 2       | Data collections                    | Lecture | MASAKI CHIHIRO<br>ANSAI TOSHIHIRO   | Clinical examination, How to Conduct Clinical Research Using Clinical Samples, Basic of Oral Examination Methods | Moodle        |
| 3       | Questionnaires and Data Managements | Lecture | ANSAI TOSHIHIRO<br>NAKATOMI CHIHIRO | How to Conduct a Questionnaire Survey, Psychological and Sensory Tests, Management and Security                  | Moodle        |
| 4       | Human Bacterial Examination         | Lecture | ARIYOSHI WATARU                     | Bacteriological Examination, Bacterial flora (Metagenomic) analysis, Evaluation of Bacterial Flora Analysis      | Moodle        |
| 5       | Imaging Diagnostics                 | Lecture | ODA MASA FUMI                       | Sialography, CT: Computed Tomography, fMRI: functional magnetic resonance imaging                                | Moodle        |
| 6       | Statistical Analysis I              | Lecture | ONO KENTAROU                        | Statistical Hypothesis, Sampling Distribution, Type I and Type II Errors   | Moodle        |
| 7       | Statistical Analysis II             | Lecture | ONO KENTAROU                        | One-Sample Test, Two-Sample Test, Multiple Sample Test   | Moodle        |
| 8       | Statistical Analysis III            | Lecture | ONO KENTAROU                        | Proportion Test, Column Chart  | Moodle        |
| 9       | Statistical Analysis IV             | Lecture | ONO KENTAROU                        | Correlation Analysis, Regression Analysis  | Moodle        |

# Human Research and Statistical Analysis

|                        |  |         |        |            |         |          |        |
|------------------------|--|---------|--------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |        | Grades     | 1 grade | Semester | Spring |
| Subject                | Required   | Methods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU   |         |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, ANSAI TOSHIHIRO, MASAKI CHIHIRO, NAKATOMI CHIHIRO, ONO KENTAROU, ODA MASAFUMI, ONIZUKA SATORU |         |        |            |         |          |        |

| Lecture | Contents                | Methods | Instructor      | before-and-after Le   | Lecture rooms |
|---------|-------------------------|---------|-----------------|---|---------------|
| 10      | Statistical Analysis V  | Lecture | ANSAI TOSHIHIRO | Fisher and Bayesian Statistics, Meta-Analysis and Systematic Review                         | Moodle        |
| 11      | Statistical Analysis VI | Lecture | ONIZUKA SATORU  | Cluster Analysis, Gene Ontology (GO) Analysis, Haplotypes                                   | Moodle        |
| 12      | Academic Rhetoric I     | Lecture | ANSAI TOSHIHIRO | Purpose of Writing a Paper, Minimum Requirement of Writing a Paper, Structure of Manuscript | Moodle        |
| 13      | Academic Rhetoric II    | Lecture | ANSAI TOSHIHIRO | Paragraph Content: What and Where to write, Key Points for Creating Charts and Figures      | Moodle        |
| 14      | Academic Rhetoric III   | Lecture | ANSAI TOSHIHIRO | Literature Management, Where to Submit Your Paper   | Moodle        |
| 15      | Academic Rhetoric IV    | Lecture | ANSAI TOSHIHIRO | Authorship and Publishing Ethics, Response to Peer Review Results                           | Moodle        |

# Seminar in Biomaterials (Basic Course)

|                        |                               |        |                    |            |            |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |                    |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this course, you will learn basic knowledge, handling and experimental test method of dental materials in order to research organic material, metal material and inorganic material. For this purpose, we will teach you the knowledge and skills with regards of denture base resin, composite resin, gold alloy, titanium alloy, porcelain, and fine ceramics in response to your research theme.

## Attainment Objectives

You should achieve following assignments; Knowledge and handling of organic material |Casting of dental alloys, especially gold alloys Knowledge and handling of dental porcelain and fine ceramics Material test methods Preparation of test piece and practice of three point loading test Preparation of test piece and practice of shear test Preparation of test piece and practice of bonding test Using casting machine in response to dental alloy Knowledge and handling of component analysis

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| B               | 歯科材料と歯科医療機器/歯科用材料と歯科用機器に必要な知識を修得し、医療の提供や発展に必要な考え方を身に付ける。 |
| B-1-1           | 材料(生体組織を含む)の物理的(光学的、機械的性質を含む)性質を理解している。                  |
| B-1-2           | 材料の化学的性質を理解している。   |
| B-1-3           | 材料の生物学的性質(生体活性、安全性)を理解している。                              |
| B-2-1           | 成形修復・歯冠修復用材料の種類、成分、特性、用途及び操作方法を理解している。                   |
| B-2-2           | 義歯用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-3           | 接着用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-4           | 歯科矯正用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-5           | 歯内療法用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-6           | 口腔インプラント、口腔外科、歯周治療用材料の種類、成分、特性、用途及び操作方法を理解している。          |
| B-3-1           | 歯科用材料の成形、加工(切削、焼結、重合、鋳造、溶着等)の原理を理解している。                  |
| B-3-2           | 歯科用機器の種類、構成、原理、特性及び使用方法を理解している。                          |
| B-3-3           | 歯科用検査装置の種類、構成、原理、特性及び使用方法を理解している。                        |
| B-3-4           | 成形・加工用機器(デジタル成形加工を含む)の種類、構成、原理、特性及び使用方法を理解している。          |

## Reference Books

| Title              | Author | Publisher |
|--------------------|--------|-----------|
| Related text books |        |           |

# Seminar in Biomaterials (Basic Course)

|                        |                               |         |                    |            |            |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |         |                    |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI, NAGAMATSU YUKI |         |                    |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item                 | Ratio |
|---------------------------------|-------|
| contents or the research report | 100%  |

## Study Method

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le | Lecture rooms |
|---------|---|----------|---------------------------------|---------------------|---------------|
| 1       | Orientation   | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 2       | Impression material   | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 3       | Denture base resin  | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 4       | Composite resin   | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 5       | Dental noble metal alloy  | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 6       | Dental base metal alloy   | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 7       | Dental porcelain  | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 8       | Dental fine ceramics  | lecture  | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 9       | Elastic and permanent strain of impression materials                                      | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 10      | Transverse strength of dental resins  | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 11      | Bond strength of composite resins   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 12      | Fabrication of wax pattern for gold alloy and casting using centrifugal casting machine   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 13      | Fabrication of wax pattern for titanium alloy and casting using argon arc casting machine | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |
| 14      | Shear strength test of dental porcelain and fine ceramics                                 | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |

2025年度

subject code:211011

# Seminar in Biomaterials (Basic Course)

|                        |                               |         |                    |            |            |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |         |                    |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |         |                    |            |            |          |        |

| Lecture | Contents                | Methods  | Instructor                      | before-and-after Le         | Lecture rooms |
|---------|-------------------------|----------|---------------------------------|-----------------------------|---------------|
| 15      | Research report meeting | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Preparation of presentation | その他           |

# Seminar in Biomaterials (Advanced Course)

|                        |                               |        |         |            |              |          |        |
|------------------------|-------------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |              |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |              |          |        |

## Course Description

【Language】 English and Japanese The dimensional accuracy and surface property of the working cast significantly affect the fitness of denture base or restorations. In the present course, you will study the effect of how to use hydrocolloid impression material on the various properties of the working cast.

## Attainment Objectives

You should achieve following assignments; Gathering of information of various types of impression material and cast material Learning the principles and using of the method of measurement equipment that is required for the analysis Fabrication of test specimens and operating measurement equipment in the preliminary experiment Calculation of the data obtained in the experiment and graphing and presentation

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| B               | 歯科材料と歯科医療機器/歯科用材料と歯科用機器に必要な知識を修得し、医療の提供や発展に必要な考え方を身に付ける。 |
| B-1-1           | 材料(生体組織を含む)の物理的(光学的、機械的性質を含む)性質を理解している。                  |
| B-1-2           | 材料の化学的性質を理解している。   |
| B-1-3           | 材料の生物学的性質(生体活性、安全性)を理解している。                              |
| B-2-1           | 成形修復・歯冠修復用材料の種類、成分、特性、用途及び操作方法を理解している。                   |
| B-2-2           | 義歯用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-3           | 接着用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-4           | 歯科矯正用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-5           | 歯内療法用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-6           | 口腔インプラント、口腔外科、歯周治療用材料の種類、成分、特性、用途及び操作方法を理解している。          |
| B-3-1           | 歯科用材料の成形、加工(切削、焼結、重合、鋳造、溶着等)の原理を理解している。                  |
| B-3-2           | 歯科用機器の種類、構成、原理、特性及び使用方法を理解している。                          |
| B-3-3           | 歯科用検査装置の種類、構成、原理、特性及び使用方法を理解している。                        |
| B-3-4           | 成形・加工用機器(デジタル成形加工を含む)の種類、構成、原理、特性及び使用方法を理解している。          |

## Reference Books

| Title                          | Author | Publisher |
|--------------------------------|--------|-----------|
| Related text books and papers. |        |           |

# Seminar in Biomaterials (Advanced Course)

|                        |                               |         |         |            |              |          |        |
|------------------------|-------------------------------|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |         | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |         |         |            |              |          |        |
| Instructor(s)          | IKEDA HIROSHI, NAGAMATSU YUKI |         |         |            |              |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item                         | Ratio |
|---|-------|
| contents of the research report meeting | 100%  |

## Study Method

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le         | Lecture rooms |
|---------|--|----------|---------------------------------|-----------------------------|---------------|
| 1       | Fabrication of test specimens I<br>Immediately after taking impression   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 2       | Fabrication of test specimens II<br>After disinfection of the impression   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 3       | Fabrication of test specimens III<br>Under a variety of<br>Fabrication of test specimens III<br>after leaving impression | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 4       | Fabrication of test specimens IV<br>Under a variety of conditions  | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 5,6     | Measurement of the dimensional precision of cast specimens   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 7~9     | Measurement of the surface roughness of cast specimens   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 10      | Measurement of the shape of cast specimens   | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 11,12   | Statistical analysis and graphs of all data  | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 13,14   | Creating a presentation  | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture           | その他           |
| 15      | Research report meeting  | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Preparation of presentation | その他           |

# Dental Biomaterials

|                        |                               |        |         |            |            |          |        |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |            |          |        |

## Course Description

Presentation, reading, introduction, and discussion using research papers for biomaterials or dental materials.

## Attainment Objectives

1. Learn scientific English and understand the differences between Japanese and English expressions.
2. Learn and practice research methods and experimental methods for biomaterials.
3. Learn and practice the latest trends in dental materials from a clinical standpoint.

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| B               | 歯科材料と歯科医療機器/歯科用材料と歯科用機器に必要な知識を修得し、医療の提供や発展に必要な考え方を身に付ける。 |
| B-1-1           | 材料(生体組織を含む)の物理的(光学的、機械的性質を含む)性質を理解している。                  |
| B-1-2           | 材料の化学的性質を理解している。   |
| B-1-3           | 材料の生物学的性質(生体活性、安全性)を理解している。                              |
| B-2-1           | 成形修復・歯冠修復用材料の種類、成分、特性、用途及び操作方法を理解している。                   |
| B-2-2           | 義歯用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-3           | 接着用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-4           | 歯科矯正用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-5           | 歯内療法用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-6           | 口腔インプラント、口腔外科、歯周治療用材料の種類、成分、特性、用途及び操作方法を理解している。          |
| B-3-1           | 歯科用材料の成形、加工(切削、焼結、重合、鋳造、溶着等)の原理を理解している。                  |
| B-3-2           | 歯科用機器の種類、構成、原理、特性及び使用方法を理解している。                          |
| B-3-3           | 歯科用検査装置の種類、構成、原理、特性及び使用方法を理解している。                        |
| B-3-4           | 成形・加工用機器(デジタル成形加工を含む)の種類、構成、原理、特性及び使用方法を理解している。          |

## Textbooks

| Title                                | Author | Publisher       |
|--------------------------------------|--------|-----------------|
| Biomaterials, Dental Materials, etc. |        | online journals |

2025年度

subject code:211013

# Dental Biomaterials

|                        |                               |        |         |            |            |          |        |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |            |          |        |
|                        |                               |        |         |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item               | Ratio |
|-------------------------------|-------|
| contents of the presentations | 100%  |

## Study Method

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le | Lecture rooms |
|---------|---|----------|---------------------------------|---------------------|---------------|
| 1 ~ 15  | Gathering information from the English research papers<br>Training of English thinking of clinical trends in the dental materials | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lecture   | その他           |

# Advanced Biomaterials

|                        |                               |        |         |            |            |          |        |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |            |          |        |

## Course Description

Select one of the research themes below.

1 Adhesion 2 Composites 3 Ceramics 4 Biomimics 5 CAD/CAM 6 Antibacterial dental materials 7 Functional water 8 Biocompatibility

Search and read the literature related to that topic. Understand the research background and the current state of the field, summarize what you have learned, and present. Receive advice from professors on the topic. A research plan is constructed based on the advice.

## Attainment Objectives

You should achieve the following assignments; 1 Reading English literature. 2 Explaining the history and current status of the topic. 3 Critical evaluation of literature. 4 Writing an introduction. 5 Drawing your own research plan with references.

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| B               | 歯科材料と歯科医療機器/歯科用材料と歯科用機器に必要な知識を修得し、医療の提供や発展に必要な考え方を身に付ける。 |
| B-1-1           | 材料(生体組織を含む)の物理的(光学的、機械的性質を含む)性質を理解している。                  |
| B-1-2           | 材料の化学的性質を理解している。   |
| B-1-3           | 材料の生物学的性質(生体活性、安全性)を理解している。                              |
| B-2-1           | 成形修復・歯冠修復用材料の種類、成分、特性、用途及び操作方法を理解している。                   |
| B-2-2           | 義歯用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-3           | 接着用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-4           | 歯科矯正用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-5           | 歯内療法用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-6           | 口腔インプラント、口腔外科、歯周治療用材料の種類、成分、特性、用途及び操作方法を理解している。          |
| B-3-1           | 歯科用材料の成形、加工(切削、焼結、重合、鋳造、溶着等)の原理を理解している。                  |
| B-3-2           | 歯科用機器の種類、構成、原理、特性及び使用方法を理解している。                          |
| B-3-3           | 歯科用検査装置の種類、構成、原理、特性及び使用方法を理解している。                        |
| B-3-4           | 成形・加工用機器(デジタル成形加工を含む)の種類、構成、原理、特性及び使用方法を理解している。          |

## Textbooks

| Title               | Author | Publisher |
|---------------------|--------|-----------|
| Select it yourself. |        |           |

2025年度

subject code:211014

# Advanced Biomaterials

|                        |                               |        |         |            |              |          |        |
|------------------------|-------------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |              |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |              |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item                 | Ratio |
|---------------------------------|-------|
| contents of the research report | 100%  |

## Study Method

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le  | Lecture rooms |
|---------|--|----------|---------------------------------|--|---------------|
| 1 ~ 15  | Gathering articless related to your own research subject, read them, compile them in a prescribed format, and present them. Response to questions. Correct the indicated matters and complete the document.s | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Preparation and review of practices<br>(Preparation of handouts and correction of matters pointed out) | その他           |

# Advanced Biomaterials

|                        |                               |        |         |            |            |          |        |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |            |          |        |

## Course Description

Learn the latest information and future prospects from the following research results, established by the faculty members. 1 Dental adhesion 2 Bactericidal and antimicrobial properties of dental materials 3 Ceramics and composite materials 4 Digital dentistry

## Attainment Objectives

1 Explaining the latest knowledge of the field. 2 Developing a new research plan in the field. 3 Explaining the relationship between the basic knowledge of the field and clinical practice.

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| B               | 歯科材料と歯科医療機器/歯科用材料と歯科用機器に必要な知識を修得し、医療の提供や発展に必要な考え方を身に付ける。 |
| B-1-1           | 材料(生体組織を含む)の物理的(光学的、機械的性質を含む)性質を理解している。                  |
| B-1-2           | 材料の化学的性質を理解している。   |
| B-1-3           | 材料の生物学的性質(生体活性、安全性)を理解している。                              |
| B-2-1           | 成形修復・歯冠修復用材料の種類、成分、特性、用途及び操作方法を理解している。                   |
| B-2-2           | 義歯用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-3           | 接着用材料の種類、成分、特性、用途及び操作方法を理解している。                          |
| B-2-4           | 歯科矯正用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-5           | 歯内療法用材料の種類、成分、特性、用途及び操作方法を理解している。                        |
| B-2-6           | 口腔インプラント、口腔外科、歯周治療用材料の種類、成分、特性、用途及び操作方法を理解している。          |
| B-3-1           | 歯科用材料の成形、加工(切削、焼結、重合、鋳造、溶着等)の原理を理解している。                  |
| B-3-2           | 歯科用機器の種類、構成、原理、特性及び使用方法を理解している。                          |
| B-3-3           | 歯科用検査装置の種類、構成、原理、特性及び使用方法を理解している。                        |
| B-3-4           | 成形・加工用機器(デジタル成形加工を含む)の種類、構成、原理、特性及び使用方法を理解している。          |

## Textbooks

| Title                                  | Author | Publisher |
|--|--------|-----------|
| The faculty member in charge prepares. |        |           |

2025年度

subject code:211015

# Advanced Biomaterials

|                        |                               |        |         |            |            |          |        |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | IKEDA HIROSHI                 |        |         |            |            |          |        |
| Instructor(s)          | IKEDA HIROSHI ,NAGAMATSU YUKI |        |         |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item                 | Ratio |
|---------------------------------|-------|
| contents of the research report | 100%  |

## Study Method

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le             | Lecture rooms |
|---------|--|----------|---------------------------------|---------------------------------|---------------|
| 1~15    | Gathering information from faculty lecture<br>Learning presentation method | Practice | IKEDA HIROSHI<br>NAGAMATSU YUKI | Review of lectures and practice | その他           |

# Comprehensive dentistry (advanced course)

|                        |                                 |        |          |            |              |          |        |
|------------------------|---------------------------------|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |          | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |          |            |              |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI ,ONIDUKA CHIE |        |          |            |              |          |        |

## Course Description

To provide patients with reassuring and safe comprehensive dental care, we reflect upon and review the knowledge, skills, and attitudes acquired through undergraduate education and clinical training. In addition, we put these elements into practice and master them in clinical settings. Regarding dental treatment skills, we revisit and apply the challenges outlined in the Dental Education Model Core Curriculum (Revised in 2022) under "E. Examination, Diagnosis, and Treatment Skills", specifically addressing " a. Challenges to be experienced firsthand in patient care" and " b. Challenges where firsthand experience is expected in patient care but can be supplemented through simulations in challenging situations", as well as " . Important challenges where experience is desirable".

## Attainment Objectives

The goals of this course are to

- Acquire the knowledge, skills, and attitudes necessary for comprehensive dental care.
- Obtain the knowledge and skills required for primary care.
- Develop the ability to formulate comprehensive treatment plans.
- Enhance awareness of team-based healthcare.

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Essential handbook for dental resident,                 |        |           |
| Real medical interview matched with the patients' needs |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|--|-------|
| The minimum requirements are to submit reports and to present cases. | 100%  |

# Comprehensive dentistry (advanced course)

|                        |                                 |         |          |            |              |          |        |
|------------------------|---------------------------------|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |          | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | NAGAMATSU HIROSHI               |         |          |            |              |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |         |          |            |              |          |        |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture | Contents  | Methods  | Instructor                        | before-and-after Le                              | Lecture rooms |
|---------|---|----------|-----------------------------------|--|---------------|
|         |   |          | NAGAMATSU HIROSHI<br>ONIDUKA CHIE |  |               |
| 1~4     | Guidance,<br>Medical interview1<br>Good patient-medical<br>relationship                       | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Good<br>patient-medical<br>relationship          |               |
| 5~8     | Medical interview2<br>Medical interviews for<br>patients who have difficulty<br>communicating | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Patients who have<br>difficulty<br>communicating |               |
| 9~12    | Periodontal treatment   | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | -  |               |
| 13~17   | Endodontic treatment  | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | microscope                                       |               |
| 18~21   | Endodontic treatment  | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Minimal<br>Intervention                          |               |
| 22~26   | Dental crown treatment  | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Clinical dental<br>technique                     |               |
| 27~31   | Fixed prosthetic treatment for<br>the missing teeth   | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Fixed prosthetics                                |               |
| 32~36   | Removable prosthetic treatment<br>for the missing teeth                                       | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Partial denture                                  |               |
| 37~40   | Orthodontic treatment   | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | -  |               |

2025年度

subject code:211022

# Comprehensive dentistry (advanced course)

|                        |                                 |         |          |            |              |          |        |  |
|------------------------|---------------------------------|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry        |         |          | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                          | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | NAGAMATSU HIROSHI               |         |          |            |              |          |        |  |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |         |          |            |              |          |        |  |

| Lecture | Contents                             | Methods  | Instructor                        | before-and-after Learning  | Lecture rooms |
|---------|--------------------------------------|----------|-----------------------------------|--|---------------|
| 41-44   | Team approach treatment              | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Multidisciplinary collaboration  |               |
| 45 ~ 46 | Application of the explanatory model | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | LEARN's approach   |               |
| 47 ~ 48 | Occlusal development                 | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Occlusal development   |               |
| 41-44   | Infection control                    | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | <ul style="list-style-type: none"> <li>Standard precaution</li> <li>COVID19</li> </ul> |               |
| 51-52   | Medical safety management            | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Incident report  |               |
| 53-57   | Comprehensive dentistry              | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Comprehensive treatment plan   |               |
| 58-60   | Oral presentation                    | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Utilization of presentation software   |               |

# Anatomy Practice (Basic course)

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                                  |         | Grades             | 1~2 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | SETA YUUJI  |         |                    |            |          |         |   |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |                    |            |          |         |   |

## Course Description

【Language】English and Japanese This course deals with the basis of fundamental morphological analysis. It also enhances the development of students' skill in carrying out a morphological experiment.

## Attainment Objectives

The goals of this course are to (1) be able to understand morphological analysis, (2) be able to carry out cell culture (3) be able to prepare tissue section (4) be able to carry out immunohistochemistry.

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| Usual performance score             | 10%   |
| Experimental performance in the lab | 90%   |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods             | Instructor  | before-and-after Le | Lecture rooms |
|---------|---|---------------------|---|---------------------|---------------|
|         |   |                     | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE |                     |               |
| 1       | Introduction<br>What is morphological analysis. | Lecture             | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 2,3     | Cell culture (1): prepare culture medium        | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 4,5     | Cell culture (2): cell culture method           | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |

2025年度

subject code:211023

# Anatomy Practice (Basic course)

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                                  |         | Grades             | 1~2 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | SETA YUUJI  |         |                    |            |          |         |   |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |                    |            |          |         |   |

| Lecture | Contents   | Methods             | Instructor  | before-and-after Le | Lecture rooms |
|---------|--|---------------------|---|---------------------|---------------|
| 6,7     | Preparing method of tissue section (1): Fixation                               | LecturePracti<br>ce | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 8,9     | Preparing method of tissue section (2): Sectioning tissue using frozen block   | LecturePracti<br>ce | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 10,11   | Preparing method of tissue section (3): Sectioning tissue using paraffin block | LecturePracti<br>ce | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 12,13   | Immunohistochemistry (1): Detection target protein in section.                 | LecturePracti<br>ce | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 14,15   | Immunohistochemistry (2): Detection target protein in section.                 | LecturePracti<br>ce | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |

# Anatomy Practice (Advanced course)

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                  |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SETA YUUJI  |         |                    |            |              |          |        |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |                    |            |              |          |        |

## Course Description

【Language】 English and Japanese This course deals with the basis of fundamental molecular biological analysis. It also enhances the development of students' skill in carrying out molecular biological experiment.

## Attainment Objectives

The goals of this course are to (1) be able to understand molecular biological analysis, (2) be able to carry out PCR cloning (3) be able to carry out transfection.

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| Usual performance score             | 10%   |
| Experimental performance in the lab | 90%   |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents   | Methods             | Instructor  | before-and-after Le | Lecture rooms |
|---------|--|---------------------|---|---------------------|---------------|
| 1       | Introduction   | Lecture             | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 2,3     | RT-PCR (1):<br>RNA preparation and cDNA synthesis    | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 4,5     | RT-PCR (2):<br>Prepare gene-specific primers and PCR | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 6,7     | PCR Cloning (1):<br>TA cloning                       | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |

2025年度

subject code:211024

# Anatomy Practice (Advanced course)

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                  |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SETA YUUJI  |         |                    |            |              |          |        |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |                    |            |              |          |        |

| Lecture | Contents   | Methods             | Instructor  | before-and-after Le | Lecture rooms |
|---------|--|---------------------|---|---------------------|---------------|
| 8,9     | PCR Cloning (2):<br>Transformation of plasmid DNA into E coli        | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 10,11   | PCR Cloning(3):<br>Transformation of plasmid DNA into E coli         | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 12,13   | Transfection (1):<br>Introduction of gene transfer technology        | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 14,15   | Transfection (2):<br>Expression vector transfect into cultured cells | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |

# Anatomy Practice

|                        |   |         |          |            |              |          |        |
|------------------------|---|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                  |         |          | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Required  | Methods | Practice | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SETA YUUJI  |         |          |            |              |          |        |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |          |            |              |          |        |

## Course Description

【Language】 English and Japanese This course deals with the basis of fundamental molecular biological analysis. It also enhances the development of students' skill in carrying out molecular biological experiment.

## Attainment Objectives

The goals of this course are to (1) be able to understand molecular biological analysis, (2) be able to carry out PCR cloning (3) be able to carry out transfection.

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| Usual performance score             | 10%   |
| experimental performance in the lab | 90%   |

## Study Method

| Lecture | Contents  | Methods             | Instructor  | before-and-after Lecture | Lecture rooms |
|---------|---|---------------------|---|--------------------------|---------------|
| 1       | Introduction  | Lecture             | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 2,3     | RT-PCR (1):<br>RNA preparation and cDNA synthesis             | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 4,5     | RT-PCR (2):<br>Prepare gene-specific primers and PCR          | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 6,7     | PCR Cloning (1):<br>TA cloning                                | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 8,9     | PCR Cloning (2):<br>Transformation of plasmid DNA into E coli | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |

2025年度

subject code:211025

# Anatomy Practice

|                        |   |         |          |            |              |          |        |
|------------------------|---|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                  |         |          | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Required  | Methods | Practice | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SETA YUUJI  |         |          |            |              |          |        |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |          |            |              |          |        |

| Lecture | Contents   | Methods             | Instructor  | before-and-after Le | Lecture rooms |
|---------|--|---------------------|---|---------------------|---------------|
| 10,11   | PCR Cloning(3):<br>Transformation of plasmid DNA into E coli T       | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 12,13   | Transfection (1):<br>Introduction of gene transfer technology        | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 14,15   | Transfection (2):<br>Expression vector transfect into cultured cells | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |

# Anatomy Advanced course

|                        |   |        |         |            |              |          |        |  |
|------------------------|---|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                                  |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | SETA YUUJI  |        |         |            |              |          |        |  |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |        |         |            |              |          |        |  |

## Course Description

【Language】 Japanese The aim of this course is to help students acquire an understanding and introducing articles about current topics of life sciences.

## Attainment Objectives

The goals of this course are to (1) be able to read scientific articles logically(2) be able to understand and review articles about life sciences(3) be able to introduce articles to let the audience understand the content

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| Textbooks and Reference Books : Choose an article that you would like to introduce and discuss with |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Attendance          | 80%   |
| Question and answer | 20%   |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods              | Instructor  | before-and-after Le                         | Lecture rooms |
|---------|---|----------------------|---|---|---------------|
|         |   |                      | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE |   |               |
| 1 ~ 15  | Understand the article and introduce it including the background of the study | Lecture and Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Choose a topic and prepare for presentation |               |

# Head and Neck Dissection Course

|                        |                          |         |          |            |              |          |        |
|------------------------|--------------------------|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Practice | Total time | 30           | Credits  | 1      |
| Responsible Instructor | KATAOKA SHINJI           |         |          |            |              |          |        |
| Instructor(s)          | KATAOKA SHINJI           |         |          |            |              |          |        |

## Course Description

This course provides an in-depth study of the human body, in particular, of the head and neck, using cadaveric dissection.

## Attainment Objectives

The student is expected to gain a three-dimensional knowledge of the structures of the head and neck.

## Grading Criteria and Method of Evaluation

| Evaluation item                          | Ratio |
|--|-------|
| quality of performance in the dissection | 60%   |
| lab practical exam                       | 40%   |

## Etc

If you wish to take this course, please contact by e-mail ([kataoka@kyu-dent.ac.jp](mailto:kataoka@kyu-dent.ac.jp)) in advance.  
Office hours: Monday - Friday 9-17 (by appointment).

## Study Method

| Lecture | Contents                 | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|--------------------------|----------|------------|---------------------|---------------|
| 1,2     | Introduction             | Lecture  |            | Related textbooks   |               |
| 3,4     | Skull                    | Practice |            | Related textbooks   |               |
| 5-15    | Head and Neck Dissection | Practice |            | Related textbooks   |               |

# Physiology Practice

|                        |                                |         |                    |            |            |          |        |
|------------------------|--------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                         | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU                   |         |                    |            |            |          |        |
| Instructor(s)          | ONO KENTAROU, NAKATOMI CHIHIRO |         |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this course, you will learn and practice basic knowledge and skills about studies for thirsty, oral dryness, salivary functions and pain mechanisms. Under the management by supervisors, you will carry out animal behavior analyses, preparation of brain slices, cell dissociation, molecular biological techniques, immunohistochemistry, intracellular dynamics analysis and electrophysiology, based on your research theme.

## Attainment Objectives

1. To develop techniques of behavioral analysis in thirsty and oral dry.
2. To develop techniques of behavioral analysis in pain.
3. To develop techniques of brain slices.
4. To develop techniques of patch-clamp recording.
5. To develop techniques of immunohistochemistry.

## Grading Criteria and Method of Evaluation

| Evaluation item           | Ratio |
|---------------------------|-------|
| Reports and presentations | 100%  |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|---|----------|------------|---------------------|---------------|
| 1       | Orientation   | Lecture  |            | Review of practices |               |
| 2~4     | Animal behavior analyses. To learn animal handling and behavioral analyses  | Practice |            | Review of practices |               |
| 5~7     | Brain slice preparation. To learn how to make slice preparation of thiest centers and electrophysiological recordings | Practice |            | Review of practices |               |

2025年度

subject code:211031

# Physiology Practice

|                        |                                |         |                    |            |            |          |        |
|------------------------|--------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                         | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU                   |         |                    |            |            |          |        |
| Instructor(s)          | ONO KENTAROU, NAKATOMI CHIHIRO |         |                    |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|---|----------|------------|---------------------|---------------|
| 8~10    | Making of oral ulcer model. To learn how to make orofacial pain models and its evaluation of pain | Practice |            | Review of practices |               |
| 11~15   | Analyses of signal transduction in pain   | Practice |            | Review of practices |               |

# Physiology Practice

|                        |                                |         |         |            |              |          |        |
|------------------------|--------------------------------|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |         | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                         | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU                   |         |         |            |              |          |        |
| Instructor(s)          | ONO KENTAROU, NAKATOMI CHIHIRO |         |         |            |              |          |        |

## Course Description

【Language】 English and Japanese In this course, you will learn and practice basic knowledge and skills about studies for thirsty, oral dryness, salivary functions and pain mechanisms. Under the management by supervisors, you will carry out animal behavior analyses, preparation of brain slices, cell dissociation, molecular biological techniques, immunohistochemistry, intracellular dynamics analysis and electrophysiology, with high reliability.

## Attainment Objectives

1. To improve techniques of behavioral analysis in thirsty and oral dry.
2. To improve techniques of behavioral analysis in pain.
3. To improve techniques of brain slices.
4. To improve techniques of patch-clamp recording.
5. To improve techniques of immunohistochemistry.

## Grading Criteria and Method of Evaluation

| Evaluation item           | Ratio |
|---------------------------|-------|
| Reports and presentations | 100%  |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|---|----------|------------|---------------------|---------------|
| 1~3     | Experiments for water drinking. To learn how to inject drinking-inducible drugs and observe the drinking behavior | Practice |            | Review of practices |               |
| 4~7     | Salivary secretion. To measure salivary secretion following injection of saliva-inducible drugs                   | Practice |            | Review of practices |               |
| 8~10    | Oral mucositis and pain. To learn pain mechanism in oral ulcer model  | Practice |            | Review of practices |               |

2025年度

subject code:211032

# Physiology Practice

|                        |                                |        |         |            |              |          |        |
|------------------------|--------------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |        |         | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                         | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU                   |        |         |            |              |          |        |
| Instructor(s)          | ONO KENTAROU, NAKATOMI CHIHIRO |        |         |            |              |          |        |

| Lecture | Contents   | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|--|----------|------------|---------------------|---------------|
| 11 ~ 13 | Analysis of pain-related behaviors. To observe behaviors following application of pain-inducible drugs | Practice |            | Review of practices |               |
| 14,15   | Analyses of signal transduction in pain. To learn pain mechanisms                                      | Practice |            | Review of practices |               |

# Physiology Practice

|                        |                                |         |         |            |              |          |        |
|------------------------|--------------------------------|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |         | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                         | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONO KENTAROU                   |         |         |            |              |          |        |
| Instructor(s)          | ONO KENTAROU, NAKATOMI CHIHIRO |         |         |            |              |          |        |

## Course Description

【Language】 English and Japanese In this course, you will learn how to analyze data and describe manuscripts for studies for thirsty, oral dryness, salivary functions and pain mechanisms. In necessary, you will perform additional experiments.

## Attainment Objectives

1. To develop manuscripts for thirsty and oral dry.
2. To develop manuscripts for pain.
3. To develop manuscripts for salivary secretion.
4. To improve research ability

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| course attendance   | 30%   |
| report/presentation | 70%   |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|---|----------|------------|---------------------|---------------|
| 1,2     | Analyses of animal behaviors<br>To analyze and consider behavioral results              | Practice |            | Review of practices |               |
| 3,4     | Analyses of salivary secretion<br>To analyze and consider results of salivary secretion | Practice |            | Review of practices |               |
| 5~8     | Analyses of pain signaling<br>To analyze and consider results from pain models          | Practice |            | Review of practices |               |
| 9~15    | Research presentation   | Practice |            | Review of practices |               |

# Physiology Division Colloquium

|                        |                                |         |         |            |            |          |        |
|------------------------|--------------------------------|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                         | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | NAKATOMI CHIHIRO               |         |         |            |            |          |        |
| Instructor(s)          | NAKATOMI CHIHIRO, ONO KENTAROU |         |         |            |            |          |        |

## Course Description

Read and discuss papers or articles to understand the latest research trends in oral physiology.

## Attainment Objectives

- Improve the ability to read scientific papers in English.
- Understand the content of research.
- Improve the ability to critique research.
- Understand the background and trends of research.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Select papers and reference books as needed. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                                       | Ratio |
|---|-------|
| Evaluation is conducted based on the rubric criteria. | 100%  |

## Etc

Office hours: as needed

## Study Method

| Lecture | Contents   | Methods                           | Instructor       | before-and-after Learning  | Lecture rooms |
|---------|--|-----------------------------------|------------------|--|---------------|
| 1-15    | Read and discuss papers to understand the latest research trends in oral physiology. | Introduce and discuss the papers. | NAKATOMI CHIHIRO | Read the selected paper carefully and find out about related fields. | その他           |

# Molecular and Cell Biology Training Program (Bas

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |        |                    |            |            |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |        |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In order to understand the life science, you will understand the principles of the important molecular biology techniques and perform the experiments to obtain the results.

## Attainment Objectives

1. You can perform cell culture. 2. You can handle mice and prepare tissue or cells from mice. 3. You can explain central dogma. 4. You can prepare RNA or protein from tissue or cells. 5. You can understand the principles of the RT-PCR, and perform it. 6. You can understand the principles of the Western blotting, and perform it.

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Report           | 80%   |
| Oral examination | 20%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents   | Methods  | Instructor        | before-and-after Le            | Lecture rooms |
|---------|--|--|-------------------|--------------------------------|---------------|
| 1,2     | Orientation<br>An overview of this lecture, and to learn about the basis of molecular biology. | Lecture<br>(Web and Face to Face)              | KOKABU SYOUITIROU | Review of lecture              |               |
| 3,4     | Basis of cell culture I<br>Cell handling How to prepare the culture media                      | Lecture<br>practi ce<br>(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about cell culture |               |
| 5,6     | Basis of cell culture II<br>Cell passage Cell stock  | Lecture<br>practi ce<br>(Web and Face to Face) | KOKABU SYOUITIROU | Review about cell culture      |               |

# Molecular and Cell Biology Training Program (Bas

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |            |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |            |          |        |

| Lecture | Contents   | Methods                | Instructor                                   | before-and-after Le | Lecture rooms   |
|---------|--|------------------------|--|---------------------|---|
| 7,8     | How to handle mice I<br>of mouse handling<br>Treatment with drugs<br>collection                              | Basis<br>Blood         | Lecturepracti<br>ce(Web and<br>Face to Face) | KOKABU SYOUITIROU   | Review about mouse<br>handling                            |
| 9,10    | How to handle mice II<br>Anesthesia for mice<br>Preparation of thymocytes and<br>bone marrow cells from mice |                        | Lecturepracti<br>ce(Web and<br>Face to Face) | KOKABU SYOUITIROU   | Review about the<br>preparation of<br>tissue and cells    |
| 11,12   | How to handle mice III<br>Preparation of primary<br>osteoblasts<br>Osteoclast<br>differentiation             |                        | Lecturepracti<br>ce(Web and<br>Face to Face) | KOKABU SYOUITIROU   | Review about the<br>osteoblast or<br>osteoclast culture   |
| 13,14   | RT-PCR I<br>Preparation of RNA<br>from cells or tissue<br>Measurement of RNA                                 |                        | Lecturepracti<br>ce(Web and<br>Face to Face) | MATSUBARA TAKUMA    | Preparation about<br>the principle of<br>RT-PCR           |
| 15,16   | RT-PCR II<br>cDNA synthesis<br>Primer design using computer<br>soft  |                        | Practice(Web<br>and Face to<br>Face)         | MATSUBARA TAKUMA    | Preparation about<br>the principle of<br>primer design    |
| 17,18   | RT-PCR III<br>PCR<br>Agarose<br>gel electrophorsis   |                        | Practice(Web<br>and Face to<br>Face)         | MATSUBARA TAKUMA    | Review about the<br>principle of<br>RT-PCR                |
| 19,20   | Real-time PCR I<br>of Real-time PCR<br>PCR   | Principle<br>Real-time | Lecturepracti<br>ce(Web and<br>Face to Face) | KOKABU SYOUITIROU   | Preparation about<br>the principle of<br>real-time PCR    |
| 21,22   | Real-time PCR II<br>Data<br>analysis   |                        | Lecturepracti<br>ce(Web and<br>Face to Face) | KOKABU SYOUITIROU   | Review about the<br>data analysis                         |
| 23,24   | Western Blotting I<br>Preparation of protein from<br>tissue or cells<br>Measurement<br>of protein            |                        | Lecturepracti<br>ce(Web and<br>Face to Face) | Addison William     | Preparation about<br>the protein<br>preparation           |
| 25,26   | Western Blotting II<br>SDS-PAGE<br>membrane  | Transfer to PVDF       | Lecturepracti<br>ce(Web and<br>Face to Face) | Addison William     | Preparation about<br>the principle of<br>Western blotting |

2025年度

subject code:211041

# Molecular and Cell Biology Training Program (Bas

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |        |                    |            |            |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |        |                    |            |            |          |        |

| Lecture | Contents  | Methods                        | Instructor      | before-and-after Le                                | Lecture rooms |
|---------|---|--------------------------------|-----------------|--|---------------|
| 27,28   | Western Blotting III<br>Blocking antibody<br>Reaction with 1st antibody<br>Reaction with 2nd antibody | Practice(Web and Face to Face) | Addison William | Preparation about the protocol of Western blotting |               |
| 29,30   | Western Blotting IV<br>Stripping Reblotting   | Practice(Web and Face to Face) | Addison William | Review about Western blotting                      |               |

# Molecular and Cell Biology Training Program (Mid

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |              |          |        |

## Course Description

【Language】 English and Japanese In order to understand the life science, you will understand the principles of the important molecular biology techniques and perform the experiments to obtain the results. You further will learn the technique that was developed the techniques learned in the basic course, and developed the ability to get a reliable data.

## Attainment Objectives

1. You can understand the principles of gene recombination. 2. You can clone a known gene. 3. You can explain the types and principle of gene transfer, and perform them. 4. You can explain the principle of immunoprecipitation, and perform them. 5. You can explain the types of tag, and detect them. 6. You can explain the principle of luciferase assay, and perform them

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Report           | 80%   |
| Oral examination | 20%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents   | Methods                                | Instructor        | before-and-after Le              | Lecture rooms |
|---------|--|--|-------------------|----------------------------------|---------------|
| 1,2     | PCR cloning I Gene cloning using PCR method Digestion of vector and PCR products with restriction enzyme | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about gene cloning   |               |
| 3,4     | PCR cloning II Dephosphorylation of vector by ALP Ligation   | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about ligation       |               |
| 5,6     | PCR cloning III How to prepare competent cells Transformation  | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about transformation |               |

# Molecular and Cell Biology Training Program (Mid

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |              |          |        |

| Lecture | Contents   | Methods                                | Instructor        | before-and-after Le   | Lecture rooms |
|---------|--|--|-------------------|---|---------------|
| 7,8     | PCR cloning IV Pick up colonies Mini-scale culture   | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Review of the previous step   |               |
| 9,10    | PCR cloning V Mini-preparation Agarose gel electrophoresis   | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about mini-scale culture                                  |               |
| 11,12   | PCR cloning VI Midi-preparation Purification of plasmid  | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about Midi-prep   |               |
| 13,14   | Gene function analysis I Types of gene transfer Gene transfer using lipofection method                       | Lecture・practice(Web and Face to Face) | Addison William   | Preparation about gene transfer                                       |               |
| 15,16   | Gene function analysis II Point mutation based on PCR Screening  | Lecture・practice(Web and Face to Face) | Addison William   | Preparation about gene transfer                                       |               |
| 17,18   | Gene function analysis III Principle of luciferase assay Measurement of luciferase activity by luminometer   | Lecture・practice(Web and Face to Face) | Addison William   | Preparation about luciferase assay                                    |               |
| 19,20   | Gene function analysis IV Generation of dominant negative form or constitutive active form for gene transfer | practice(Web and Face to Face)         | Addison William   | Preparation about dominant negative form and constitutive active form |               |
| 21,22   | Immunoprecipitation I Preparation of protein from cells Measurement of protein Immunoprecipitation           | Lecture・practice(Web and Face to Face) | MATSUBARA TAKUMA  | Preparation about handling of protein                                 |               |
| 23,24   | Immunoprecipitation II SDS-PAGE Transfer to PVDF membrane Blocking   | practice(Web and Face to Face)         | MATSUBARA TAKUMA  | Preparation about immunoprecipitation                                 |               |
| 25,26   | Immunoprecipitation III Reaction with 1st antibody Reaction with 2nd antibody                                | practice(Web and Face to Face)         | MATSUBARA TAKUMA  | Review about immunoprecipitation                                      |               |

2025年度

subject code:211042

# Molecular and Cell Biology Training Program (Mid

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |              |          |        |

| Lecture | Contents   | Methods                                | Instructor       | before-and-after Le                          | Lecture rooms |
|---------|--|--|------------------|--|---------------|
| 27,28   | Tagged I Kind and principle of tag Cloning your interesting gene into FLAG-, HA-, Myc-,GFP-tagged vector | Lecture・practice(Web and Face to Face) | MATSUBARA TAKUMA | Preparation of the kind and principle of Tag |               |
| 29,30   | Tagged II Detection of tagged protein by anti-tag antibody   | Lecture・practice(Web and Face to Face) | MATSUBARA TAKUMA | Review of immunoprecipitation                |               |

# Molecular and Cell Biology Training Program (Adv)

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |              |          |        |

## Course Description

English and Japanese In order to understand the life science, you will understand the principles of the important molecular biology techniques and perform the experiments to obtain the results. You further will learn the technique related to bone biology and perform them. You also will learn oral presentation and writing article.

## Attainment Objectives

1. You can understand the principles of viral vector and perform gene transfer using retroviral vector. 2. You can explain the principle of chromatin immunoprecipitation, and perform it. 3. You can explain the types and principle of genetically modified mice. 4. You can explain the principle of flow cytometry, and perform it.

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Report           | 80%   |
| Oral examination | 20%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods                                 | Instructor       | before-and-after Le                                  | Lecture rooms |
|---------|---|---|------------------|--|---------------|
| 1,2     | Gene transfer using viral vector I Principle of retroviral vector<br>Generation of retroviral vector 1・ Digestion of vector and PCR products by restriction enzyme・ Dephosphorylation of vector・ Ligation | Lecture・ practice(Web and Face to Face) | MATSUBARA TAKUMA | Preparation about the principle of retroviral vecto  |               |
| 3,4     | Gene transfer using viral vector II Generation of retroviral vector 2・ Preparation of competent cells・ Transformation   | Lecture・ practice(Web and Face to Face) | MATSUBARA TAKUMA | Preparation about the generation of retroviral vecto |               |

# Molecular and Cell Biology Training Program (Adv)

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |              |          |        |

| Lecture | Contents   | Methods                        | Instructor        | before-and-after Le   | Lecture rooms |
|---------|--|--------------------------------|-------------------|---|---------------|
| 5,6     | Gene transfer using viral vector III Generation of retroviral vector 3・ Pick up colonies・ Mini-scale culture   | Lecture(Web and Face to Face)  | MATSUBARA TAKUMA  | Preparation about the generation of retroviral vector       |               |
| 7,8     | Gene transfer using viral vector IV Generation of retroviral vector 4・ Mid-scale culture・ Preparation of packaging cell  | Practice(Web and Face to Face) | MATSUBARA TAKUMA  | Preparation about the gene transfer using retroviral vector |               |
| 9,10    | Gene transfer using viral vector V Generation of retroviral vector 5・ Collection of viral supernatant・ Measurement of MOI  | Practice(Web and Face to Face) | MATSUBARA TAKUMA  | Preparation about the gene transfer using retroviral vector |               |
| 11,12   | Gene transfer using viral vector VI Generation of retroviral vector 6・ Gene transfer by retroviral vector containing GFP・ Detection of GFP expression by microscop | Lecture(Web and Face to Face)  | MATSUBARA TAKUMA  | Preparation about the gene transfer using retroviral vector |               |
| 13,14   | Chromatin immunoprecipitation (ChIP) I Principle of ChIP   | Lecture(Web and Face to Face)  | KOKABU SYOUITIROU | Preparation about the principle of ChIP                     |               |
| 15,16   | Chromatin immunoprecipitation II Preparation of cells and cross-linking Immunoprecipitation  | Practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about ChIP                                      |               |
| 17,18   | Chromatin immunoprecipitation III PCR  | Practice(Web and Face to Face) | KOKABU SYOUITIROU | Review about ChIP   |               |
| 19,20   | Genetically modified mice I Principle of transgenic mice Principle of knockout mice  | Lecture(Web and Face to Face)  | KOKABU SYOUITIROU | Preparation about transgenic or knockout mice               |               |

# Molecular and Cell Biology Training Program (Adv)

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |                    |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |                    |            |              |          |        |

| Lecture | Contents   | Methods                                | Instructor        | before-and-after Le                                    | Lecture rooms |
|---------|--|--|-------------------|--|---------------|
| 21,22   | Genetically modified mice II<br>Principle of knockin mice<br>Principle of conditional KO mice                                  | Lecture(Web and Face to Face)          | KOKABU SYOUITIROU | Preparation about knockin or conditional knockout mice |               |
| 23,24   | Analysis of the phenotype of the genetically modified mice I<br>Genotyping by PCR<br>Phenotype analyzed by histology           | Lecture・practice(Web and Face to Face) | KOKABU SYOUITIROU | Preparation about mouse genotyping                     |               |
| 25,26   | Analysis of the phenotype of the genetically modified mice II<br>Preparation of primary osteoblasts Osteoclast differentiation | Practice(Web and Face to Face)         | KOKABU SYOUITIROU | Preparation about osteoblast and osteoclast culture    |               |
| 27,28   | Analysis of the phenotype of the genetically modified mice III<br>Analysis of lymphocyte markers by flow cytometry             | Practice(Web and Face to Face)         | MATSUBARA TAKUMA  | Understanding of flow cytometry                        |               |
| 29,30   | Analysis of the phenotype of the genetically modified mice IV  | Practice(Web and Face to Face)         | MATSUBARA TAKUMA  | Understanding of flow cytometry                        |               |

# Molecular Biology Journal Club

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                             |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUBARA TAKUMA                                     |        |         |            |            |          |        |
| Instructor(s)          | MATSUBARA TAKUMA, KOKABU SYOUITIROU, Addison William |        |         |            |            |          |        |

## Course Description

【Language】 \*English, Japanese We read the literature describing the current topics of bone metabolism and molecular biology to understand the trends of important, up-to-date research.

## Attainment Objectives

1. You can read English literature and understand its content.
2. You can understand the experimental procedures in the literature.
3. You can evaluate the contents of the literature objectively.
4. You can understand the research background.
5. You can introduce the other person to understand easily the contents of the literature.

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| A-1-1-1         | 原子と生体を構成する元素を理解している。   |
| A-1-1-2         | 分子の成り立ちと生体構成分子に関する化学的性質を理解している。  |
| A-1-2-1         | アミノ酸とタンパク質の構造、機能及び代謝を理解している。   |
| A-1-2-2         | 糖質の構造、機能及び代謝を理解している。   |
| A-1-2-3         | 脂質の構造、機能及び代謝を理解している。   |
| A-1-2-4         | 電子伝達系と酸化リン酸化を理解している。   |
| A-1-2-5         | 酵素の機能と調節、主な代謝異常を理解している。  |
| A-1-2-6         | ビタミン、ミネラルの種類と作用を理解している。  |
| A-1-2-7         | 酸化ストレス(フリーラジカル、活性酸素)の発生と作用を理解している。                                       |
| A-1-2-8         | 栄養素の相互変換とエネルギー代謝(エネルギーの定義、食品中のエネルギー値、エネルギー消費量、推定エネルギー必要量)を理解している。        |
| A-1-2-9         | 空腹時、飢餓時、食後、過食時及び運動時における代謝を理解している。  |
| A-1-3-1         | メンデルの法則や遺伝子型と表現型の関係を理解している。  |
| A-1-3-2         | 核酸、遺伝子及び染色体の構造と機能を理解している。  |
| A-1-3-3         | デオキシリボ核酸(DNA)複製と修復、DNAからリボ核酸(RNA)への転写、タンパク質合成に至る翻訳を含む遺伝情報の発現及び調節を理解している。 |
| A-1-3-4         | 遺伝性疾患の発生機序を理解している。   |
| A-1-3-5         | 遺伝子解析や遺伝子工学技術を理解している。  |
| A-1-3-6         | 染色体分析とDNA配列決定を含むゲノム解析技術を理解している。  |
| A-1-4-1         | 真核細胞の全体像と細胞膜、核、細胞小器官及び細胞骨格の構造と機能を理解している。                                 |
| A-1-4-4         | 細胞周期、細胞分裂及び主な細胞分化のしくみを理解している。  |
| A-1-5-1         | 細胞接着の機構を理解している。  |
| A-1-5-2         | 受容体を介するホルモン、成長因子、サイトカイン等による細胞間及び細胞内の情報伝達機構を理解している。                       |
| A-1-5-3         | 主な細胞外マトリックス分子の種類、構造及び機能を理解している。  |
| A-1-5-4         | 主な細胞外マトリックス分子の合成と分解を理解している。  |

# Molecular Biology Journal Club

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                             |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUBARA TAKUMA                                     |        |         |            |            |          |        |
| Instructor(s)          | MATSUBARA TAKUMA, KOKABU SYOUITIROU, Addison William |        |         |            |            |          |        |

| Core Curriculum | Contents                  |
|-----------------|---------------------------|
| A-2-1-5         | 多能性幹細胞と基本的な発生学的技術を理解している。 |

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Students will be required to select the articles and related literature. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                  | Ratio |
|----------------------------------|-------|
| Selection of article             | 30%   |
| Oral presentation                | 40%   |
| Discussion (question and answer) | 30%   |

## Etc

Choose an article that you would like to share the content and discuss about it with members.

## Study Method

| Lecture | Contents  | Methods   | Instructor   | before-and-after Le                          | Lecture rooms             |
|---------|---|---|--|--|---------------------------|
| 1~15    | Understand the content and trends of important, up-to-date research in bone and skeletal muscle biology and molecular biology area and explained their importance to other persons. | Lecture and practice including presentation and discussion. | KOKABU SYOUITIROU<br>MATSUBARA TAKUMA<br>Addison William | Choose a topic and prepare for presentation. | その他<br>Microsoft<br>Teams |

# Oral Pathology

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 60         | Credits  | 4      |
| Responsible Instructor | MATSUO KOU               |        |        |            |            |          |        |
| Instructor(s)          | MATSUO KOU, YADA NAOMI   |        |        |            |            |          |        |

## Course Description

Provide the latest knowledge and information about oral and maxillofacial diseases, to serve as a basis for the future studies on mechanism, diagnosis and treatment of those diseases.

## Attainment Objectives

1. Acquire the latest information and expertise in caries and dentin-pulp complex disease. 2. Acquire the latest information and expertise in periapical lesion. 3. Acquire the latest information and expertise in periodontal lesion. 4. Acquire the latest information and expertise in diseases of jaw and temporomandibular joint. 5. Acquire the latest information and expertise in oral mucosal diseases. 6. Acquire the latest information and expertise in oral cancer and premalignant lesion. 7. Acquire the latest information and expertise in odontogenic tumors and cystic lesions. 8. Acquire the latest information and expertise in non-odontogenic tumors. 9. Acquire the latest information and expertise in non-neoplastic salivary gland diseases. 10. Acquire the latest information and expertise in salivary gland tumors.

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| handout |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 100%  |

## Etc

【Office hours】 Kou Matsuo: Mon. ~ Fri. 17:00 ~ 19:00; Naomi Yada: Mon. ~ Fri. 17:00 ~ 19:00; or e-mail communications at any time

## Study Method

| Lecture | Contents   | Methods                             | Instructor               | before-and-after Le | Lecture rooms |
|---------|--|-------------------------------------|--------------------------|---------------------|---------------|
| 1~3     | Obtain the latest knowledge on caries and dentin-pulp complex disease from the covered topics. | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 4~6     | Obtain the latest knowledge on periapical lesion from the covered topics.                      | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |

# Oral Pathology

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 60         | Credits  | 4      |  |
| Responsible Instructor | MATSUO KOU               |        |        |            |            |          |        |  |
| Instructor(s)          | MATSUO KOU, YADA NAOMI   |        |        |            |            |          |        |  |

| Lecture | Contents  | Methods                             | Instructor               | before-and-after Le | Lecture rooms |
|---------|---|-------------------------------------|--------------------------|---------------------|---------------|
| 7~9     | Obtain the latest knowledge on periodontal lesion from the covered topics.                          | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 10~12   | Obtain the latest knowledge on diseases of jaw and temporomandibular joint from the covered topics. | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 13~15   | Obtain the latest knowledge on oral mucosal diseases from the covered topics.                       | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 16~18   | Obtain the latest knowledge on oral cancer and premalignant lesion from the covered topics.         | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 19~21   | Obtain the latest knowledge on odontogenic tumors and cystic lesions from the covered topics.       | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 22~24   | Obtain the latest knowledge on non-odontogenic tumors from the covered topics.                      | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 25~27   | Obtain the latest knowledge on non-neoplastic salivary gland diseases from the covered topics.      | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 28~30   | Obtain the latest knowledge on salivary gland tumors from the covered topics.                       | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |

# Practice of Oral Pathology (basic course)

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUO KOU               |        |         |            |            |          |        |
| Instructor(s)          | MATSUO KOU               |        |         |            |            |          |        |

## Course Description

Learn the basic knowledge and skills required for carrying out a study on the main theme of research at our laboratory. Teach the knowledge and skills of the preparation of histopathologic specimens, histochemical, immunohistochemical and ultrastructural analyses. According to the theme of the postgraduate work, teach the required knowledge and skills of biochemical, molecular, microbiological and immunological techniques.

## Attainment Objectives

1. Acquire expertise in the preparation of histopathologic specimen  
 2. Acquire expertise in the preparation of histochemical specimen  
 3. Acquire expertise in the preparation of immunohistochemical specimen  
 4. Acquire expertise in the preparation of electron microscopic specimen  
 5. (According to the theme) acquire expertise in cell culture  
 6. (According to the theme) acquire expertise in extraction of DNA and RNA  
 7. (According to the theme) acquire expertise in extraction of protein  
 8. (According to the theme) acquire expertise in electrophoresis and western blotting  
 9. (According to the theme) acquire expertise in gene cloning and recombination

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| handout |        |           |

## Reference Books

| Title               | Author | Publisher |
|---------------------|--------|-----------|
| Reference materials |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 100%  |

## Etc

【Office hours】 Kou Matsuo: Mon.~Fri. 17:00~19:00 or e-mail communications at any time

## Study Method

| Lecture | Contents  | Methods   | Instructor | before-and-after Le | Lecture rooms |
|---------|---|---|------------|---------------------|---------------|
| 1,2     | Practice of the preparation of histopathologic specimen | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |

# Practice of Oral Pathology (basic course)

|                        |                          |         |         |            |            |          |        |
|------------------------|--------------------------|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUO KOU               |         |         |            |            |          |        |
| Instructor(s)          | MATSUO KOU               |         |         |            |            |          |        |

| Lecture | Contents   | Methods   | Instructor | before-and-after Le | Lecture rooms |
|---------|--|---|------------|---------------------|---------------|
| 3,4     | Practice of the preparation of histochemical specimen        | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 5,6     | Practice of the preparation of immunohistochemical specimen  | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 7,8     | Practice of the preparation of electron microscopic specimen | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 9,10    | Practice of cell culture                                     | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 11      | Practice of the extraction of DNA and RNA                    | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 12      | Practice of the extraction of protein                        | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 13      | Practice of RT-PCR and agarose gel electrophoresis           | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 14      | Practice of protein electrophoresis and western blotting     | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |
| 15      | Practice of gene cloning and recombination                   | practice in office and laboratory of Oral Pathology | MATSUO KOU | report              | その他           |

# Practice of Oral Pathology (advanced course)

|                        |                          |         |         |            |            |          |        |
|------------------------|--------------------------|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 2~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUO KOU               |         |         |            |            |          |        |
| Instructor(s)          | MATSUO KOU               |         |         |            |            |          |        |

## Course Description

Promote the study on the given theme of research. Train to produce reliable data in experiments using histopathologic, histochemical, immunohistochemical, ultra-structural, biological, molecular, microbial, immunological techniques.

## Attainment Objectives

1. Improve the skill in preparation of histopathologic specimen. 2. Obtain data from histochemical specimens for a research paper. 3. Obtain data from immunohistochemical specimens for a research paper. 4. Obtain data from electron microscopic specimens for a research paper. 5. Obtain data from cell culture experiments for a research paper. 6. Obtain data from extracted DNA and RNA for a research paper. 7. Obtain data from extracted protein for a research paper. 8. Increase reliability of the experimental data. 9. Improve the skills in designing experiments and developing research.

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| handout |        |           |

## Reference Books

| Title               | Author | Publisher |
|---------------------|--------|-----------|
| reference materials |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 50%   |
| Presentation    | 50%   |

## Etc

【Office hours】 Kou Matsuo: Mon.~Fri. 17:00~19:00 or e-mail communications at any time

## Study Method

| Lecture | Contents   | Methods                              | Instructor | before-and-after Le | Lecture rooms |
|---------|--|--------------------------------------|------------|---------------------|---------------|
| 1,2     | Analyze data obtained from microscopic specimens. Discuss and summarize them.          | Practice in office of Oral Pathology | MATSUO KOU | Practice            | その他           |
| 3,4     | Analyze data obtained from electron microscopic specimens. Discuss and summarize them. | Practice in office of Oral Pathology | MATSUO KOU | Practice            | その他           |

# Practice of Oral Pathology (advanced course)

|                        |                          |         |         |            |            |          |        |
|------------------------|--------------------------|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 2~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUO KOU               |         |         |            |            |          |        |
| Instructor(s)          | MATSUO KOU               |         |         |            |            |          |        |

| Lecture | Contents   | Methods                              | Instructor | before-and-after Le | Lecture rooms |
|---------|--|--------------------------------------|------------|---------------------|---------------|
| 5,6     | Analyze data obtained from cell culture. Discuss and summarize them.   | Practice in office of Oral Pathology | MATSUO KOU | Practice            | その他           |
| 7,8     | Analyze data obtained from experiments using biochemical and molecular techniques. Discuss and summarize them. | Practice in office of Oral Pathology | MATSUO KOU | Practice            | その他           |
| 9~11    | Presentation of research findings  | Practice in office of Oral Pathology | MATSUO KOU | Practice            | その他           |
| 12~15   | Learn how to write a research paper and come up with the outline of thesis paper.                              | Practice in office of Oral Pathology | MATSUO KOU | Practice            | その他           |

# Colloquium of Oral Pathology

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUO KOU               |        |         |            |            |          |        |
| Instructor(s)          | MATSUO KOU               |        |         |            |            |          |        |

## Course Description

Read intensively the related literatures and discuss their contents to understand new trends of general pathological and oral pathological research. Also present each participant's research results and discuss them.

## Attainment Objectives

1. Improve the ability to understand exactly the meaning of English literatures.
2. Understand exactly the contents of research paper and presentation.
3. Improve the ability to assess research.
4. Understand background and trend of research.
5. Improve the skills in research presentation.

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| handout |        |           |

## Reference Books

| Title               | Author | Publisher |
|---------------------|--------|-----------|
| reference materials |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 50%   |
| Presentation    | 50%   |

## Etc

【Office hours】 Kou Matsuo: Mon.~Fri. 17:00~19:00; or e-mail communications at any time

## Study Method

| Lecture | Contents  | Methods                              | Instructor | before-and-after Le | Lecture rooms |
|---------|---|--------------------------------------|------------|---------------------|---------------|
| 1       | Orientation. Explanation of the outline of research performed at the division of Oral Pathology and discussion. | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 2,3     | Know the recent trend of research on premalignant lesion and carcinoma in situ, and discuss it.                 | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |

# Colloquium of Oral Pathology

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MATSUO KOU               |        |         |            |            |          |        |
| Instructor(s)          | MATSUO KOU               |        |         |            |            |          |        |

| Lecture | Contents   | Methods                              | Instructor | before-and-after Le | Lecture rooms |
|---------|--|--------------------------------------|------------|---------------------|---------------|
| 4       | Introduce and discuss participant's research and related literatures (I).                                  | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 5,6     | Know the recent trend of research on tumor marker, and discuss it.   | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 7       | Introduce and discuss participant's research and related literatures (II).                                 | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 8,9     | Know the recent trend of research on wound healing, and discuss it (I).                                    | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 10      | Introduce and discuss participant's research and related literatures (III).                                | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 11,12   | Know the recent trend of research on wound healing, and discuss it (II).                                   | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 13      | Introduce and discuss participant's research and related literatures (IV).                                 | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |
| 14,15   | Summarize the discussion about participants' research, and discuss the future development of the research. | practice in office of Oral Pathology | MATSUO KOU | report              | その他           |

# Clinical Diagnostic Pathology

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 60         | Credits  | 4      |  |
| Responsible Instructor | MATSUO KOU               |        |        |            |            |          |        |  |
| Instructor(s)          | MATSUO KOU, YADA NAOMI   |        |        |            |            |          |        |  |

## Course Description

Teach clinical diagnostic pathology to perform a diagnostic task as a routine work at the division of Oral Pathology. Also provide the latest information on oral and maxillofacial diseases, focusing on the pathological diagnosis.

## Attainment Objectives

1. Learn and practice pathological anatomy (autopsy). 2. Learn and practice biopsy diagnosis. 3. Learn handling of the surgical materials and practice diagnosis. 4. Learn and practice cytological diagnosis. 5. Learn and practice intraoperative rapid diagnosis. 6. Learn and practice preparation of histopathologic specimens. 7. Learn and practice histochemical and immunohistochemical staining. 8. Acquire expertise in pathological diagnosis of oral and maxillofacial diseases. 9. Acquire expertise in differential diagnosis of benign and malignant tumors.

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| handout |        |           |

## Reference Books

| Title   | Author           | Publisher                     |
|---|------------------|-------------------------------|
| Pathologic basis of disease, 10th edition   | Robbins & Cotran | Elsevier                      |
| Pathology and Genetics of Tumours of the Head and Neck (IARC)                         |                  | WHO Classification of Tumours |
| WHO Classification of Tumours, Pathology and Genetics of Tumours of the Head and Neck |                  |                               |
| Reference materials   |                  |                               |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 0%    |

## Etc

【Office hours】 Kou Matsuo: Mon. ~ Fri. 17:00 ~ 19:00; Naomi Yada: Mon. ~ Fri. 17:00 ~ 19:00; or e-mail communications at any time

# Clinical Diagnostic Pathology

|                        |                          |         |        |            |            |          |        |  |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 60         | Credits  | 4      |  |
| Responsible Instructor | MATSUO KOU               |         |        |            |            |          |        |  |
| Instructor(s)          | MATSUO KOU, YADA NAOMI   |         |        |            |            |          |        |  |

## Study Method

| Lecture | Contents  | Methods                             | Instructor               | before-and-after Le | Lecture rooms |
|---------|---|-------------------------------------|--------------------------|---------------------|---------------|
| 1,2     | Learn outline of human pathology  | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 3~5     | Learn outline of pathological anatomy (autopsy)   | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 6~8     | Learn outline of biopsy   | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 9~11    | Learn outline of handling of the surgical materials   | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 12~14   | Learn outline of cytological diagnosis  | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 15~17   | Learn outline of intraoperative rapid diagnosis   | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 18~20   | Learn outline of the preparation of histopathologic specimens   | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 21~23   | Learn outline of histochemical and immunohistochemical staining   | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 24~26   | Learn outline and specificity of pathological diagnosis of oral and maxillofacial diseases, and also obtain the latest specific information on oral pathological diagnosis. | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |
| 27~30   | Learn differential diagnosis of benign and malignant tumors.  | lecture in office of Oral Pathology | MATSUO KOU<br>YADA NAOMI | report              | その他           |

# Practice of Clinical Diagnostic Pathology

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YADA NAOMI               |        |         |            |            |          |        |
| Instructor(s)          | YADA NAOMI               |        |         |            |            |          |        |

## Course Description

Acquire skills in clinical diagnostic pathology, and develop an ability to make pathological diagnosis.

## Attainment Objectives

1. Acquire the skill of handling biopsy materials.2. Acquire the skill of handling surgical materials.3. Acquire the skill of cytological materials.4. Acquire the skill of materials of intraoperative rapid diagnosis.5. Experience autopsy and expand the knowledge of it.6. Acquire expertise in diagnosis of main diseases of oral and maxillofacial region.7. Acquire expertise in diagnosis of main general diseases.8. Acquire the skill in pathological diagnostic report writing.9. Acquire the skill in preparing manuscript of case report.

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| handout |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| WHO Classification of of Head and Neck Tumours |        | IARC      |
| handout  |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| report          | 100%  |

## Etc

【Office hours】 Mon.~Fri. 17:00~19:00; or e-mail communications at any time

## Study Method

| Lecture | Contents   | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|--|----------|------------|---------------------|---------------|
| 1       | Orientation  | Lecture  | YADA NAOMI | Report              |               |
| 2, 3    | Learn and practice the procedure of handling of biopsy and surgical materials. | Practice | YADA NAOMI | Report              |               |
| 4, 5    | Learn and practice the procedure of handling of cytological materials.         | Practice | YADA NAOMI | Report              |               |

# Practice of Clinical Diagnostic Pathology

|                        |                          |         |         |            |            |          |        |
|------------------------|--------------------------|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YADA NAOMI               |         |         |            |            |          |        |
| Instructor(s)          | YADA NAOMI               |         |         |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|--|----------|------------|---------------------|---------------|
| 6       | Learn and practice the procedure of handling of materials of intraoperative rapid diagnosis. | Practice | YADA NAOMI | Report              |               |
| 7       | Learn and practice the procedure of autopsy.   | Practice | YADA NAOMI | Report              |               |
| 8, 9    | Learn outline of main diseases of oral and maxillofacial region and practice diagnosis.      | Practice | YADA NAOMI | Report              |               |
| 10, 11  | Learn outline of main general diseases and practice diagnosis                                | Practice | YADA NAOMI | Report              |               |
| 12, 13  | Learn and practice the pathological diagnostic report writing.                               | Practice | YADA NAOMI | Report              |               |
| 14, 15  | Learn and practice the preparation of manuscript of case report.                             | Practice | YADA NAOMI | Report              |               |

# Infectious Diseases

|                        |   |        |                    |            |            |          |        |
|------------------------|---|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |        |                    |            |            |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |        |                    |            |            |          |        |

## Course Description

You can obtain novel information and knowledge concerning life sciences for infection and immunity in molecular cell biology. At this course, you should perform a group study for individual themes, including “periodontopathic bacteria”, “pattern recognition receptors” and “osteimmunology”.

## Attainment Objectives

To obtain novel information and knowledge for

- Virulence factors responsible for infection
- Dental biofilm
- Oral infectious diseases
- Recognition and elimination of pathogens in immune system
- Cytokines and inflammatory mediators
- Pattern recognition receptors
- Role of immune cells in inflammatory response
- Host defense in oral lesion
- Diagnosis, prevention and treatment of infectious diseases
- Inflammasome
- Bone remodeling
- Interaction between bone metabolisms and immune system

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| Handout |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Recent reports in our laboratory publications and reference papers concerning this lecture |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                              | Ratio |
|--|-------|
| Reports after the group studies and lectures | 100%  |

## Etc

You can ask your study-counsel in our office time at our department in the 11th floor of main building. Email is available at any time.

# Infectious Diseases

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |         |                    | Grades     | 1 ~ 2 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |         |                    |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods     | Instructor  | before-and-after Le          | Lecture rooms             |
|---------|--|-------------|---|------------------------------|---------------------------|
| 1       | Molecular biology for pathogenic microbes :<br>Fundamental knowledge of molecular biology and microbiology for studying infectious diseases            | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout       | Moodle<br>Microsoft Teams |
| 2       | Molecular biology for pathogenic microbes :<br>Knowledge for adhesion molecules and endotoxin bow pathogenic bacteria                                  | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout       | Moodle<br>Microsoft Teams |
| 3       | Molecular biology for pathogenic microbes :<br>Structure and functions of dental biofilm   | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout       | Moodle<br>Microsoft Teams |
| 4       | Molecular biology for pathogenic microbes :<br>Virulence factors of periodontopathic bacteria  | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout       | Moodle<br>Microsoft Teams |
| 5       | Molecular biology for pathogenic microbes :<br>Structure and functions of human oral microbiome  | Lecture     | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Review of group study Report | Moodle<br>Microsoft Teams |
| 6       | Molecular biology for host defense against infection :<br>Fundamental knowledge of molecular biology for studying immunology                           | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout       | Moodle<br>Microsoft Teams |
| 7       | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in antigen recognition and elimination by innate immune system | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout       | Moodle<br>Microsoft Teams |

# Infectious Diseases

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |         |                    | Grades     | 1 ~ 2 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |         |                    |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |         |                    |            |              |          |        |

| Lecture | Contents  | Methods     | Instructor  | before-and-after Le             | Lecture rooms                |
|---------|---|-------------|---|---------------------------------|------------------------------|
| 8       | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in antigen recognition and elimination by humoral immune system       | Group study | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | Pre-reading of handout          | Moodle<br>Microsoft<br>Teams |
| 9       | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in antigen recognition and elimination by cell-mediated immune system | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout          | Moodle<br>Microsoft<br>Teams |
| 10      | Molecular biology for host defense against infection :<br>Host defense by saliva and immune system in oral lesion   | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout          | Moodle<br>Microsoft<br>Teams |
| 11      | Molecular biology for host defense against infection :<br>Approach for diagnosis, prevention and treatment of oral infectious diseases in oral lesion         | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout          | Moodle<br>Microsoft<br>Teams |
| 12      | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in activation of inflammasome in inflammatory response                | Lecture     | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Review of group study<br>Report | Moodle<br>Microsoft<br>Teams |
| 13      | Inflammatory bone resorption :<br>Molecular mechanisms involved in regulation of bone remodeling  | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout          | Moodle<br>Microsoft<br>Teams |
| 14      | Inflammatory bone resorption :<br>Regulation of immunomodulatory molecules in bone metabolisms  | Group study | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout          | Moodle<br>Microsoft<br>Teams |

2025年度

subject code:211061

# Infectious Diseases

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |         |                    |            |            |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |         |                    |            |            |          |        |

| Lecture | Contents   | Methods | Instructor  | before-and-after Le                | Lecture rooms                |
|---------|--|---------|---|------------------------------------|------------------------------|
| 15      | Inflammatory bone resorption<br>:<br>Osteoimmunological approach<br>for treatment of inflammatory<br>bone resorption | Lecture | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Review of group<br>study<br>Report | Moodle<br>Microsoft<br>Teams |

# Infectious Diseases

|                        |   |        |         |            |              |          |        |
|------------------------|---|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |        |         |            |              |          |        |
| Instructor(s)          | YOSHIOKA YOSHIE, ARIYOSHI WATARU, YAMASAKI RYOUTA |        |         |            |              |          |        |

## Course Description

You can study novel issue of infectious diseases and immunity through scientific papers, which were recently published on scientific journal concerning infection and immunity. At this course, you should explain the objects, methods, results and discussion in detail and we can share novel knowledge, which require to your experiments, through the discussion on this seminar.

## Attainment Objectives

- Bring up your ability to read scientific papers
- Bring up your ability to think critically
- Bring up your ability to think logically

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| Novel scientific papers, Nature, Cell, Science, etc |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                    | Ratio |
|------------------------------------|-------|
| Oral presentations and discussions | 100%  |

## Etc

You can ask your study-counsel in our office time at our department in the 11th floor of main building. Email is available at any time.

# Infectious Diseases

|                        |   |        |         |            |              |          |        |
|------------------------|---|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |        |         |            |              |          |        |
| Instructor(s)          | YOSHIOKA YOSHIE, ARIYOSHI WATARU, YAMASAKI RYOUTA |        |         |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods   | Instructor  | before-and-after Le  | Lecture rooms             |
|---------|---|---|---|--|---------------------------|
| 1 ~ 15  | 1. Understanding the details of novel experiments for infectious diseases and immunity<br>2. Discussion about experimental view | Introduction of novel scientific paper and discussion | YOSHIOKA YOSHIE<br>ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Reading paper intensively and investigating issues on the area related to your experiments<br><br>Studying the issues that are pointed out in the presentation | Moodle<br>Microsoft Teams |

# Infectious Diseases

|                        |   |        |         |            |            |          |        |
|------------------------|---|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                 |        |         |            |            |          |        |
| Instructor(s)          | YAMASAKI RYOUTA,ARIYOSHI WATARU,YOSHIOKA YOSHIE |        |         |            |            |          |        |
|                        |   |        |         |            |            |          |        |

## Course Description

At this course, you should explain the objects, methods and results of your experiments. The instructors point out the critical points, which require to your experiments, through the discussion on this seminar.

## Attainment Objectives

Bring up your ability to explain your experimental data.

Bring up your ability to understand the principles of experimental procedures and interpretation of results.

Bring up your ability to listen to the reports of others and consider whether they can be applied to your own research.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Research lab notebook and reference papers concerning your project |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                    | Ratio |
|------------------------------------|-------|
| Oral presentations and discussions | 100%  |

## Etc

You can ask your study-counsel in our office time at our department in the 11th floor of main building. Email is available at any time.

2025年度

subject code:211063

# Infectious Diseases

|                        |   |        |         |            |            |          |        |
|------------------------|---|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                 |        |         |            |            |          |        |
| Instructor(s)          | YAMASAKI RYOUTA,ARIYOSHI WATARU,YOSHIOKA YOSHIE |        |         |            |            |          |        |

## Study Method

| Lecture | Contents  | Methods   | Instructor  | before-and-after Le   | Lecture rooms                               |
|---------|---|---|---|---|---|
| 1~15    | 1. Understanding the background, methods and results of your experiments<br>2. Discussion about experimental data | Presentation and discussion of your experiments | YAMASAKI RYOUTA<br>ARIYOSHI WATARU<br>YOSHIOKA YOSHIE | Reading paper intensively and preparation for your presentation<br><br>Studying the issues that were pointed out in the presentatio | 601 講義室<br>その他<br>Moodle<br>Microsoft Teams |

# Infectious Diseases

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU          |         |                    |            |            |          |        |
| Instructor(s)          | ARIYOSHI WATARU          |         |                    |            |            |          |        |

## Course Description

You can obtain basic knowledge and techniques of molecular biology for studying infection and immunity.

## Attainment Objectives

To obtain knowledge and technique for

Cell culture

Bacteria culture

RNA extraction from cultured cell

I real-time RT-qPCR analysis

Protein preparation from cultured cell

Western blotting analysis

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| Handout |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Recent reports in our laboratory publications and reference papers concerning this lecture |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Discussion      | 100%  |

## Etc

You can ask your study-counsel in our office time at our department in the 11th floor of main building. Email is available at any time.

## Study Method

| Lecture | Contents   | Methods | Instructor  | before-and-after Le    | Lecture rooms                    |
|---------|--|---------|---|------------------------|----------------------------------|
| 1       | Orientation:<br>Aim and overview of this lecture | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft Teams |

# Infectious Diseases

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU          |         |                    |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU          |         |                    |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor  | before-and-after Le    | Lecture rooms                       |
|---------|---|----------------------|---|------------------------|-------------------------------------|
| 2       | Cell culture :<br>Preparation of culture media and cell cultivation                                   | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 3       | Cell culture :<br>Cell passage and stock  | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 4       | Bacteria culture :<br>Aseptic technique, preparation of media and bacteria cultivation                | Lecture and Practice | YAMASAKI RYOUTA<br>ARIYOSHI WATARU<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 5       | Bacteria culture :<br>Pick up a single colony from plate, small-scale culture and large-scale culture | Lecture and Practice | YAMASAKI RYOUTA<br>ARIYOSHI WATARU<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 6       | real-time RT-qPCR analysis :<br>Principle of real-time RT-qPCR and primer design                      | Lecture and Practice | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 7       | real-time RT-qPCR analysis :<br>RNA extraction from cultured cell and cDNA synthesis                  | Lecture and Practice | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 8       | real-time RT-qPCR analysis :<br>Real-time RT-qPCR   | Lecture and Practice | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 9       | real-time RT-qPCR analysis :<br>Data analysis for real-time RT-PCR                                    | Lecture and Practice | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 10      | Western blotting analysis :<br>Principle of Western blotting and gel preparation                      | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |

# Infectious Diseases

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU          |         |                    |            |            |          |        |
| Instructor(s)          | ARIYOSHI WATARU          |         |                    |            |            |          |        |

| Lecture No. | Contents  | Methods              | Instructor  | before-and-after Le    | Lecture rooms                       |
|-------------|---|----------------------|---|------------------------|-------------------------------------|
| 11          | Western blotting analysis :<br>Protein preparation from cultured cell                         | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 12          | Western blotting analysis :<br>SDS-PAGE and blotting  | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 13          | Western blotting analysis :<br>Blocking and 1st antibody reaction                             | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 14          | Western blotting analysis :<br>2nd antibody reaction and chemiluminescent detection using ECL | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |
| 15          | Western blotting analysis :<br>Data analysis for Western blotting                             | Lecture and Practice | ARIYOSHI WATARU<br>YOSHIOKA YOSHIE<br>YAMASAKI RYOUTA | Pre-reading of handout | その他<br>Moodle<br>Microsoft<br>Teams |

# Specialized study of infectious diseases

|                        |   |        |         |            |              |          |        |
|------------------------|---|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |        |         | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |        |         |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |        |         |            |              |          |        |

## Course Description

You will identify issues related to your research projects and formulate methods and research plans based on these issues. In addition, through presentations of experimental research results in the meeting, you will have opportunities to update knowledge and exchange information in your research areas. The instructors conduct exercises and education as tutors in discussion.

## Attainment Objectives

Bring up your ability to identify issues regarding your own research project, based on trends in research fields.

Bring up your ability to understand and explain the principles and interpretation of experimental procedures.

Bring up your ability to interpret and discuss the results.

Bring up your ability to discuss with several researchers and to identify techniques that can be applied to your own research.

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| Research lab notebook and reference papers concerning your project. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item           | Ratio |
|---------------------------|-------|
| Planning research project | 25%   |
| Interim report            | 25%   |
| Conference report         | 25%   |
| Final report              | 25%   |

## Etc

You can ask your study-counsel in our office time at our department in the 11th floor of main building. Email is available at any time.

# Specialized study of infectious diseases

|                        |   |         |         |            |              |          |        |
|------------------------|---|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                          |         |         | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                                   |         |         |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |         |         |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods                   | Instructor  | before-and-after Learning  | Lecture rooms                    |
|---------|--|---------------------------|---|--|----------------------------------|
| 1       | Research planning 1: Develop the ability to identify one's own research problem through reading of relevant papers.                | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Close reading of relevant papers and identification of research issues<br>[after learning task] Revision of extracted research issues | その他<br>Moodle<br>Microsoft Teams |
| 2       | Research Planning 2: Understand the principles through the proposal of a research method to prove the extracted research question. | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Close reading of relevant papers and suggestions for research methods<br>[after learning task] Revision of proposal method            | その他<br>Moodle<br>Microsoft Teams |
| 3       | Research Planning 3: Develop research planning skills by constructing a research plan to carry out the proposed research method.   | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Close reading of relevant papers and development of a research plan<br>[after learning task] Revision of drafting plan                | その他<br>Moodle<br>Microsoft Teams |
| 4       | Interim Report 1: Develop the ability to organize data obtained by August and compile research results.                            | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Close reading of relevant papers<br>[after learning task] Interpretation and compilation of research data                             | その他<br>Moodle<br>Microsoft Teams |

# Specialized study of infectious diseases

|                        |   |        |         |            |              |          |        |  |
|------------------------|---|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                          |        |         | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | ARIYOSHI WATARU                                   |        |         |            |              |          |        |  |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |        |         |            |              |          |        |  |

| Lecture | Contents  | Methods                   | Instructor  | before-and-after Le  | Lecture rooms                       |
|---------|---|---------------------------|---|--|-------------------------------------|
| 5       | Interim Report 2: Develop presentation skills of research results through preparation for presentation of data obtained by August.  | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Close reading of relevant papers<br>[after learning task] Devising a presentation structure   | その他<br>Moodle<br>Microsoft<br>Teams |
| 6       | Interim Report 3: Develop scientific question-and-answer skills by giving a presentation and accurately answering faculty members' questions about your presentation.   | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Creating presentation slides<br>[after learning task] Correction of points raised in presentation                                       | その他<br>Moodle<br>Microsoft<br>Teams |
| 7       | Interim Report 4: Cultivate the ability to summarize the content of the questions and answers from the presentation.  | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Creating presentation slides<br>[after learning task] Correction of points raised in presentation                                       | その他<br>Moodle<br>Microsoft<br>Teams |
| 8       | Interim Report 5: Identify research issues from the feedback, and develop research plans.   | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Identification of new research topics<br>[after learning task] Suggestions for rearch methods and development of a research plan        | その他<br>Moodle<br>Microsoft<br>Teams |
| 9       | Conference 1: Explore conferences in research area and understand research topics from past presentations. Develop the ability to organize research results by preparing abstracts for conference (3rd and 4th grade students). | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Searching for information on conferences and confirming the content of presentations<br>[after learning task] Preparation of manuscript | その他<br>Moodle<br>Microsoft<br>Teams |

# Specialized study of infectious diseases

|                        |   |         |         |            |              |          |        |  |
|------------------------|---|---------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                          |         |         | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | ARIYOSHI WATARU                                   |         |         |            |              |          |        |  |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |         |         |            |              |          |        |  |

| Lecture | Contents  | Methods                   | Instructor  | before-and-after Learning  | Lecture rooms                    |
|---------|---|---------------------------|---|--|----------------------------------|
| 10      | Conference 2: Develop the ability to understand the relevance of research and to identify problems by reading the abstracts of the conferences. Develop the ability to present research results through preparation for conference (3rd and 4th grade students).                                    | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Confirmation of conference abstract content<br>[after learning task] Extraction of discussion items and creation of presentation slides and posters           | その他<br>Moodle<br>Microsoft Teams |
| 11      | Conference 3: Participate in conferences and actively ask questions to the presenters of related topics, and cultivate the ability to engage in discussion. Develop scientific question and answer skills by accurately answering questions about your presentations (3rd and 4th grade students).. | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Preparation for presentation and Q&A session<br>[after learning task] Summary of questions and answers  | その他<br>Moodle<br>Microsoft Teams |
| 12      | Conference 4: Develop the ability to summarize the content of questions and answers at conferences, and to feed back and reflect on the results of your research.   | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Identification of research issues based on questions and answers<br>[after learning task] Suggestions for research methods and development of a research plan | その他<br>Moodle<br>Microsoft Teams |
| 13      | Report of research results 1: Develop the ability to compile research results through the preparation of an interim report (2nd-3rd year) and a final report of research results (final year).  | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Close reading of relevant papers and drafting of the structure of the report<br>[after learning task] Revision of report structure                            | その他<br>Moodle<br>Microsoft Teams |

# Specialized study of infectious diseases

|                        |   |        |         |            |              |          |        |  |
|------------------------|---|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                          |        |         | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | ARIYOSHI WATARU                                   |        |         |            |              |          |        |  |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA, YOSHIOKA YOSHIE |        |         |            |              |          |        |  |

| Lecture | Contents   | Methods                   | Instructor  | before-and-after Le   | Lecture rooms                       |
|---------|--|---------------------------|---|---|-------------------------------------|
| 14      | Report of research results 2: Develop the ability to reflect on research findings through the preparation of interim reports (2nd-3rd year) and a final report of research results (final year).   | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Preparation of draft report<br>[after learning task] Revision of draft report    | その他<br>Moodle<br>Microsoft<br>Teams |
| 15      | Report of research results 3: Develop the ability to summarize the results of your own research by preparing an interim report (1st-3rd year) and a final report of research results (final year). | Exercises and Discussions | ARIYOSHI WATARU<br>YAMASAKI RYOUTA<br>YOSHIOKA YOSHIE | [before learning task] Preparation of report<br>[after learning task] Revision and submission of report | その他<br>Moodle<br>Microsoft<br>Teams |

# Pharmacology

|                        |                               |        |                    |            |            |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |            |          |        |

## Course Description

【Language】 Japanese In the present, the elderly is administrated a large number of drugs for systemic disease. In this course, you will study the hematologic drugs (anticoagulant drugs and antiplatelet drugs) and central nerves system drugs (antidepressants, etc.).

## Attainment Objectives

1. You will administer the proper drug to the patient with systemic disease.
2. You will treat the patient with systemic disease with safety.
3. You will explain the drugs used in systemic disease.

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| oral presentation                    | 50%   |
| Activities in lectures and exercises | 50%   |

## Etc

Student consultation: Accepted at any time by email.

## Study Method

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|--|---------------------------------|----------------------------|---------------|
|         |   |  | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |
| 1       | Outline of hematologic drugs and central nervous system drugs                 | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |
| 2       | Hematologic drugs 1You will obtain knowledge of anticoagulant drug (heparin). | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Pharmacology

|                        |                               |         |                    |            |            |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|--|--|---------------------------------|----------------------------|---------------|
| 3       | Hematologic drugs 2 You will obtain knowledge of anticoagulant drug (low molecular weight heparin).                            | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 4       | Hematologic drugs 3 You will obtain knowledge of anticoagulant drug (warfarin).  | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 5       | Hematologic drugs 4 You will obtain knowledge of antiplatelet drug (aspirin).  | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 6       | Hematologic drugs 5 You will obtain knowledge of new antiplatelet drugs .  | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 7       | Hematologic drugs 6 You will study the things to be careful about the patients who take hematologic drugs in dental treatment. | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 8       | Hematologic drugs 7 You will study the things to be careful about the patients who take hematologic drugs in dental treatment. | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 9       | Central nerves system drugs 1 You will obtain knowledge of mental disorder.  | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 10      | Central nerves system drugs 2 You will obtain knowledge of drugs used in Parkinsonism.   | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Pharmacology

|                        |                               |        |                    |            |            |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|--|--|---------------------------------|----------------------------|---------------|
| 11      | Central nerves system drugs<br>3You will obtain knowledge of antidepressants.                                    | Lecture<br>(Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 12      | Central nerves system drugs<br>4You will obtain knowledge of drugs used in Alzheimer disease.                    | Lecture<br>(Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 13      | Central nerves system drugs<br>5You will obtain knowledge of drugs used in epilepsy.                             | Lecture<br>(Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 14      | Central nerves system drugs<br>6You will study the drugs used in the elderly.                                    | Lecture<br>(Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 15      | SummaryYou will study the relationship between dental treatments and hematologic or central nerves system drugs. | Lecture and practice<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |

# Pharmacology

|                        |                               |        |                    |            |            |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |            |          |        |

## Course Description

【Language】 Japanese In the present, the elderly is administrated a large number of drugs for systemic disease. In this course, you will study the cardiovascular drugs (drugs used in hypertension, etc.) and central nerves system drugs (antidepressants, etc.).

## Attainment Objectives

1. You will administer the proper drug to the patient with systemic disease.
2. You will treat the patient with systemic disease with safety.
3. You will explain the drugs used in systemic disease.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Goodman & Gilman's the Pharmacological Basis of Therapeutics |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| oral presentation                    | 50%   |
| Activities in lectures and exercises | 50%   |

## Etc

Student consultation: Accepted at any time by email.

## Study Method

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le | Lecture rooms |
|---------|--|--|---------------------------------|---------------------|---------------|
|         |  |  | TAKEUCHI HIROSHI<br>HIGASHI SEN |                     |               |
| 1       | Outline of cardiovascular drugs and central nervous system drugs | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                     |               |

# Pharmacology

|                        |                               |         |                    |            |              |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |              |          |        |

| Lecture | Contents   | Methods   | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|--|---|---------------------------------|----------------------------|---------------|
| 2       | Cardiovascular drugs 1 You will obtain knowledge of drugs used in hypertension.  | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 3       | Cardiovascular drugs 2 You will obtain knowledge of drugs used in hypertension.  | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 4       | Cardiovascular drugs 3 You will obtain knowledge of drugs used in heart failure.   | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 5       | Cardiovascular drugs 4 You will obtain knowledge of drugs used in the treatment of angina pectoris.                                  | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 6       | Cardiovascular drugs 5 You will obtain knowledge of antiarrhythmic drugs.  | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 7       | Cardiovascular drugs 6 You will study the things to be careful about the patients who take cardiovascular drugs in dental treatment. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 8       | Cardiovascular drugs 7 You will study the things to be careful about the patients who take cardiovascular drugs in dental treatment. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 9       | Central nerves system drugs 1 You will obtain knowledge of mental disorder.  | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Pharmacology

|                        |                               |         |                    |            |              |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |              |          |        |

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|--|--|---------------------------------|----------------------------|---------------|
| 10      | Central nerves system drugs 2<br>You will obtain knowledge of antidepressants.   | Practice<br>(Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 11      | Central nerves system drugs 3<br>You will obtain knowledge of drugs used in mania.   | Practice<br>(Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 12      | Central nerves system drugs 4<br>You will obtain knowledge of drugs used in Alzheimer disease.                             | Practice<br>(Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 13      | Central nerves system drugs 5<br>You will obtain knowledge of antipsychotic drugs.   | Practice<br>(Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 14      | Central nerves system drugs 6<br>You will study alcoholism and drug dependence.  | Practice<br>(Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 15      | Summary You will study the relationship between dental treatments and cardiovascular drugs or central nerves system drugs. | Lecture and practice<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |

# Pharmacology

|                        |                               |        |         |            |            |          |        |  |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |         |            |            |          |        |  |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |         |            |            |          |        |  |

## Course Description

【Language】 Japanese In this course, you will read the literature of drug which has a close relationship with dental treatments and obtain the up-to-date knowledge of drugs. You will study the adverse effects of drugs used in dental treatment.

## Attainment Objectives

1. You will administer drugs to patients with effectively and safety.
2. You will obtain the up-to-date knowledge of drugs.
3. You will read scientific articles logically.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| The antimicrobial stewardship textbook for lifelong continuing education |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| oral presentation                    | 50%   |
| Activities in lectures and exercises | 50%   |

## Etc

Student consultation: Accepted at any time by email.

## Study Method

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le | Lecture rooms |
|---------|---|---|---------------------------------|---------------------|---------------|
|         |   |   | TAKEUCHI HIROSHI<br>HIGASHI SEN |                     |               |
| 1       | You will discuss the lecture and practice in this course. | Lecture<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                     |               |

# Pharmacology

|                        |                               |        |         |            |              |          |        |  |
|------------------------|-------------------------------|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |         |            |              |          |        |  |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |         |            |              |          |        |  |

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|--|---------------------------------|----------------------------|---------------|
| 2       | Antimicrobial drugs 1 You will obtain knowledge of the theory of PK-PD.                                   | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 3       | Antimicrobial drugs 2 You will obtain knowledge of the theory of PK-PD.                                   | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 4       | Antimicrobial drugs 3 You will study resistant bacteria.  | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 5       | Antimicrobial drugs 4 You will obtain knowledge of carbapenem antibiotics.                                | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 6       | Antiviral drugs You will obtain knowledge of new anti-influenza drugs.                                    | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 7       | Antiplatelet drugs 1 You will study the coagulation of blood and fibrinolytic system.                     | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 8       | Antiplatelet drugs 2 You will obtain knowledge of new antiplatelet drugs.                                 | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 9       | Antiplatelet drugs 3 You will study the relationship between dental treatment and new antiplatelet drugs. | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 10      | You will study the guideline for use of the coagulation of blood inhibitors.                              | Lecture (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Pharmacology

|                        |                               |        |         |            |              |          |        |  |
|------------------------|-------------------------------|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |         |            |              |          |        |  |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |         |            |              |          |        |  |

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|---|---------------------------------|----------------------------|---------------|
| 11      | Antifungal drugs 1 You will obtain knowledge of antifungal drugs. You will study the application of antifungal drugs in dental treatment. | Lecture (Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 12      | Antifungal drugs 2 You will study the drug-interaction of antifungal drugs.   | Lecture (Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 13      | Pharmaceuticals for osteoporosis 1 You will obtain knowledge of bisphosphonates.  | Lecture (Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 14      | Pharmaceuticals for osteoporosis 2 You will study the adverse effect of bisphosphonates.  | Lecture (Combination of on-line and in-person class)              | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 15      | Summary You will study the administration of drugs in dental treatment with safety.   | Lecture and practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |

# Pharmacology

|                        |                               |         |                    |            |            |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |            |          |        |

## Course Description

【Language】 Japanese In this course, you will learn about basic knowledge, mechanism of action, clinical application, and proper use of newly developed drugs.

## Attainment Objectives

1. You can obtain and understand the latest information of newly developed drugs.
2. You can explain informations about newly developed drugs, focusing on molecular targeting drugs.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Documents prepared by each person in charge. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| oral presentation                    | 50%   |
| Activities in lectures and exercises | 50%   |

## Etc

Student consultation: Accepted at any time by email.

## Study Method

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|---|---------------------------------|----------------------------|---------------|
| 1       | Orientation. Learn how to collect information on newly developed drugs.   | Lecture (Combination of on-line and in-person class)  | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |
| 2       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Pharmacology

|                        |                               |         |                    |            |            |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |            |          |        |

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|---|---------------------------------|----------------------------|---------------|
| 3       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 4       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 5       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 6       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 7       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 8       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 9       | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Pharmacology

|                        |                               |        |                    |            |              |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |              |          |        |

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|---|---------------------------------|----------------------------|---------------|
| 10      | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 11      | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 12      | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 13      | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 14      | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Practice (Combination of on-line and in-person class)             | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 15      | The person in charge of the presentation introduces and explains newly developed drugs, and learns how to collect information and present it. | Lecture and practice (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |

# Journal Club - Current Topics for Drug Discovery -

|                        |                               |        |         |            |            |          |        |
|------------------------|-------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |         |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |         |            |            |          |        |

## Course Description

Understand and introduce articles about current topics of life sciences to provide hints for drug discovery.

## Attainment Objectives

1. You can read scientific articles logically.
2. You can understand and review articles about basic life science.
3. You can introduce articles about basic life science to let the audience understand the content.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Choose an article that you would like to introduce and discuss with the members. |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Literature and reference books to be introduced are individually selected by the person in charge |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| oral presentations         | 50%   |
| Discussions and activities | 50%   |

## Etc

Anytime, but an appointment is required prior to visit our office.

## Study Method

| Lecture | Contents | Methods | Instructor                      | before-and-after Le | Lecture rooms |
|---------|----------|---------|---------------------------------|---------------------|---------------|
|         |          |         | TAKEUCHI HIROSHI<br>HIGASHI SEN |                     |               |

2025年度

subject code:211075

# Journal Club - Current Topics for Drug Discovery -

|                        |                               |        |         |            |              |          |        |
|------------------------|-------------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |         |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |         |            |              |          |        |

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le                          | Lecture rooms |
|---------|---|---|---------------------------------|--|---------------|
| 1 ~ 15  | Understand the article and introduce it including the background of the study, discuss about the possible application for drug discovery. | Lecture and Practice including Presentation and Discussion (Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Choose a topic and prepare for presentation. |               |

# Seminar in Molecular Pharmacology

|                        |                               |         |                    |            |            |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese Learn basic techniques required for pharmacological experiments. Learn the methods to prepare recombinant protein and examine effects of drugs using it.

## Attainment Objectives

1. You can explain how to prepare recombinant proteins.
2. You can design and prepare DNA constructs for preparing recombinant proteins.
3. You can prepare recombinant proteins.
4. You can perform in vitro pharmacological experiments using recombinant proteins.

## Grading Criteria and Method of Evaluation

| Evaluation item                       | Ratio |
|---------------------------------------|-------|
| oral presentation                     | 30%   |
| Activities in lectures and practicies | 70%   |

## Etc

Lecture with writing on the whiteboard. Textbooks will be recommended to referring the course contents.

## Study Method

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le            | Lecture rooms |
|---------|---|---|---------------------------------|--------------------------------|---------------|
|         |   |   | TAKEUCHI HIROSHI<br>HIGASHI SEN |                                |               |
| 1       | OrientationLearn overall process of the examination.  | Lecture<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of the handout |               |
| 2       | Pre-preparation of bacterial expression DNA constructLearn how to obtain the information of the genes of interest and design the construct. | Practice  | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results          |               |

# Seminar in Molecular Pharmacology

|                        |                               |         |                    |            |              |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le   | Lecture rooms |
|---------|---|----------|---------------------------------|-----------------------|---------------|
| 3       | Preparation of bacterial expression DNA construct<br>(1) Learn how to prepare the gene of interest by PCR and the vector for cloning.                                     | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 4       | Preparation of bacterial expression DNA construct<br>(2) Learn how to judge the result of cloning.  | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 5       | Confirming expression of recombinant protein (1) Learn how to culture bacteria to induce expression of recombinant protein and prepare sample for analysis of expression. | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 6       | Confirming expression of recombinant protein (2) Learn how to analyze the expression of recombinant protein; SDS-PAGE.  | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 7       | Preparation of recombinant protein (1) Learn how to optimize introducing condition in large scale culture for preparing recombinant protein.                              | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 8       | Preparation of recombinant protein (2) Learn how to purify recombinant protein from the lysate of bacteria.   | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 9       | Preparation of recombinant protein (3) Learn how to examine concentration and purity of the prepared protein.   | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 10      | In vitro assay using the recombinant protein (1) Learn how to prepare samples for examining binding activity of the prepared protein.                                     | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |

# Seminar in Molecular Pharmacology

|                        |                               |        |                    |            |              |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le                                     | Lecture rooms |
|---------|---|--|---------------------------------|---|---------------|
| 11      | In vitro assay using the recombinant protein (2) Learn how to examine binding activity of the prepared protein: SDS-PAGE.             | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 12      | In vitro assay using the recombinant protein (3) Learn how to examine enzymatic activity of the prepared protein.                     | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 13      | In vitro assay using the recombinant protein (4) Learn how to examine effects of drugs on enzymatic activity of the prepared protein. | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 14      | Summarizing the data<br>Summarize your data and prepare for the presentation.   | Practice<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Summarize your results and prepare for the presentation |               |
| 15      | Presentation of the summarized data Present your summarized data and discuss about the result.  | Practice<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Summarize your results and prepare for the presentation |               |

# Seminar in Cellular and Molecular Pharmacology

|                        |                               |        |                    |            |         |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30      | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |         |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |         |          |        |

## Course Description

【Language】 English and Japanese Learn basic techniques required for pharmacological experiments. Learn the methods to examine effects of drugs using techniques for gene modification and mammalian cell culture.

## Attainment Objectives

1. You can explain how to control exogenous gene expression in cultured cells.
2. You can design and prepare DNA constructs for gene expression.
3. You can transfect exogenous gene into cultured cells.
4. You can examine effect of drugs using genetically modified cultured cells.

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| oral presentation                    | 30%   |
| Activities in lectures and exercises | 70%   |

## Etc

Lecture with writing on the whiteboard. Textbooks will be recommended to referring the course contents.

## Study Method

| Lecture | Contents  | Methods   | Instructor                      | before-and-after Le            | Lecture rooms |
|---------|---|---|---------------------------------|--------------------------------|---------------|
| 1       | Orientation<br>Learn overall process of the examination.  | Lecture<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of the handout |               |
| 2       | Pre-preparation of mammalian expression DNA construct<br>Learn how to obtain the information of the genes of interest and design the construct. | Practice  | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results          |               |

# Seminar in Cellular and Molecular Pharmacology

|                        |                               |         |                    |            |         |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30      | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |         |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |         |          |        |

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le   | Lecture rooms |
|---------|--|----------|---------------------------------|-----------------------|---------------|
| 3       | Preparation of mammalian expression DNA construct<br>(1)Learn how to prepare the interest gene and the vector for cloning.   | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 4       | Preparation of mammalian expression DNA construct<br>(2)Learn how to judge the result of cloning.  | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 5       | Introducing genes into cultured cells and confirming the expression (1)Learn how to introduce the prepared expression constructs into cultured cells.                                      | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 6       | Introducing genes into cultured cells and confirming the expression (2)Learn how to introduce the prepared expression constructs into cultured cells.                                      | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 7       | Introducing genes into cultured cells and confirming the expression (3)Learn how to check expression of the introduced gene. (Microscopic examination and electrophoresis of the protein). | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 8       | Introducing genes into cultured cells and confirming the expression (4)Learn how to check expression of the gene (Western blotting).   | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |
| 9       | Examining the effect of drugs using the transfected cells<br>(1)Learn how to observe translocation of the intracellular protein in response to drug treatment.                             | Practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results |               |

# Seminar in Cellular and Molecular Pharmacology

|                        |                               |         |                    |            |         |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30      | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |         |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |         |          |        |

| Lecture | Contents  | Methods  | Instructor                      | before-and-after Le                                     | Lecture rooms |
|---------|---|--|---------------------------------|---|---------------|
| 10      | Examining the effect of drugs using the transfected cells<br>(2) Learn how to evaluate effect of the drug based on phosphorylation of the intracellular protein (Preparation of samples).               | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 11      | Examining the effect of drugs using the transfected cells<br>(3) Learn how to evaluate effect of the drug based on phosphorylation of the intracellular protein (Electrophoresis).                      | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 12      | Examining the effect of drugs using the transfected cells<br>(4) Learn how to evaluate effect of the drug based on phosphorylation of the intracellular protein (Detection and judgment of the result). | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 13      | Examining the effect of drugs using the transfected cells<br>(5) Learn how to evaluate effect of the drug based on intracellular calcium level (Preparation of cells).                                  | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 14      | Examining the effect of drugs using the transfected cells<br>(6) Learn how to evaluate effect of the drug based on intracellular calcium level (Calcium imaging).                                       | Practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Recording the results                                   |               |
| 15      | Summary of the data and discussion<br>Summarize your data and present/discuss the result.   | Practice<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Summarize your results and prepare for the presentation |               |

# Seminar in Pharmacology

|                        |                              |        |                    |            |            |          |        |
|------------------------|------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry     |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                       | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI             |        |                    |            |            |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI,HIGASHI SEN |        |                    |            |            |          |        |

## Course Description

【Language】 Japanese In this course, you will study the basic knowledge and experimental procedures for animal experiment. You will study the animal experiment protocol drafting.

## Attainment Objectives

1. You will explain the laboratory animals.
2. You will draft an animal experiment protocol.
3. You will administer drugs to animals.
4. You will explain and practice the basic pharmacological experiment.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Guidelines for proper conduct of animal experiments |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| oral presentation                    | 30%   |
| Activities in lectures and exercises | 70%   |

## Study Method

| Lecture | Contents   | Methods   | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|--|---|---------------------------------|----------------------------|---------------|
|         |  |   | TAKEUCHI HIROSHI<br>HIGASHI SEN |                            |               |
| 1       | You will discuss the lecture and practice in this course.                        | Lecture<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Check the schedule         |               |
| 2       | Laboratory animal science 1<br>You will study the outline of laboratory animals. | Lecture and practice                                    | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Seminar in Pharmacology

|                        |                               |         |                    |            |              |          |        |
|------------------------|-------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |         |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |         |                    |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor                      | before-and-after Le        | Lecture rooms |
|---------|---|----------------------|---------------------------------|----------------------------|---------------|
| 3       | Laboratory animal science 2<br>You will obtain knowledge of laws and guidelines for laboratory animals.                                   | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 4       | Laboratory animal science 3<br>You will obtain knowledge of animal welfare for laboratory animals.  | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 5       | Laboratory animal science 4<br>You will obtain knowledge of the administration of drug, anesthetics management and euthanasia procedures. | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 6       | Laboratory animal science 5<br>You will obtain knowledge of the administration of drug, anesthetics management and euthanasia procedures. | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 7       | Laboratory animal science 6<br>You will obtain knowledge of the administration of drug, anesthetics management and euthanasia procedures. | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 8       | Pharmacological experiment 1<br>You will obtain knowledge of the acute toxicity test.   | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 9       | Pharmacological experiment 2<br>You will obtain knowledge of the chronic toxicity test.   | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 10      | Pharmacological experiment 3<br>You will obtain knowledge of the local irritation test.   | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |
| 11      | Pharmacological experiment 4<br>You will obtain knowledge of another toxicity tests.  | Lecture and practice | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout |               |

# Seminar in Pharmacology

|                        |                               |        |                    |            |              |          |        |
|------------------------|-------------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry      |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                        | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | TAKEUCHI HIROSHI              |        |                    |            |              |          |        |
| Instructor(s)          | TAKEUCHI HIROSHI, HIGASHI SEN |        |                    |            |              |          |        |

| Lecture | Contents   | Methods  | Instructor                      | before-and-after Le                    | Lecture rooms |
|---------|--|--|---------------------------------|--|---------------|
| 12      | Drafting of animal experiment protocol 1 You will study the method of drafting the animal experiment protocol. | Lecture and practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout             |               |
| 13      | Drafting of animal experiment protocol 2 You will study the method of drafting the animal experiment protocol. | Lecture and practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout             |               |
| 14      | Drafting of animal experiment protocol 3 You will draft the animal experiment protocol.                        | Lecture and practice   | TAKEUCHI HIROSHI<br>HIGASHI SEN | Careful reading of handout             |               |
| 15      | Summary You will summarize pharmacological experiments.  | Lecture and practice<br>(Combination of on-line and in-person class) | TAKEUCHI HIROSHI<br>HIGASHI SEN | Summarize the points to handle animals |               |

# Clinical Epidemiology

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | KAKUDATE NAOKI           |        |                    |            |            |          |        |
| Instructor(s)          | KAKUDATE NAOKI           |        |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this lecture, you will learn basic aspects of clinical epidemiology and study designs. You will learn about critical appraisal of research articles according to each study design, which will lead to develop practical skills in Evidence-Based Dentistry (EBD).

## Attainment Objectives

At the completion of this course, you will be able to: 1. Understand the outlines of clinical epidemiology. 2. Understand how to read the structure of research articles and abstracts on clinical epidemiology. 3. Understand the outlines of clinical epidemiological study designs. 4. Critically appraise clinical research papers and structured abstracts. 5. Practice Evidence-Based Dentistry (EBD).

## Textbooks

| Title                                    | Author | Publisher      |
|--|--------|----------------|
| Introduction to Evidence-Based Dentistry |        | Nagasue Shoten |

## Reference Books

| Title   | Author           | Publisher                     |
|---|------------------|-------------------------------|
| Designing Clinical Research                             | Stephen B Hulley | Lippincott Williams & Wilkins |
| Guide to Practice-Based Research and Scientific Writing |                  | Ishiyaku Publishers           |

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 100%  |

## Etc

【Office hour】 Before and after every class, or email at any time.

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|------------------|---------|------------|---------------------|---------------|
|                  |         |            |                     |               |

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1 ~ 2 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |              |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor      | before-and-after Le  | Lecture rooms |
|---------|---|----------|-----------------|--|---------------|
| 1,2     | Introduction: You will learn about the definition of clinical epidemiology and study designs.   | Lecture  | KAKU DATE NAOKI | Definition of clinical epidemiology                              |               |
| 3,4     | Research articles and Structured abstracts: You will learn about the structure of research articles and abstracts on clinical epidemiology. | Lecture  | KAKU DATE NAOKI | Structure of the research articles and abstracts                 |               |
| 5,6     | Literature search : You will learn how to search the literature using PubMed.   | Practice | KAKU DATE NAOKI | Literature search/PubMed   |               |
| 7,8     | Literature search : You will learn how to search the literature using the Cochrane library and Minds.                                       | Practice | KAKU DATE NAOKI | Literature search/Cochrane review・Minds                          |               |
| 9,10    | Study design : You will learn about the design of cross sectional study and case control study.   | Lecture  | KAKU DATE NAOKI | Cross sectional study and case control study                     |               |
| 11,12   | Critical Appraisal : You will learn about critical appraisal of reports of cross sectional study.   | Practice | KAKU DATE NAOKI | Critical appraisal of research articles of cross sectional study |               |
| 13,14   | Study design : You will learn about the design of cohort study.   | Lecture  | KAKU DATE NAOKI | Cohort study   |               |
| 15,16   | Critical Appraisal : You will learn about critical appraisal of reports of cohort study   | Practice | KAKU DATE NAOKI | Critical appraisal of research articles of cohort study          |               |
| 17,18   | Study design :You will learn about the design of interventional study.  | Lecture  | KAKU DATE NAOKI | Interventional Study   |               |

# Clinical Epidemiology

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |            |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor      | before-and-after Le   | Lecture rooms |
|---------|--|----------|-----------------|---|---------------|
| 19,20   | Critical Appraisal : You will learn about critical appraisal of reports of interventional study              | Practice | KAKU DATE NAOKI | Critical appraisal of research articles of interventional study               |               |
| 21,22   | Study design : You will learn about the design of systematic reviews and meta-analyses.                      | Lecture  | KAKU DATE NAOKI | Systematic reviews and meta-analyses  |               |
| 23,24   | Critical Appraisal : You will learn how to critically appraise systematic reviews and meta-analyses.         | Practice | KAKU DATE NAOKI | Critical appraisal of research papers of systematic reviews and meta-analysis |               |
| 25,26   | Study design : You will learn about the design of diagnosis and screening.                                   | Practice | KAKU DATE NAOKI | Study design of diagnosis and screening.                                      |               |
| 27,28   | Critical Appraisal : You will learn how to critically appraise diagnosis and screening.                      | Practice | KAKU DATE NAOKI | Critical appraisal of research papers of diagnosis and screening              |               |
| 29,30   | Clinical Guidelines: You will learn about the role of clinical guidelines and about AGREE and GRADE systems. | Practice | KAKU DATE NAOKI | AGREE and GRADE systems.  |               |

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKUDATE NAOKI           |         |                    |            |              |          |        |
| Instructor(s)          | KAKUDATE NAOKI           |         |                    |            |              |          |        |

## Course Description

【Language】 English and Japanese In this lecture, you will obtain specialized knowledge on clinical epidemiology and applied skills in the conduct of clinical epidemiological study. In addition, you will make a study design and statistical design protocol based on a research question. Finally you can develop the practical ability to create a study.

## Attainment Objectives

At the completion of this course, you will be able to: 1. Formulate a research question derived from your own dental practice. 2. Develop a conceptual framework 3. Develop an appropriate clinical epidemiological study design. 4. Develop an appropriate statistical design. 5. Create a study protocol.

## Reference Books

| Title   | Author           | Publisher                     |
|---|------------------|-------------------------------|
| Introduction to Evidence-Based Dentistry                |                  | Nagasue Shoten                |
| Designing Clinical Research                             | Stephen B Hulley | Lippincott Williams & Wilkins |
| Guide to Practice-Based Research and Scientific Writing |                  | Ishiyaku Publishers           |

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 100%  |

## Etc

【Office hour】 Before and after every class, or email at any time.

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKULATE NAOKI           |         |                    |            |              |          |        |
| Instructor(s)          | KAKULATE NAOKI           |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods              | Instructor     | before-and-after Le                                      | Lecture rooms |
|---------|---|----------------------|----------------|--|---------------|
| 1,2     | Introduction to clinical research: You will learn how to formulate an answerable question.  | Lecture              | KAKULATE NAOKI | PICO/Finer 's check                                      |               |
| 3,4     | Setting of outcome measures: You will learn about indicators in measuring outcomes, measurement methods, and patient-reported outcomes.   | Lecture              | KAKULATE NAOKI | Outcome indicators                                       |               |
| 5,6     | Hypothetical conceptual framework: You will learn how to build a hypothetical conceptual framework.   | Lecture and Practice | KAKULATE NAOKI | Hypothetical conceptual framework                        |               |
| 7,8     | Planning of clinical epidemiology study design: You will devise an appropriate clinical epidemiology study design based on your own research question. You will learn about research methods consistent with various types of design. | Lecture and Practice | KAKULATE NAOKI | Study design of clinical epidemiology                    |               |
| 9,10    | Controlling bias: You will learn how to control information, selection, and confounding bias.   | Lecture              | KAKULATE NAOKI | Controlling bias   |               |
| 11,12   | Data measurement methods: You will learn about the reliability and validity of data measurement methods, including those of calibration.  | Lecture and Practice | KAKULATE NAOKI | Reliability and validity of data measurement             |               |
| 13,14   | Statistical analysis part : You will learn about types of data, distribution, descriptive statistics, odds ratio, risk ratio, and the difference between risk difference and hazard ratio.  | Lecture and Practice | KAKULATE NAOKI | Odds ratio, Risk ratio, Risk difference and Hazard ratio |               |

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKULATE NAOKI           |         |                    |            |              |          |        |
| Instructor(s)          | KAKULATE NAOKI           |         |                    |            |              |          |        |

| Lecture | Contents   | Methods              | Instructor     | before-and-after Le  | Lecture rooms |
|---------|--|----------------------|----------------|--|---------------|
| 15,16   | Statistical analysis part :<br>You will learn about statistical hypothesis testing, P values and level of significance, confidence intervals, correlation, and correlation coefficient.  | Lecture and Practice | KAKULATE NAOKI | P value and level of significance, confidence intervals, correlation, and correlation coefficient. |               |
| 17,18   | Statistical analysis part :<br>You will learn about statistical test methods for comparison between two groups and comparison among multi-groups, and errors in the test.                | Lecture and Practice | KAKULATE NAOKI | Statistical test methods for comparison between two groups and comparison among multi-groups       |               |
| 19,20   | Statistical analysis part :<br>You will learn about multivariate analyses including logistic regression analysis and multiple regression analysis.                                       | Lecture and Practice | KAKULATE NAOKI | Logistic regression analysis and multiple regression analysis                                      |               |
| 21,22   | Statistical analysis part :<br>You will learn about methods for survival analysis including Cox regression (proportional hazards model), Kaplan-Meier curves, and log-rank testing.      | Lecture and Practice | KAKULATE NAOKI | Survival analysis  |               |
| 23,24   | Statistical analysis part :<br>You will learn how to estimate sample size.   | Lecture and Practice | KAKULATE NAOKI | Sample size estimation   |               |
| 25,26   | Questionnaire survey: You will learn how to produce questionnaires and question items to reduce information bias.  | Lecture and Practice | KAKULATE NAOKI | Questionnaire development  |               |
| 27,28   | Research protocol: You will learn about guidelines for research reports including the Consort statement and Strobe statement, and understand how to create efficient research protocols. | Lecture              | KAKULATE NAOKI | How to make a research protocol  |               |

2025年度

subject code:211082

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |              |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |              |          |        |

| Lecture | Contents   | Methods | Instructor      | before-and-after Le                                 | Lecture rooms |
|---------|--|---------|-----------------|---|---------------|
| 29,30   | Ethical considerations in clinical epidemiology research: You will learn about various ethical guidelines, document-based applications to Institutional Review Boards, and registration of clinical research trials. | Lecture | KAKU DATE NAOKI | Research protocol for an Institutional Review Board |               |

# Clinical Epidemiology

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 3~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | KAKUDATE NAOKI           |        |                    |            |            |          |        |
| Instructor(s)          | KAKUDATE NAOKI           |        |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this course, you will study examples of various types of clinical epidemiology research in the field of dentistry. In addition, you will learn about international clinical epidemiological studies, and understand the significance and methodology of Practice-based Research.

## Attainment Objectives

At the completion of this course, you will: 1. understand the theory and examples of various types of clinical epidemiology research in the field of dentistry. 2. learn about international clinical epidemiology research. 3. understand Practice-based Research. 4. understand the Evidence-Practice Gap. 5. learn how to create a clinical epidemiology research paper.

## Reference Books

| Title   | Author | Publisher                     |
|---|--------|-------------------------------|
| Introduction to Evidence-Based Dentistry                |        | Nagasue Shoten                |
| Designing Clinical Research                             |        | Lippincott Williams & Wilkins |
| Guide to Practice-Based Research and Scientific Writing |        | Ishiyaku Publishers           |

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 100%  |

## Etc

【Office hour】 Before and after every class, or email at any time.

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 3 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |              |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le                                   | Lecture rooms |
|---------|--|----------------------|-----------------|---|---------------|
| 1,2     | Clinical epidemiology of dental caries: You will learn about the clinical epidemiology of dental caries, including its causes, diagnosis, treatment, prevention, and prognosis.                            | Lecture and Practice | KAKU DATE NAOKI | Clinical epidemiology of dental caries                |               |
| 3,4     | Clinical epidemiology of periodontal disease: You will learn about the clinical epidemiology of periodontal disease, including its causes, diagnosis, treatment, prevention, and prognosis.                | Lecture and Practice | KAKU DATE NAOKI | Clinical epidemiology of periodontal disease          |               |
| 5,6     | Clinical epidemiology of temporomandibular disorders: You will learn about the clinical epidemiology of temporomandibular disorders including its causes, diagnosis, treatment, prevention, and prognosis. | Lecture and Practice | KAKU DATE NAOKI | Clinical epidemiology of temporomandibular disorders  |               |
| 7,8     | Clinical epidemiology of crown restoration: You will learn about the clinical epidemiology of prognosis and survival period of dental restoration.   | Lecture and Practice | KAKU DATE NAOKI | Clinical epidemiology of dental restoration           |               |
| 9,10    | Clinical epidemiology of dental health guidance: You will learn about the clinical epidemiology of dental health instruction.  | Lecture and Practice | KAKU DATE NAOKI | Clinical epidemiology about dental health instruction |               |
| 11,12   | Patient-based outcomes research: You will understand patient-reported outcomes such as patient satisfaction and QOL, and learn about case studies in the field of dentistry.                               | Lecture and Practice | KAKU DATE NAOKI | Patient-reported outcome research                     |               |

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 3 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |              |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |              |          |        |

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le                                    | Lecture rooms |
|---------|--|----------------------|-----------------|--|---------------|
| 13,14   | Clinical epidemiology about behavioral science: You will understand a variety of behavioral science theories, and learn about case studies in the field of dentistry.                  | Lecture and Practice | KAKU DATE NAOKI | Health behavioral science theories                     |               |
| 15,16   | Clinical epidemiology of cost-effectiveness in dental treatment: You will understand cost-effectiveness in dental treatment, and learn about case studies in the field of dentistry.   | Lecture and Practice | KAKU DATE NAOKI | Clinical epidemiology of cost-effectiveness            |               |
| 17,18   | Clinical epidemiology of cost-effectiveness in dental treatment: You will understand cost-effectiveness in dental treatment, and learn about case studies in the field of dentistry.   | Lecture and Practice | KAKU DATE NAOKI | Studies in the quality of health care                  |               |
| 19,20   | Practice-Based Research: You will understand the history, meaning, and current status of Practice-based Research, and learn about research examples.                                   | Lecture and Practice | KAKU DATE NAOKI | Practice-Based Research                                |               |
| 21,22   | Evidence-Practice Gap: You will understand the Evidence-Practice Gap, and learn about research examples.   | Lecture and Practice | KAKU DATE NAOKI | Evidence-Practice Gap                                  |               |
| 23,24   | International clinical epidemiology research: You will understand trends in international clinical epidemiology research, and learn about research examples in the field of dentistry. | Lecture and Practice | KAKU DATE NAOKI | Trends in international clinical epidemiology research |               |

# Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 3 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAKULATE NAOKI           |         |                    |            |              |          |        |
| Instructor(s)          | KAKULATE NAOKI           |         |                    |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor     | before-and-after Le  | Lecture rooms |
|---------|---|----------------------|----------------|--|---------------|
| 25,26   | International comparative study on dental practice: You will learn about the international comparison of dental practice patterns, and consider differences in dental health care system. | Lecture and Practice | KAKULATE NAOKI | International comparative study on dental practice           |               |
| 27,28   | Dental health care policy and clinical epidemiology: You will learn about the relationship of dental health care policy and clinical epidemiology research.                               | Lecture and Practice | KAKULATE NAOKI | Dental health care policy and clinical epidemiology research |               |
| 29,30   | Creation of clinical epidemiology research papers: You will learn how to write clinical epidemiology research papers and methods of statistical reporting.                                | Lecture and Practice | KAKULATE NAOKI | Creation of clinical epidemiology research papers            |               |

# Clinical Epidemiology Practice

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |            |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |            |          |        |

## Course Description

You will participate in research progress meetings for presentation of the research content and achievements, and strengthen your understanding of research contents through discussion and Question & Answer. You will review your own research on the basis of the feedback received from the meeting participants, including the supervisor, and improve the quality of your research.

## Attainment Objectives

1. You understand and are able to explain research methods. 2. You can logically interpret and explain your own research results (data analysis). 3. You can create a slide explaining the progress and results of your research and can give an easy-to-understand presentation.

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 50%   |
| presentation and Q&A                | 50%   |

## Etc

You will select the latest papers related to your research theme. The presenter will prepare materials for presentation in slides, and pre-distribute printed materials to participants. 【Office hour】 Before and after every class, or email at any time.

## Study Method

| Lecture | Contents   | Methods  | Instructor      | before-and-after Le  | Lecture rooms |
|---------|--|--|-----------------|--|---------------|
| 1~15    | You will summarize in slides your research progress and data analysis, and give a presentation. The presenter shall answer questions from the participants, and through the discussion you will better understand the research methods and contents. | Reporting and presentation of, and debate about research progress. | KAKU DATE NAOKI | Reading of the literature and collection of related literature |               |

# Journal Club in Clinical Epidemiology

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KAKU DATE NAOKI          |         |                    |            |              |          |        |
| Instructor(s)          | KAKU DATE NAOKI          |         |                    |            |              |          |        |

## Course Description

You will participate in research progress meetings for presentation of the research content and achievements, and strengthen your understanding of research contents through discussion and Question & Answer. You will review your own research on the basis of the feedback received from the meeting participants, including the supervisor, and improve the quality of your research.

## Attainment Objectives

1. You understand and are able to explain research methods. 2. You can logically interpret and explain your own research results (data analysis). 3. You can create a slide explaining the progress and results of your research and can give an easy-to-understand presentation.

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 50%   |
| presentation and Q&A                | 50%   |

## Etc

You will select the latest papers related to your research theme. The presenter will prepare materials for presentation in slides, and pre-distribute printed materials to participants. 【Office hour】 Before and after every class, or email at any time.

## Study Method

| Lecture | Contents   | Methods  | Instructor      | before-and-after Le  | Lecture rooms |
|---------|--|--|-----------------|--|---------------|
| 1 ~ 15  | You will summarize in slides your research progress and data analysis, and give a presentation. The presenter shall answer questions from the participants, and through the discussion you will better understand the research methods and contents. | Reporting and presentation of, and debate about research progress. | KAKU DATE NAOKI | Reading of the literature and collection of related literature |               |

# Oral Health Science

|                        |  |        |        |            |            |          |        |
|------------------------|--|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO  |        |        |            |            |          |        |
| Instructor(s)          | AKIFUSA SUMIO, FUJII WATARU, SOH INHO, SATOU TSUYOSHI, IZUMI MAYA, FUNAHARA MADOKA |        |        |            |            |          |        |

## Course Description

【Language】 Japanese To obtain the ability for research and instruction on oral health sciences, students learn the recent oral health-related evidences and the research skills/analytical methods with lectures in omnibus form

## Attainment Objectives

You should achieve the basic and applied knowledge indicated below.

You can 1. explain the role of dental personnel based on knowledge of the health policy on public health;

2. explain the logical perspective and the research methods to resolve the problems of oral health-related diseases /disorder;

3. explain the basic / clinical methods concerning evidence-based medicine (EBM) on oral health sciences;

4. imagine the oral health related-professional value and ability based on clients background;

5. explain the methodology to provide relationship between oral status/diseases and general status;

6. explain for higher-order brain, neurophysiological, and non-invasive research methods on feeding behavior;

7. explain the logical perspective and the research methods to resolve the problems of nutritional-related health or disease.

## Grading Criteria and Method of Evaluation

| Evaluation item                   | Ratio |
|-----------------------------------|-------|
| evaluation of after-action report | 90%   |
| Oral examination                  | 10%   |

## Etc

Student consultation: at all times

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|------------------|---------|------------|---------------------|---------------|
|                  |         |            |                     |               |

# Oral Health Science

|                        |  |         |        |            |            |          |        |
|------------------------|--|---------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO  |         |        |            |            |          |        |
| Instructor(s)          | AKIFUSA SUMIO, FUJII WATARU, SOH INHO, SATOU TSUYOSHI, IZUMI MAYA, FUNAHARA MADOKA |         |        |            |            |          |        |

| Lecture | Contents   | Methods                        | Instructor    | before-and-after Le  | Lecture rooms |
|---------|--|--------------------------------|---------------|--|---------------|
| 1       | Public health and health policy (1)<br>To lecture system and policy of healthcare in public health. To discuss how research, human resources development, and other professional activities contribute to social system and policy on healthcare.        | remote lecture (Teams, Moodle) | SOH INHO      | before: system and policy of healthcare in public health<br>after: after-action report     |               |
| 2       | Public health and health policy (2)<br>To discuss how distribute limiting healthcare resource, based on knowledge that how research, human resources development, and other professional activities contribute to social system and policy on healthcare | remote lecture (Teams, Moodle) | SOH INHO      | before: distribution of healthcare resource<br>after: after-action report                  |               |
| 3       | Oral health related-perspective (1)<br>To discuss human health from dental health perspective, and strategy from micro to macro to maintain, enhance and recover human health.   | remote lecture (Teams, Moodle) | AKIFUSA SUMIO | before: concept of health<br>after: after-action report                                    |               |
| 4       | Oral health related-perspective (2)<br>To lecture dental health perspective regarding with caries and periodontal disease, and to discuss the problems and the solutions.  | remote lecture (Teams, Moodle) | AKIFUSA SUMIO | before: research reviews on caries and periodontal disease<br>after: after-action report   |               |
| 5       | Perspective of oral hygiene in convalescent and chronic phase<br>To lecture background of patients in convalescent and chronic phase with dental health perspective, and to discuss the study subjects and solutions.                                    | Lecture (Teams, Moodle)        | IZUMI MAYA    | before: states of patients in convalescent and chronic phase<br>after: after-action report |               |

# Oral Health Science

|                        |  |         |        |            |            |          |        |  |
|------------------------|--|---------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |         |        | Grades     | 1~2 grades | Semester | Winter |  |
| Subject                | Choice   | Methods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | AKIFUSA SUMIO  |         |        |            |            |          |        |  |
| Instructor(s)          | AKIFUSA SUMIO, FUJII WATARU, SOH INHO, SATOU TSUYOSHI, IZUMI MAYA, FUNAHARA MADOKA |         |        |            |            |          |        |  |

| Lecture | Contents  | Methods                 | Instructor      | before-and-after Le   | Lecture rooms |
|---------|---|-------------------------|-----------------|---|---------------|
| 6       | Oral adverse event and maintenance of oral function in acute phase<br>To lecture oral adverse event, maintenance of oral function and supporting treatment prevention methods in acute phase with dental health perspective, and to discuss the study subjects and solutions with referring related articles. | Lecture (Teams, Moodle) | FUNAHARA MADOKA | before: oral adverse event, maintenance of oral function and supporting treatment prevention methods in acute phase<br>after: after-action report |               |
| 7       | Perspective on higher education for dental hygienist (1)<br>In view of change of social situation and oral health, to lecture values and ability required of leader of professionals.   | Lecture (Teams, Moodle) | SATOU TSUYOSHI  | before: values and ability required of leader of professionals<br>after: after-action report  |               |
| 8       | Perspective on higher education for dental hygienist (2)<br>To lecture educational methods in medical and nursing, and to discuss educational methods to foster higher professionalism of oral health.  | Lecture (Teams, Moodle) | SATOU TSUYOSHI  | before: educational methods in medical and nursing<br>after: after-action report  |               |
| 9       | Methodology on relation with oral and general status (1)<br>to lecture experimental methods from past to present to have proven relationship between oral states or oral diseases and general states.   | Lecture (Teams, Moodle) | AKIFUSA SUMIO   | before: relationship between oral states or oral diseases and general states<br>after: after-action report  |               |
| 10      | Methodology on relation with oral and general status (2)<br>to lecture epidemiological methods from past to present to have proven relationship between oral states or oral diseases and general states.  | Lecture (Teams, Moodle) | AKIFUSA SUMIO   | before: relationship between oral states or oral diseases and general states<br>after: after-action report  |               |

# Oral Health Science

|                        |  |        |        |            |            |          |        |
|------------------------|--|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO  |        |        |            |            |          |        |
| Instructor(s)          | AKIFUSA SUMIO, FUJII WATARU, SOH INHO, SATOU TSUYOSHI, IZUMI MAYA, FUNAHARA MADOKA |        |        |            |            |          |        |

| Lecture | Contents  | Methods                       | Instructor             | before-and-after Le   | Lecture rooms |
|---------|---|-------------------------------|------------------------|---|---------------|
| 11      | medical practice for dysphagia (1)<br>To lecture clinical status of swallowing based on clinical knowledge on swallowing.   | Lecture<br>(Teams,<br>Moodle) | FUJII WATARU           | before: swallowing<br>after:<br>after-action<br>report  |               |
| 12      | medical practice for dysphagia (2)<br>To lecture support of swallowing via case studies.  | Lecture<br>(Teams,<br>Moodle) | FUJII WATARU           | before: support of<br>swallowing<br>after-action<br>report  |               |
| 13      | Dietetic perspective on health (1)<br>To lecture dietetics perspective regarding with health and life style related disease, and to discuss the problems and the solutions. | Lecture<br>(Teams,<br>Moodle) | TSUJISAWA<br>TOSHIYUKI | before: dietetics<br>perspective<br>regarding with<br>health and life<br>style related<br>disease<br>after:<br>after-action<br>report |               |
| 14      | Dietetic perspective on health (2)<br>To lecture dietetics perspective regarding with health and life style related disease, and to discuss the problems and the solutions. | Lecture<br>(Teams,<br>Moodle) | TSUJISAWA<br>TOSHIYUKI | before: dietetics<br>perspective<br>regarding with<br>health and life<br>style related<br>disease<br>after:<br>after-action<br>report |               |
| 15      | Summary   | Lecture<br>(Teams,<br>Moodle) | AKIFUSA SUMIO          | before: past<br>revies<br>after-action<br>report  |               |

# Oral Health Science

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | FUJII WATARU             |        |                    |            |            |          |        |
| Instructor(s)          | FUJII WATARU             |        |                    |            |            |          |        |

## Course Description

【Language】 Japanese

To understand most recent trend of discipline on oral health sciences, discuss the related papers of international journal.

## Attainment Objectives

1. Explain the contents of papers in English.
2. Explain the background of papers.
3. Explain the methods described in papers in detail.
4. Explain the results described in papers in detail.
5. Explain critically the discussion described in papers.
6. Perform presentation for the contents of the read papers.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Use papers and reference books provided by faculty members and literature in related fields searched |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| Presentation          | 50%   |
| questions and answers | 50%   |

## Etc

Consultation is accepted at any time.

2025年度

subject code:211092

# Oral Health Science

|                        |                          |        |                    |            |              |          |        |
|------------------------|--------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | FUJII WATARU             |        |                    |            |              |          |        |
| Instructor(s)          | FUJII WATARU             |        |                    |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods  | Instructor   | before-and-after Le   | Lecture rooms |
|---------|---|----------|--------------|---|---------------|
| 1 ~ 30  | Understand and explain the contents of most recent trend of discipline on oral health sciences. | Practice | FUJII WATARU | Attend the practice under the guidance of each instructor.<br>Paper search, after-action report |               |

# Oral Health Science

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | FUJII WATARU             |         |                    |            |            |          |        |
| Instructor(s)          | FUJII WATARU             |         |                    |            |            |          |        |

## Course Description

【Language】 Japanese

All teacher and students discuss on the outcome of study, to improve the quality of study, and to develop ability of presentation.

## Attainment Objectives

1. Explain logically the contents of your study.
2. Explain the background of your study in detail.
3. Answer questions on your study.

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| presentation          | 50%   |
| questions and answers | 50%   |

## Etc

Consultation is accepted at any time.

## Study Method

| Lecture | Contents  | Methods  | Instructor   | before-and-after Le   | Lecture rooms |
|---------|---|----------|--------------|---|---------------|
| 1-30    | Presentation of your study followed with question and answer. | Practice | FUJII WATARU | Attend the practice under the guidance of each instructor.<br>Paper search, after-action report |               |

# Practice of Oral Health Science

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry               |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                 | Mehods | Seminar | Total time | 60         | Credits  | 4      |
| Responsible Instructor | FUJII WATARU                           |        |         |            |            |          |        |
| Instructor(s)          | FUJII WATARU, SOH INHO, SATOU TSUYOSHI |        |         |            |            |          |        |

## Course Description

To acquire the latest knowledge and techniques in the field of oral health science, clinical practice will be conducted.

## Attainment Objectives

1. Conduct appropriate medical interviews.
2. Implement medical safety and infection prevention measures.
3. Develop a comprehensive dental hygiene process based on evidence-based medicine (EBM).
4. Practice dental preventive care, dental treatment assistance, and dental health guidance based on EBM.
5. Perform oral function management necessary to fulfill the social role of a dental hygienist.

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Clinical practice skills will be evaluated comprehensively. | 100%  |

## Etc

Consultation is accepted at any time.

## Study Method

| Lecture | Contents  | Methods  | Instructor                                 | before-and-after Le  | Lecture rooms |
|---------|---|----------|--|--|---------------|
| 1-30    | To learn the latest knowledge and techniques in the field of oral health science, clinical practice is carried out. | practice | FUJII WATARU<br>SOH INHO<br>SATOU TSUYOSHI | Attend the practice under the guidance of each instructor. |               |

# Advanced Oral health and Welfare Promotion

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO            |        |         |            |            |          |        |
| Instructor(s)          | AKIFUSA SUMIO            |        |         |            |            |          |        |

## Course Description

The purpose of this course is to practice actual activity of community dental healthcare and welfare using model case , based on the knowledge on community dental healthcare and welfare.

## Attainment Objectives

The ability to: (1) describe activities community health and welfare activities;  
 (2) describe collaboration of medical, health, and welfare section in oral healthcare;  
 (3) learn methods to drive the collaboration of medical, health, and welfare section in oral healthcare;  
 (4) learn knowledge of methods to practice oral HP/WP in community

## Textbooks

| Title  | Author             | Publisher         |
|--|--------------------|-------------------|
| 地方分権時代の健康政策実践書 みんなで楽しくできるヘルスプロモーション (Japanese) | Aut. 石井敏弘、中村譲治、その他 | Pub. ライフサイエンスセンター |

## Reference Books

| Title                     | Author                     | Publisher  |
|---------------------------|----------------------------|------------|
| 国民衛生の動向 (Japanese)        | Aut. 厚生労働統計協会編集            |            |
| 不平等が健康を損なう (Japanese)     | Aut. イチローカワチ, ブルース・P. ケネディ | Pub. 日本評論社 |
| ソーシャル・キャピタルと健康 (Japanese) | Aut. イチローカワチ               | Pub. 日本評論社 |

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| after-action report on all lectures | 80%   |
| practice assignments of No. 5 and 7 | 20%   |

# Advanced Oral health and Welfare Promotion

|                        |                          |         |         |            |              |          |        |
|------------------------|--------------------------|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO            |         |         |            |              |          |        |
| Instructor(s)          | AKIFUSA SUMIO            |         |         |            |              |          |        |

## Etc

Student who dose not attend the Advanced Oral Health and Welfare Promotion I can attend this course.

## Study Method

| Lecture | Contents   | Methods                    | Instructor    | before-and-after Le  | Lecture rooms |
|---------|--|----------------------------|---------------|--|---------------|
|         |  |                            | AKIFUSA SUMIO |  |               |
| 1       | Theory of health promotion<br>To learn general and new methods for health promotion.   | Lecture<br>(Teams, Moodle) | AKIFUSA SUMIO | before: PRECEDE-PROCEED model<br>after: after-action report                                |               |
| 2       | Welfare activity with oral healthcare<br>To learn roles and ideal state of oral health in welfare for older adults and impaired persons. | Lecture<br>(Teams, Moodle) | AKIFUSA SUMIO | before: old-age welfare, welfare for the disabled<br>after: after-action report            |               |
| 3       | Theory of oral health promotion<br>To learn theories of health promotion in oral health.   | Lecture<br>(Teams, Moodle) | AKIFUSA SUMIO | before: oral health promotion<br>after: after-action report                                |               |
| 4       | Practice of oral health promotion (1)<br>To learn methods for oral health promotion through examples in municipalities.                  | Lecture<br>(Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion<br>after: after-action report             |               |
| 5       | Practice of oral health promotion (2)<br>To learn methods for oral health promotion through examples in municipalities.                  | Lecture<br>(Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion<br>after: after-action report             |               |
| 6       | Case study on community oral HP/WP (1)<br>To select examples of oral health promotion and welfare from reports of community oral health. | Lecture<br>(Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |

# Advanced Oral health and Welfare Promotion

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO            |        |         |            |              |          |        |
| Instructor(s)          | AKIFUSA SUMIO            |        |         |            |              |          |        |

| Lecture | Contents  | Methods                 | Instructor    | before-and-after Le  | Lecture rooms |
|---------|---|-------------------------|---------------|--|---------------|
| 7       | Case study on community oral HP/WP (2)<br>To discuss problem and its solution of oral health in community, selected in previous lecture.                      | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |
| 8       | Case study on community oral HP/WP (3)<br>To discuss case studies of problem and its solution of oral health in community by bibliographical consideration.   | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |
| 9       | Case study on community oral HP/WP (4)<br>To discuss case studies of problem and its solution of oral health in community by bibliographical consideration.   | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |
| 10      | strategy for community oral HP/WP (1)<br>To extract problems of oral health promotion and welfare of model municipality in Fukuoka prefecture.                | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |
| 11      | Strategy for community oral HP/WP (2)<br>To plan solution for oral health problem of model municipality in Fukuoka prefecture, extracted in previous lecture. | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |
| 12      | Strategy for community oral HP/WP (3)<br>To plan solution for oral health problem of model municipality in Fukuoka prefecture, extracted in previous lecture  | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |

# Advanced Oral health and Welfare Promotion

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | AKIFUSA SUMIO            |        |         |            |              |          |        |
| Instructor(s)          | AKIFUSA SUMIO            |        |         |            |              |          |        |

| Lecture | Contents  | Methods                 | Instructor    | before-and-after Le  | Lecture rooms |
|---------|---|-------------------------|---------------|--|---------------|
| 13      | Strategy for community oral HP/WP (4)<br>To plan solution for oral health problem of model municipality in Fukuoka prefecture, extracted in previous lecture. | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: case collection of oral health promotion and welfare<br>after: after-action report |               |
| 14      | Approach to community oral HP/WP<br>To discuss methods for approach to local community through case studies.  | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: community HP and WP<br>after: after-action report                                  |               |
| 15      | Summary<br>Presentation of summary of this course.  | Lecture (Teams, Moodle) | AKIFUSA SUMIO | before: preparation of presentation<br>after: after-action report                          |               |
|         |   |                         |               |  |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |

## Course Description

【Language】 Japanese

You can learn about the importance of researching the problems of the dental field, among health issues of all people living in the region, by focusing on the relationship between epidemiological methods and social system. In particular, you can learn about the basic knowledge to study the role that play of the dental health care and dental health care workers among the social security system.

## Attainment Objectives

- 1 . You can explain about dignity of the patient, medical ethics and research ethics.
- 2 . You can explain the concept of health and disease.
- 3 . You can explain the basic idea of the dental practitioners laws and related regulations.
- 4 . You can explain the concept of prevention in public health and dental care.
- 5 . You can explain the main overview of health medical statistics.

## Reference Books

| Title  | Author            | Publisher  |
|--|-------------------|--|
| Health in Japan : Recent Vital Statistics. Japan.              |                   | Health, Labour and Welfare Statistics Association    |
| Concise Text of Hygiene and Public Health. Japan. 2025.        | Ichiro Tsuji      | Nankodo.Co.  |
| Visual Guide: Medical Care and Public Health 2024-2025. Japan. | Medic Media Co.   | Institute for Health Care Information Sciences, Inc. |
| Dental Practice Management. Japan. 2018.                       | Ishiyaku Pub, Inc | Japanese Society of Dental Practice Administration   |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| percentage of reports | 50%   |
| oral examination      | 50%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
|         |   |         | FUKUIZUMI TAKAKI |   |               |
| 1       | Society and dentistry<br>You can learn about the concepts of health which become a foundation of public health, the relations between society and the environment, and the concepts of prevention.                    | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 2       | Society and dentistry<br>You can learn about the patient's dignity, the ethics of medicine which support this and the various norms.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 3       | Society and dentistry<br>You can learn about the relations between dentistry and society, and the responsibilities of the dentist.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 4       | Medical insurance system<br>You can recognize about the whole picture of the social security system, and learn about the national health insurance system which supports the medical care among the social insurance. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
| 5       | Pension insurance system, Workers' compensation insurance system<br>You can learn about pension insurance system and workers' compensation insurance system which constitute the social insurance.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 6       | Nursing care insurance system<br>You can learn about the long-term care insurance system which is one of the social insurance.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 7       | Employment insurance, Social welfare system<br>You can learn about the employment insurance system which is one of the social insurance, and the social welfare and public assistance which are component of the social security.                             | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 8       | Dental doctor and related regulations<br>You can recognize the responsibility of dentist and the overview of Dental Practitioners Law which defines the business, and learn about the current situation surrounding the dentist from the relevant statistics. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 9       | Dental doctor and related regulations<br>You can recognize the overview of medical law that defines the healthcare delivery system in Japan and learn about the support of the selection for medical and the ensuring the safety of medical.                  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |

| Lecture | Contents   | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|--|---------|------------------|---|---------------|
| 10      | Dental doctor and related regulations<br>You can learn about the management of hospitals and clinics which defined in the Medical Care Act, and the ensuring of the health care provider system of medical care plans.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 11      | Dental doctor and related regulations<br>You can recognize about the overview of the Pharmaceuticals and Medical Devices Act and learn about management of the pharmacy, examination of pharmaceutical products, and the relationship of medical equipment and health insurance treatment. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 12      | Dental doctor and related regulations<br>You can recognize about the advertising regulations and adverse reaction reports which are defined in the Pharmaceuticals and Medical Devices Act, and learn about the regulations such as poison and narcotic.                                   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 13      | Society and demographics<br>You can recognize about the overview of Statistics Act and learn about the typical official statistics and the typical indicators, related to health care among the fundamental statistics and general statistics.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |              |          |        |  |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |  |

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
| 14      | The actual condition of dental health administration in urban and rural prefectures<br>Following the trend of dental health care administration promoted by the country, you can learn about the concrete efforts of the dental health administration which is carried out in the prefectures.                  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 15      | The actual condition of dental health administration in cities, towns and villages<br>Following the trend of dental health care administration promoted by the national and prefectural, you can learn about the concrete efforts of the dental health administration which is carried out in the municipality. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |  |

## Course Description

【Language】 Japanese

You can learn about the basic idea of epidemiology, the underlying law of regulations and the relations between the dental doctors and the health services in each field such as dental health in region, school dental health, health promotion, disease prevention, international health and mental health. In particular, you can learn about the basic knowledge to study the role of dental health care workers in various health businesses.

## Attainment Objectives

- 1 .You can explain about the basic idea of the medical occupations and related laws and regulations.
- 2 .You can explain about health, medical care, welfare and social institutions related to nursing care, community health care and social environment.
- 3 .You can explain about the relations between the environment and health.
- 4 .You can explain about the population level prevention and health management.
- 5 .You can explain about the medical care based on epidemiological and scientific basis, and application of health statistics.

## Reference Books

| Title  | Author           | Publisher  |
|--|------------------|--|
| Health in Japan : Recent Vital Statistics. Japan.              |                  | Health, Labour and Welfare Statistics Association    |
| Concise Text of Hygiene and Public Health. Japan. 2025.        | Ichiro Tsuji     | Nankodo.Co.  |
| Visual Guide: Medical Care and Public Health 2024-2025. Japan. | Medic Media Co.  | Institute for Health Care Information Sciences, Inc. |
| Manual of epidemiology. Japan. 2012.                           | Hiroshi Yanagawa | Nanzando.Co.   |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| percentage of reports | 50%   |
| oral examination      | 50%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents   | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|--|---------|------------------|---|---------------|
|         |  |         | FUKUIZUMI TAKAKI |   |               |
| 1       | Related laws and regulations and health care occupations<br>You can learn about the overview of Dental Hygienists Act and Health Nurses Midwives and Nurses Act, the relevant government ordinance, the system based on law and the situation of employment.                         | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 2       | Related laws and regulations and health care occupations<br>You can learn about the dental technician method, pharmacist method, the overview of the Medical Practitioners Law, and the relevant government ordinance, the system based on the law, and the situation of employment. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
| 3       | Related laws and regulations and health care occupations<br>You can learn about the radiological technologists method, speech therapist method, physical therapists and occupational therapists method, a compendium of the law of relationship occupations of dietitian method, and the situation of employment.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 4       | Adult health<br>You can recognize about the change of the disease structure and the current situation of lifestyle-related diseases, and learn about the target value which defined as health promotion business of the municipality, specific medical examinations and specific health guidance, Healthy Japan 21 (second) and Dental and Oral Health Law. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 5       | Community health, public health centers<br>You can recognize about the business of the health centers and municipal health centers which become a base of the public health of the region, and learn about the importance of regional diagnosis.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |

| Lecture | Contents   | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|--|---------|------------------|---|---------------|
| 6       | Epidemiology and dental care<br>You can learn about the basic idea of epidemiology which is the foundation of public health, and epidemiological approach, research procedures, and the applications of dental medicine. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 7       | Epidemiology and dental care<br>Give the topics of specific epidemiological studies in order to understand the detailed exposition of epidemiology, and you can learn about the study design and the level of evidence.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 8       | Epidemiology and dental care<br>You can recognize the concept of screening, and learn about the relationship of various epidemiological indicators and research design.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 9       | Maternal and child health<br>You can get the overview of maternal and child health which supports the healthy growth of children, and learn about maternal and child health policy in Japan.                             | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 10      | Health Promotion<br>You can get the overview of health promotion law, and learn about current state of health promotion measures in the municipality.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |         |        |            |              |          |        |
|------------------------|--------------------------|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |         |        |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |         |        |            |              |          |        |

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
| 11      | International Health<br>You can recognize about the overview of international health and the concept of the important disease prevention in public health, and learn about various infectious diseases prescribed in the Infectious Disease Law and Preventive Vaccination Law. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 12      | School Health<br>You can recognize about the concept of school health which is important for health management in the school age, and learn about variety of measures prescribed in the School Health and Safety Act.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 13      | Environment and Health<br>You can recognize about relationship of the various environmental factors and Basic Environment Law which affect the public health, and learn about the hygiene standards of water supply and sewerage systems.                                       | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 14      | Mental Health and Welfare<br>You can recognize about the overview of mental health and welfare, and learn about Mental Health Act and medical observation method.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

2025年度

subject code:211102



# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |

| Lecture | Contents   | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|--|---------|------------------|---|---------------|
| 15      | Care of the elderly<br>You can recognize about the current state of aging and the Elderly, and learn about overview of the oral-related care service in long-term care insurance, the relationship between the long-term care insurance facilities and the elderly welfare facilities. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |

## Course Description

【Language】 Japanese

You can learn about the measures to responses to industrial dental health, labor management, medical safety management (including the safety management of pharmaceuticals and medical devices), medical information management, food hygiene, people with disabilities health and welfare and responding to medical malpractice. In particular, you can learn about the basic knowledge to study the role of dental health care workers in the efforts that are required in the position and social security system on a variety of systems.

## Attainment Objectives

1. You can explain about the relations between environment and health.
2. You can explain about health, medical care, welfare and social institutions related to nursing care, the regional medical care and social environment.
3. You can explain the prevention and health management of the office level.
4. You can explain about the use and management methods of health care information.
5. You can explain about the dialogue capability, the attitude and mindset necessary to obtain the principal consent of the patient after conducting an appropriate description of the order to practice medicine in the patient-oriented.

## Reference Books

| Title   | Author           | Publisher  |
|---|------------------|--|
| Health in Japan : Recent Vital Statistics. Japan.             |                  | Health, Labour and Welfare Statistics Association    |
| Concise Text of Hygiene and Public Health. Japan. 2025.       | Ichiro Tsuji     | Nankodo.Co.  |
| Visual Guide: Medical Care and Public Health 2024-2025. Japan | Medic Media Co.  | Institute for Health Care Information Sciences, Inc. |
| Manual of epidemiology. Japan. 2012.                          | Hiroshi Yanagawa | Nanzando.Co.   |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| percentage of reports | 50%   |
| oral examination      | 50%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
|         |   |         | FUKUIZUMI TAKAKI |   |               |
| 1       | Occupational health<br>You can understand about the overview of the occupational health which is responsible for the health management of workers, and learn about worker protection measures stipulated in the Labor Standards Act and the Occupational Safety and Health Act. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 2       | Occupational health<br>You can understand about the overview of the Labor Contract Law which is one of the worker protection measures, and learn about the handing of fixed-term employment contract of dentist and the features of medical contract.                           | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
| 3       | Medical information and its management<br>You can understand about the handling of medical records associated with dental care and learn about the provisions in Dental Practitioners Law, the medical law and the recuperation charge rules.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 4       | Medical information and its management<br>You can understand about the handling of personal information in the dental clinic and learn about the provisions in the Personal Information Protection Act and the guidelines for handling.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 5       | Pharmaceuticals (including biologics) and the safety management of medical equipment (medical Care law, etc.)<br>You can understand about the safety management of the pharmaceuticals and medical devices in dental clinic, and learn about the provisions in the Medical Care Act.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 6       | National Nutrition and Food Health (National Health and Nutrition Examination Survey, the Food Sanitation Law, etc.)<br>You can understand about the significance of the National Health and Nutrition Examination Survey, and learn about the overview of food hygiene involved in closely public health, and trend of food poisoning. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |              |          |        |

| Lecture | Contents  | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------|------------------|---|---------------|
| 7       | Disability health and welfare<br>You can understand about the overview of health and welfare measures for people with disabilities and learn about the circumstance leading to the enactment of the Disability Comprehensive Support Law, and the Convention on the Rights of Persons with Disabilities, and normalization. | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 8       | Dentistry viewed from the patient's point of view<br>You can understand about patient's dignity and medical ethics and learn about legal status related to responsibility of the dentist.   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 9       | Conflict Management<br>You can understand about the cause of medical dispute in dental clinic and learn about Medical Mediation which is a method to solve this.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 10      | Conflict Management<br>To understand alternative dispute resolution procedures, which are attracting attention as a method of resolving medical disputes, and to learn about trends in medical litigation.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 11      | Recent Trends in dental health care administration<br>As a summary of health care theory in general, you can learn about recent developments in the dental health care administration.  | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

2025年度

subject code:211103

# Training Program in Public Health and Social Sec

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |        |            |            |          |        |

| Lecture | Contents   | Methods | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|--|---------|------------------|---|---------------|
| 12      | Study design<br>You can learn about whole picture of the level of evidence, the various study design and the outcome measures.       | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 13      | Study design<br>You can learn about the design outcome measures, advantages and disadvantages of cross-sectional study.              | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 14      | Study design<br>You can learn about the design outcome measures, advantages and disadvantages of the cohort study.                   | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 15      | Study design<br>You can learn about the design outcome measures, advantages and disadvantages of randomized controlled trials (RCT). | lecture | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |                    |            |              |          |        |
|------------------------|--------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |                    |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |                    |            |              |          |        |

## Course Description

【Language】 Japanese

Based on objective documentation, while to clarify the current status and changes in disease, risk and lifestyle, you can learn about the epidemiology technique which is essential in order to evaluate the results of individual health policy. In particular, you can learn about the basic knowledge to study the stretching of the healthy life expectancy and the reduction of health disparities, and the prevention of the onset and severity of lifestyle-related diseases.

## Attainment Objectives

1. You can explain about the epidemiological studies and ethics.
2. You can explain about the basic method of epidemiology.
3. You can explain about the distraction of healthy life expectancy and reduction of health disparities.
4. You can explain the onset prevention and aggravation prevention of lifestyle-related diseases.
5. You can explain about the practice of policy epidemiology.

## Reference Books

| Title  | Author           | Publisher  |
|--|------------------|--|
| Health in Japan : Recent Vital Statistics. Japan.              |                  | Health, Labour and Welfare Statistics Association    |
| Concise Text of Hygiene and Public Health. Japan. 2025.        | Ichiro Tsuji     | Nankodo.Co.  |
| Visual Guide: Medical Care and Public Health 2024-2025. Japan. | Medic Media Co.  | Institute for Health Care Information Sciences, Inc. |
| Manual of epidemiology. Japan. 2012.                           | Hiroshi Yanagawa | Nanzando.Co.   |

# Training Program in Public Health and Social Sec

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |                    |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |                    |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| percentage of reports | 50%   |
| artifacts of practice | 50%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods             | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------------------|------------------|---|---------------|
|         |   |                     | FUKUIZUMI TAKAKI |   |               |
| 1       | Epidemiology of meaning and ethics<br>You can learn about the epidemiology's meaning and purpose, ethics of epidemiological research, and the validity of the intervention studies and subject selection. | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 2       | Measurement of disease frequency<br>You can learn about prevalence, cumulative incidence, prevalence, mortality, fatality rate, relative frequency.   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 3       | Measurement of exposure effect<br>You can learn about the rate of difference ratio, survival rate, and healthy life expectancy.   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |         |                    |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |         |                    |            |            |          |        |

| Lecture | Contents  | Methods             | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------------------|------------------|---|---------------|
| 4       | Epidemiological research methods<br>You do the review of the contents of the scientific papers using the CASP (CRITICAL APPRAISAL SKILLS PROGRAMME), and learn and to clarify the difference between observational studies. | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 5       | Sample survey<br>You can learn about complete enumeration and sample surveys, the population and the sample, randomization, the concept of sampling, method of determining the size of the specimen.                        | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 6       | Error, bias and its control<br>You can learn about error classification, bias, exclusion of confounding factors, and the standardization of the rate.   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 7       | The judgement of the cause-and-effect relationship<br>You can learn about criteria for causality, evaluation methods, risk factors and prevention factors.  | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 8       | Epidemiological factors<br>You can learn about host factors, environmental factors, and multi-factor etiology.  | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 9       | Screening<br>You can learn about the significance of Screening, evaluation method, implementation conditions, program evaluation, and typical screening program.  | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Training Program in Public Health and Social Sec

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |                    |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |                    |            |            |          |        |

| Lecture | Contents  | Methods             | Instructor       | before-and-after Le                                     | Lecture rooms |
|---------|---|---------------------|------------------|---|---------------|
| 10      | Epidemiology of infectious diseases<br>You can learn about three conditions of the infection onset, the index of spread of infection, resistance force of epidemic and host, pathogen and the route of infection, and the epidemic investigation. | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 11      | Etiology epidemiology<br>You can learn about etiology epidemiology, risk factors, and molecular epidemiology.   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 12      | Policy epidemiology<br>You can learn about population approach, high-risk approach, and medical economic evaluation (outcome analysis).   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 13      | Actual research plan<br>You can learn about selection of the survey items, information collection method, the creation of questionnaire, and the flow of data analysis.   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 14      | Epidemiological analysis technique<br>You can learn about contingency tables, regression and correlation, actual assays, and multivariate analysis.   | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |
| 15      | Creating a statistical chart<br>You can learn about the principle of charting, and the formats and features of the statistics chart.  | lecturepracti<br>ce | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively |               |

# Practice of Public Health and Social Security Po

|                        |                          |        |         |            |              |          |        |  |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |  |

## Course Description

【Language】 Japanese

About the medical service fee system which revised every two years, and the long-term care compensation plans which revised every three years, You can analyze the background leading up to each of the most recent changes and institutional reforms. Also, from the statistical survey associated with each reward including Survey of Medical Care Activities in Public Health Insurance and Survey of Long-term Care Benefit Expenditures, you can understand the trends of the post-reform of the system and learn a method of utilizing Policy Research, and a research technique for performing a simulation.

## Attainment Objectives

1. You can explain the long-term care compensation system and the medical fee system.
2. You can explain the statistical survey associated with each reward including the social care intervention surveys and nursing care payment survey.
3. You can take advantage of the policy research and practice the simulation.

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| The list of Statistical Surveys conducted by Ministry of Health |        |           |
| The Portal Site of Official Statistics of Japan(e-Stat)         |        |           |

## Reference Books

| Title   | Author | Publisher   |
|---|--------|---|
| Health in Japan : Recent Vital Statistics. Japan. |        | Health, Labour and Welfare Statistics Association |
| The Trends of Insurance and Pension. Japan.       |        | Health, Labour and Welfare Statistics Association |
| Health, Labour and Welfare Statistics Association |        | Health, Labour and Welfare Statistics Association |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| results of simulation | 35%   |

# Practice of Public Health and Social Security Po

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |

| Evaluation item   | Ratio |
|-------------------|-------|
| oral presentation | 35%   |
| discussion        | 30%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods   | Instructor       | before-and-after Le  | Lecture rooms |
|---------|---|---|------------------|--|---------------|
| 1 ~ 15  | Recognize the background of institutional reforms and the relationship of the statistical survey associated with each reward, You can take advantage of the policy research and practice the simulation. Give your presentation about the results of the simulation and discuss about the latest trend. | Take advantage of the policy research and practice the simulation. Practice including Presentation and Discussion | FUKUIZUMI TAKAKI | Reading an article,handout,reference book intensively and investigate issues on the related area |               |

# Practice of Public Health and Social Security Po

|                        |                          |        |         |            |              |          |        |  |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |  |

## Course Description

【Language】 Japanese

Among the Health, Labor and Welfare statistics, for each area of health and sanitation sector, population and household sector, social welfare sector, the sector of health and welfare for elderly, social security sector, you can understand the latest trends of the post-reform of the system and learn a method of utilizing Policy Research, and a research technique for performing a simulation. Also about School Health Statistics, you can learn by same technique.

## Attainment Objectives

1. You can explain the features of Health, Labour and Welfare statistics, etc.
2. You can explain the overview of each area of Health, Labour and Welfare statistics.
3. You can take advantage of policy research of each statistic and practice the simulation.

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| The list of Statistical Surveys conducted by Ministry of Health |        |           |
| The Portal Site of Official Statistics of Japan(e-Stat)         |        |           |

## Reference Books

| Title   | Author | Publisher   |
|---|--------|---|
| Health in Japan : Recent Vital Statistics. Japan. |        | Health, Labour and Welfare Statistics Association |
| The Trends of Insurance and Pension. Japan.       |        | Health, Labour and Welfare Statistics Association |
| Health, Labour and Welfare Statistics Association |        | Health, Labour and Welfare Statistics Association |

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| results of simulation | 35%   |
| oral presentation     | 35%   |
| discussion            | 30%   |

# Practice of Public Health and Social Security Po

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods   | Instructor       | before-and-after Le  | Lecture rooms |
|---------|---|---|------------------|--|---------------|
| 1 ~ 15  | Recognize the background of institutional reforms and the relationship of the statistical survey associated with each reward, You can take advantage of the policy research and practice the simulation. Give your presentation about the results of the simulation and discuss about the latest trend. | Take advantage of the policy research and practice the simulation. Practice including Presentation and Discussion | FUKUIZUMI TAKAKI | Reading an article, handout, reference book intensively and investigate issues on the related area |               |

# Colloquium of Public Health and Social Security Po

|                        |                          |        |         |            |            |          |        |  |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |         |            |            |          |        |  |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |         |            |            |          |        |  |

## Course Description

You examine carefully several article related public health and social security policy in order to recognize latest trend of the study. Moreover, you give your own presentation about state of progress and discuss the development of your study.

## Attainment Objectives

1. You can learn the way of critical thinking throughout examining carefully several article related public health and social security policy.
2. You can recognize the background and methods of your own study.
3. You can explain your own research exactly.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Choose an article that you would like to introduce and discuss with the members. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item              | Ratio |
|------------------------------|-------|
| comprehension of the article | 35%   |
| oral presentation            | 35%   |
| discussion                   | 30%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|----------|---------|------------|---------------------|---------------|
|         |          |         |            |                     |               |

2025年度

subject code:211107

# Colloquium of Public Health and Social Security Po

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |        |         |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor       | before-and-after Le  | Lecture rooms |
|---------|---|--|------------------|--|---------------|
| 1 ~ 15  | Recognize background, methods and the latest trend of the study.<br>Give your presentation about state of progress and discuss to embody and to develop your study. | Practice including Presentation and Discussion | FUKUIZUMI TAKAKI | Reading an article intensively and investigate issues on the related area to your study. |               |

# Primary Dental Care (Clinical Basic Course)

|                        |   |         |          |            |         |          |        |
|------------------------|---|---------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |         |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120     | Credits  | 4      |
| Responsible Instructor | AWANO SHUUJI                                    |         |          |            |         |          |        |
| Instructor(s)          | AWANO SHUUJI, MORISHITA MASAKI, MURAOKA KOUSUKE |         |          |            |         |          |        |

## Course Description

This course is designed to practice primary dental care based on holistic dentistry in the clinical work.

## Attainment Objectives

You should achieve the following competencies;

- practice a medical interview to patients based on patient-centered dentistry
- perform prevention and control of medical accidents and infection
- create a comprehensive treatment plan according to EBM
- practice prevention, treatment and management of oral and dental diseases according to EBM
- practice a medical management which needs to perform social roles as a dentist and a dental hygienist

## Grading Criteria and Method of Evaluation

| Evaluation item      | Ratio |
|----------------------|-------|
| Evaluation of report | 100%  |

## Study Method

| Lecture | Contents  | Methods  | Instructor  | before-and-after Learning  | Lecture rooms |
|---------|---|--|---|--|---------------|
| 1-60    |   |  | MURAOKA KOUSUKE<br>MORISHITA MASAKI<br>AWANO SHUUJI |  | 診療室_病院        |
| 1-60    | The contents of this course are as follows;<br><ul style="list-style-type: none"> <li>• understand speciality of primary dental care</li> <li>• master knowledges and skills in searching for and applying evidence</li> <li>• practice prevention and control of medical accidents and infection</li> <li>• practice medical interview and examination</li> <li>• diagnose oral and dental diseases</li> <li>• create a comprehensive treatment plan according to EBM</li> <li>• practice of primary dental care according to EBM</li> </ul> | lecture<br>practice<br>seminar<br>presentation<br>discussion | MURAOKA KOUSUKE<br>MORISHITA MASAKI<br>AWANO SHUUJI | You should read the reference related to this course and submit the report after each class. | 診療室_病院        |

# Primary Dental Care (Clinical Advance Course)

|                        |   |         |          |            |              |          |        |
|------------------------|---|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |         |          | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | AWANO SHUUJI                                    |         |          |            |              |          |        |
| Instructor(s)          | AWANO SHUUJI, MORISHITA MASAKI, MURAOKA KOUSUKE |         |          |            |              |          |        |

## Course Description

This course is designed to improve various special clinical abilities which are needed for primary dental care related to improvement in QOL of patients

## Attainment Objectives

You should be achieve the following competencies;

- practice prevention and control of medical accidents and infection in every clinical fields
- create a comprehensive treatment plan according to the difference in the life-stage of each patient
- practice prevention, treatment and management of oral and dental diseases based on the life-stage of patients
- practice patient-centered team care medicine with other health care professionals who are experts in different specialties
- understand Japanese system of community-based comprehensive health care • participate in the community-based comprehensive health care

## Grading Criteria and Method of Evaluation

| Evaluation item      | Ratio |
|----------------------|-------|
| Evaluation of report | 100%  |

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le  | Lecture rooms |
|---------|--|--|---|--|---------------|
| 1-60    |  |  | MURAOKA KOUSUKE<br>MORISHITA MASAKI<br>AWANO SHUUJI |  | 診療室_病院        |
| 1-60    | The contents of this course is are as follows; • practice primary dental care based on life-stage of patients • practice the risk assessment of dental caries and periodontal diseases of patients • practice basic periodontal surgery • practice treatment of patients with xerostomia • practice primary dental care for elderly patients with some systemic disease in the fields of the community-based health care | lecturepracti<br>ceseminarpres<br>entationdiscu<br>ssion | MURAOKA KOUSUKE<br>MORISHITA MASAKI<br>AWANO SHUUJI | You should prepare for each practice and summarize the content of the case after practice. | 診療室_病院        |

# Primary Dental Care (Clinical Conference)

|                        |   |        |         |            |            |          |        |
|------------------------|---|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AWANO SHUUJI                                    |        |         |            |            |          |        |
| Instructor(s)          | AWANO SHUUJI, MORISHITA MASAKI, MURAOKA KOUSUKE |        |         |            |            |          |        |

## Course Description

This course is designed to improve the ability which solve various clinical problems to need the practice for primary dental care via case studies.

## Attainment Objectives

You should be achieve the following competencies;

- make a list of the clinical problem based on patient information
- create a comprehensive treatment plan according to the latest EBM
- collect information of the latest dental treatment and oral health care from the international journals of various special fields
- prepare the material for a case presentation and make a presentaion

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Evaluation of presentation | 100%  |

## Study Method

| Lecture | Contents   | Methods | Instructor  | before-and-after Le                                     | Lecture rooms |
|---------|--|---------|---|---|---------------|
| 1-15    | The contents of this course is are as follows; • learn the latest clinical information by making a case presentation based on primarydental care | Seminar | AWANO SHUUJI<br>MORISHITA MASAKI<br>MURAOKA KOUSUKE | You should prepare the material for a case presentation | その他           |

# Educational Research of Comprehensive Clinical Den

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AWANO SHUUJI                                    |         |                    |            |            |          |        |
| Instructor(s)          | AWANO SHUUJI, MORISHITA MASAKI, MURAOKA KOUSUKE |         |                    |            |            |          |        |

## Course Description

This course is to improve the comprehensive research skills necessary for graduate students, students will learn about basic research, clinical research, epidemiological research, and educational research in various fields conducted for the development of dental medicine.

## Attainment Objectives

You should be achieve the following competencies;

- search and find the literature you need using Pubmed.
- read and explain English papers.
- develop a research plan.
- acquire statistical analysis methods necessary for research.
- prepare a questionnaire list.

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Evaluation of presentation | 0%    |

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le  | Lecture rooms |
|---------|--|--|---|--|---------------|
| 1-8     | The contents of this lecture are as follows.<br>To search for the latest academic articles related to dentistry using PubMed.<br>・ To give a presentation on the contents of the articles. | Presentation/<br>Discussion                              | MORISHITA MASAKI<br>MURAOKA KOUSUKE<br>AWANO SHUUJI | You should prepare to search for and present scholarly article | その他           |
| 9,10    | The contents of this lecture are as follows.<br>To learn statistical analysis methods using actual data.   | Lectures/Exer<br>cises                                   | MORISHITA MASAKI<br>MURAOKA KOUSUKE<br>AWANO SHUUJI | You should prepare the data                                    | その他           |
| 11-13   | The contents of this lecture are as follows.<br>To develop and present a research plan in accordance with the research theme..   | Lectures/Exer<br>cises/Present<br>ations/Discus<br>sions | MORISHITA MASAKI<br>MURAOKA KOUSUKE<br>AWANO SHUUJI | You should prepare the theme for the research                  | その他           |

2025年度

subject code:212014

# Educational Research of Comprehensive Clinical Den

|                        |   |        |                    |            |            |          |        |
|------------------------|---|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                        |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | AWANO SHUUJI                                    |        |                    |            |            |          |        |
| Instructor(s)          | AWANO SHUUJI, MORISHITA MASAKI, MURAOKA KOUSUKE |        |                    |            |            |          |        |

| Lecture | Contents   | Methods                                      | Instructor  | before-and-after Le  | Lecture rooms |
|---------|--|--|---|--|---------------|
| 14,15   | The contents of this lecture are as follows.<br>To create actual surveys for questionnaires to be used in a variety of settings. | Lectures/Exercises/Presentations/Discussions | MURAOKA KOUSUKE<br>MORISHITA MASAKI<br>AWANO SHUUJI | You should prepare summary preparation of questionnaire survey | その他           |

# Educational Research of Comprehensive Clinical Den

|                        |   |        |                    |            |          |         |   |
|------------------------|---|--------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                        |        | Grades             | 3~4 grades | Semester | Winter  |   |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | AWANO SHUUJI                                    |        |                    |            |          |         |   |
| Instructor(s)          | AWANO SHUUJI, MORISHITA MASAKI, MURAOKA KOUSUKE |        |                    |            |          |         |   |

## Course Description

This course is designed to train the ability of comprehensive management for research through the research work to complete the research subjects.

## Attainment Objectives

You should be achieve the following competencies;

- review the reference paper related to your research theme
- summarize the problems and subjects in your research
- analyze the research data for the conference presentation and writing the research paper
- make the presentation material for the conference presentation
- write the research paper to publish to the international academic journals

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Evaluation of presentation | 100%  |

## Study Method

| Lecture | Contents   | Methods      | Instructor  | before-and-after Le                              | Lecture rooms |
|---------|--|--------------|---|--|---------------|
| 1-15    | The contents of this course is are as follows; <ul style="list-style-type: none"> <li>• present the review of reference papers for your research</li> <li>• present the results and process in your research work</li> </ul> | Presentation | MORISHITA MASAKI<br>MURAOKA KOUSUKE<br>AWANO SHUUJI | You should prepare the material for presentation | その他           |

# Comprehensive dentistry (Basic course)

|                        |                                 |        |          |            |            |          |        |
|------------------------|---------------------------------|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |          |            |            |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |        |          |            |            |          |        |

## Course Description

To provide patients with reassuring and safe comprehensive dental care, we reflect upon and review the knowledge, skills, and attitudes acquired through undergraduate education and clinical training. In addition, we put these elements into practice and master them in clinical settings. Regarding dental treatment skills, we revisit and apply the challenges outlined in the Dental Education Model Core Curriculum (Revised in 2022) under "E. Examination, Diagnosis, and Treatment Skills", specifically addressing " a. Challenges to be experienced firsthand in patient care" and " b. Challenges where firsthand experience is expected in patient care but can be supplemented through simulations in challenging situations", as well as " . Important challenges where experience is desirable". In the case of working graduate students, we review their current clinical practice style and provide feedback, including on new materials and new techniques.

## Attainment Objectives

The goals of this course are to

- Acquire the knowledge, skills, and attitudes necessary for comprehensive dental care.
- Obtain the knowledge and skills required for primary care.
- Develop the ability to formulate comprehensive treatment plans.
- Enhance awareness of team-based healthcare.

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Essential handbook for dental resident                  |        |           |
| Real medical interview matched with the patients' needs |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item          | Ratio |
|--------------------------|-------|
| The minimum requirements | 100%  |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

# Comprehensive dentistry (Basic course)

|                        |                                 |         |          |            |              |          |        |
|------------------------|---------------------------------|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |          | Grades     | 1 ~ 3 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | NAGAMATSU HIROSHI               |         |          |            |              |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |         |          |            |              |          |        |

## Study Method

| Lecture    | Contents   | Methods              | Instructor                        | before-and-after Le  | Lecture rooms |
|------------|--|----------------------|-----------------------------------|--|---------------|
|            |  |                      | NAGAMATSU HIROSHI<br>ONIDUKA CHIE |  |               |
| 1          | Guidance   | Lecture              | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | -  |               |
| 2~3        | Impression taking  | Lecture,<br>Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Types of<br>impression taking<br>methods by purpose  |               |
| 4~7        | Impression taking  | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Individual tray  |               |
| 8          | Impression taking<br>Intraoral scanning  | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Intraoral scanner  |               |
| 9~14       | Study model making   | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Oral examination<br>using a study<br>model   |               |
| 15 ~<br>22 | Information gathering<br>(pictures etc.)   | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Oral examination<br>with intraoral<br>photographs<br>Periodontal tissue<br>examination             |               |
| 23 ~<br>24 | Referral patient from other<br>clinical office   | Lecture,<br>Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Interpretation of<br>CT X-ray<br>examination<br>Evaluation of clinical<br>examination              |               |
| 25 ~<br>29 | Medical interview 1  | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | communication<br>skills  |               |
| 30 ~<br>34 | Medical interview 2  | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Narrative Based<br>Medicine  |               |
| 35 ~<br>37 | Medical system and treatment<br>position<br>・ Learn about treatment<br>planning and clinical<br>management.<br>・ Learn about mirror<br>technique and Pd (posture<br>based on proprioceptive<br>awareness). | Practice             | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Mirror technique<br>Dental treatment<br>posture by<br>awareness of<br>proprioceptive<br>derivation |               |

# Comprehensive dentistry (Basic course)

|                        |                                 |         |          |            |            |          |        |
|------------------------|---------------------------------|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | NAGAMATSU HIROSHI               |         |          |            |            |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |         |          |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor                        | before-and-after Le                         | Lecture rooms |
|---------|---|----------|-----------------------------------|---|---------------|
| 38 ~ 41 | endodontic treatment<br>・Learn the basic techniques of endodontic treatment from the perspective of the anatomical form of teeth, based on clinical practice.   | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Endodontic treatment based on tooth anatomy |               |
| 42 ~ 45 | Basic periodontal treatment<br>Learn about basic periodontal treatment through a series of practical exercises. Learn the rules of insurance medical treatment. | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Scaling root planing                        |               |
| 46 ~ 49 | Treatment of the teeth disease  | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Minimal Intervention                        |               |
| 50 ~ 54 | Limited orthodontic treatment   | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Minor Tooth Movement<br>Typodont            |               |
| 55 ~ 57 | Presentation resume making  | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Handling digital images                     |               |
| 58 ~ 60 | Oral Presentation   | Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | How to use presentation software            |               |

# Research of the dental education

|                        |                                 |        |                    |            |            |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |        |                    |            |            |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |        |                    |            |            |          |        |

## Course Description

To provide safe and comprehensive dental treatment to patients, We reflect upon and review the knowledge, skills, and attitudes we have acquired through undergraduate education and clinical training, and based on this, we understand and put into practice communication techniques and dental education techniques.

## Attainment Objectives

The goals of this course are to

1. Understand the communication methodology
2. Understand the dental educational methodology
3. Practice communication techniques
4. Practice dental education techniques
5. Cultivate professionalism as a dentist and dental educator

## Textbooks

| Title                                  | Author | Publisher |
|--|--------|-----------|
| Handouts will be distributed as needed |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Method of medical communication analysis  |        |           |
| Introduction to Text Mining for Welfare / Psychology / Nursing                        |        |           |
| How to make a research question   |        |           |
| Narrative Dental Communication  |        |           |
| Read other educational technique literature, related literature, and reference books. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| portfolios        | 30%   |
| oral examinations | 50%   |

# Research of the dental education

|                        |                                 |         |                    |            |            |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |         |                    |            |            |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |         |                    |            |            |          |        |

| Evaluation item   | Ratio |
|-------------------|-------|
| paper examination | 20%   |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture | Contents  | Methods           | Instructor                        | before-and-after Le                                | Lecture rooms |
|---------|---|-------------------|-----------------------------------|--|---------------|
|         |   |                   | ONIDUKA CHIE<br>NAGAMATSU HIROSHI |  |               |
| 1       | orientation   | Lecture           | ONIDUKA CHIE                      | Communication skills, Educational technique        |               |
| 2       | Communication skills 1 (Active listening, empathy and Cross-cultural communication) | Lecture           | ONIDUKA CHIE                      | Communication skills, Cross-cultural communication |               |
| 3       | Communication research methods  | Lecture           | ONIDUKA CHIE                      | Ethnomethodology, Taxonomy                         |               |
| 4-5     | Communication skills 2  | Practice          | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Communication skills, Competences, Dialect         |               |
| 6-7     | Interaction analysis (quantitative)   | Lecture, Practice | ONIDUKA CHIE                      | Scripts, RIAS                                      |               |
| 8-9     | Interaction analysis (qualitative)  | Lecture, Practice | ONIDUKA CHIE                      | Textmining<br>Grounded Theory<br>Competences       |               |
| 10      | Global standard of the dental education   | Lecture           | ONIDUKA CHIE                      | global standard<br>Outcome-Based Education         |               |

2025年度

subject code:212023

# Research of the dental education

|                        |                                 |         |                    |            |              |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 1 ~ 3 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |         |                    |            |              |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |         |                    |            |              |          |        |

| Lecture | Contents   | Methods           | Instructor                        | before-and-after Learning          | Lecture rooms |
|---------|--|-------------------|-----------------------------------|------------------------------------|---------------|
| 11      | Problem Based Learning   | Lecture           | ONIDUKA CHIE                      | Problem Based Learning             |               |
| 12-13   | Medical Interview  | Lecture           | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Psychosocial factors               |               |
| 14      | Model simulation 1(guidance, automatic trace pursuit and preparation pressure) | Lecture, Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Simulation-based medical education |               |
| 15      | Oral Examination   | Examination       | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Examination                        |               |

# Research of the dental education

|                        |                                 |         |                    |            |              |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |         |                    |            |              |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |         |                    |            |              |          |        |

## Course Description

To provide safe and comprehensive dental treatment to patients, We reflect upon and review the knowledge, skills, and attitudes we have acquired through undergraduate education and clinical training, and based on this, we understand and put into practice communication techniques and dental education techniques.

## Attainment Objectives

The goals of this course are to

1. Understand the communication methodology
2. Understand the dental educational methodology
3. Practice communication techniques
4. Practice dental education techniques
5. Cultivate professionalism as a dentist and dental educator.

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Read other educational technique literature, related literature, and reference books. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| portfolios        | 30%   |
| oral examinations | 50%   |
| paper examination | 20%   |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture Contents | Methods | Instructor   | before-and-after Le | Lecture rooms |
|------------------|---------|--------------|---------------------|---------------|
|                  |         | ONIDUKA CHIE |                     |               |

2025年度

subject code:212024

# Research of the dental education

|                        |                                 |        |                    |            |              |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |        |                    |            |              |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |        |                    |            |              |          |        |

| Lecture | Contents   | Methods           | Instructor                        | before-and-after Le              | Lecture rooms |
|---------|--|-------------------|-----------------------------------|----------------------------------|---------------|
| 1~5     | Model simulation 2(Cavity, preparation and root canal measuring) | Lecture, Practice | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | simulator                        |               |
| 6~7     | Microteaching  | Lecture, Practice | ONIDUKA CHIE                      | Characteristic                   |               |
| 8~9     | Medical Behavior   | Lecture           | ONIDUKA CHIE                      | Behavior education               |               |
| 10~11   | Medical Ethics   | Lecture           | ONIDUKA CHIE                      | Professionalism                  |               |
| 12~13   | KJ method  | Lecture, Practice | ONIDUKA CHIE                      | Characteristic                   |               |
| 14      | Facilitation skills  | Lecture, Practice | ONIDUKA CHIE                      | Behavior changes<br>Facilitation |               |
| 15      | oral examination   | examination       | ONIDUKA CHIE<br>NAGAMATSU HIROSHI |                                  |               |

# Research of the dental education

|                        |                                 |        |                    |            |            |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 3~4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |        |                    |            |            |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |        |                    |            |            |          |        |

## Course Description

To provide safe and comprehensive dental treatment to patients, We reflect upon and review the knowledge, skills, and attitudes we have acquired through undergraduate education and clinical training, and based on this, we understand and put into practice communication techniques and dental education techniques.

## Attainment Objectives

The goals of this course are to

1. Understand the communication methodology
2. Understand the dental educational methodology
3. Practice communication techniques
4. Practice dental education techniques
5. Cultivate professionalism as a dentist and dental educator.

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Read other educational technique literature, related literature, and reference books. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| portfolios        | 30%   |
| oral examinations | 50%   |
| paper examination | 20%   |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture Contents | Methods | Instructor   | before-and-after Le | Lecture rooms |
|------------------|---------|--------------|---------------------|---------------|
|                  |         | ONIDUKA CHIE |                     |               |

# Research of the dental education

|                        |                                 |        |                    |            |              |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 3 ~ 4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ONIDUKA CHIE                    |        |                    |            |              |          |        |
| Instructor(s)          | ONIDUKA CHIE, NAGAMATSU HIROSHI |        |                    |            |              |          |        |

| Lecture | Contents                          | Methods           | Instructor                        | before-and-after Le   | Lecture rooms |
|---------|-----------------------------------|-------------------|-----------------------------------|---|---------------|
| 1~2     | Coaching                          | Lecture, Practice | ONIDUKA CHIE                      | Coaching theory<br>Assertion                                |               |
| 3~4     | Paper questionnaire               | Lecture, Practice | ONIDUKA CHIE                      | Characteristic and benefits of Questionnaire method         |               |
| 5~7     | dental psychosomatic disease      | Lecture           | ONIDUKA CHIE                      | Behavioral characteristics<br>Dental psychosomatic disorder |               |
| 8       | patient psychology                | Lecture           | ONIDUKA CHIE                      | Cognitive psychology  |               |
| 9       | correspondence to a complainer    | Lecture, Practice | ONIDUKA CHIE                      | Complainer<br>Cognitive psychology                          |               |
| 10~11   | Simulated (Standardized) patient  | Lecture           | ONIDUKA CHIE<br>NAGAMATSU HIROSHI | SP<br>Facilitation  |               |
| 12~13   | Safety medical environment design | Lecture           | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Risk management<br>Incident                                 |               |
| 14      | Professionalism                   | Lecture           | ONIDUKA CHIE                      | professionalism<br>competence                               |               |
| 15      | Oral examination                  | Examination       | ONIDUKA CHIE<br>NAGAMATSU HIROSHI |   |               |

# Education and research of the general dentistry

|                        |                                |        |         |            |            |          |        |
|------------------------|--------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                         | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | NAGAMATSU HIROSHI              |        |         |            |            |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI,ONIDUKA CHIE |        |         |            |            |          |        |

## Course Description

To understand the worldwide research trend of comprehensive dental treatment, we read abstracts the research paper.

We hold a debriefing session, discussion, etc. about the own research.

## Attainment Objectives

The goals of this course are to

- 1.Explain papers in specialized areas. (Cognitive domain)
- 2.Understand, evaluate, and discuss research in the other fields. (Cognitive/affective domain)
- 3.Improve your ability to read research papers written mainly in English. (psychomotor domain)
- 4.Improve your ability to discuss research. (psychomotor domain)
- 5.Present own research. (psychomotor domain)

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| An important related research article and appropriate reference book |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                         | Ratio |
|---|-------|
| portfolios, oral and paper examination. | 100%  |

## Etc

Learning Counseling : Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture | Contents                                     | Methods                          | Instructor                        | before-and-after Le                         | Lecture rooms |
|---------|--|----------------------------------|-----------------------------------|---|---------------|
| 1~15    | Understanding the educational research paper | Abstract , report and discussion | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Investigation the associated research paper |               |

# Education and research of the general dentistry

|                        |                                 |        |         |            |              |          |        |
|------------------------|---------------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |         | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |         |            |              |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |        |         |            |              |          |        |

## Course Description

To understand the worldwide research trend of comprehensive dental treatment, we read abstracts the research paper.

We hold a debriefing session, discussion, etc. about the own research.

## Attainment Objectives

The goals of this course are to

- 1.Explain papers in specialized areas. (Cognitive domain)
- 2.Understand, evaluate, and discuss research in the other fields. (Cognitive/affective domain)
- 3.Improve your ability to read research papers written mainly in English. (psychomotor domain)
- 4.Improve your ability to discuss research. (psychomotor domain)
- 5.Present own research. (psychomotor domain)
- 6.Write research reports and abstracts (Japanese and English). (Psychomotor domain)
- 7.Plan and manage graduate school seminar content. (psychomotor domain)

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| An important related research article and appropriate reference book |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                        | Ratio |
|--|-------|
| portfolios, oral and paper examination | 100%  |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|------------------|---------|------------|---------------------|---------------|
|                  |         |            |                     |               |

2025年度

subject code:212027

# Education and research of the general dentistry

|                        |                                 |        |         |            |              |          |        |  |
|------------------------|---------------------------------|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry        |        |         | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                          | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |         |            |              |          |        |  |
| Instructor(s)          | NAGAMATSU HIROSHI ,ONIDUKA CHIE |        |         |            |              |          |        |  |

| Lecture | Contents                                     | Methods                          | Instructor  | before-and-after Le                         | Lecture rooms |
|---------|--|----------------------------------|---|---|---------------|
| 1~15    | Understanding the educational research paper | Abstract , report and discussion | KONOO TETSUROU<br>NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Investigation the associated research paper |               |

# Education and research of the general dentistry

|                        |                                 |        |         |            |            |          |        |
|------------------------|---------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |         | Grades     | 3~4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |         |            |            |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |        |         |            |            |          |        |

## Course Description

Abstract the research paper to understand the worldwide research trend of the general dentistry. Report, discuss and present the own research.

## Attainment Objectives

The goals of this course are to

- 1.Explain papers in specialized areas. (Cognitive domain)
- 2.Understand, evaluate, and discuss research in the other fields. (Cognitive/Affective domain)
- 3.Improve your ability to read research papers written mainly in English. (Psychomotor domain)
- 4.Improve your ability to discuss research. (Psychomotor domain)
- 5.Present own research. (Psychomotor domain)
- 6.Write research reports and abstracts (Japanese and English). (Psychomotor domain)
- 7.Plan and manage graduate school seminar content. (Psychomotor domain)
- 8.write a research paper. (Psychomotor domein)
- 9.Provide guidance regarding graduate school seminar content. (Affective/Psychomotor domain)
9. Instruction the seminar contents. (affective and psychomotor domain)

## Textbooks

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Handouts will be distributed as needed. |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| An important related research article and appropriate reference book |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                        | Ratio |
|--|-------|
| portfolios, oral and paper examination | 100%  |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

2025年度

subject code:212028

# Education and research of the general dentistry

|                        |                                 |        |         |            |              |          |        |  |
|------------------------|---------------------------------|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry        |        |         | Grades     | 3 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                          | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |         |            |              |          |        |  |
| Instructor(s)          | NAGAMATSU HIROSHI ,ONIDUKA CHIE |        |         |            |              |          |        |  |
|                        |                                 |        |         |            |              |          |        |  |

## Study Method

| Lecture | Contents                                     | Methods                          | Instructor                        | before-and-after Le                         | Lecture rooms |
|---------|--|----------------------------------|-----------------------------------|---|---------------|
| 1~15    | Understanding the educational research paper | Abstract , report and discussion | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Investigation the associated research paper |               |

# Comprehensive dentistry 3 (Case Study Meetin)

|                        |                                 |        |         |            |            |          |        |
|------------------------|---------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | NAGAMATSU HIROSHI               |        |         |            |            |          |        |
| Instructor(s)          | NAGAMATSU HIROSHI, ONIDUKA CHIE |        |         |            |            |          |        |

## Course Description

To develop a treatment plan tailored to the patient's background, and to improve your presentation skills, we collect information and conduct tests necessary

## Attainment Objectives

The goals of this course are to

- 1) Collect information from patients.
- 2) Conduct necessary inspections.
- 3) Develop a treatment plan according to the patient's narrative.
- 4) Prepare data for case presentation.
- 5) Give a presentation that is easy for the audience to understand.
- 6) Reflect on yourself and improve.

## Grading Criteria and Method of Evaluation

| Evaluation item                  | Ratio |
|----------------------------------|-------|
| Evaluation of case presentations | 100%  |

## Etc

Learning Counseling: Counseling is available at any time, but you should make a reservation to subject manager by email or phone in advance.

## Study Method

| Lecture | Contents  | Methods              | Instructor                        | before-and-after Le                | Lecture rooms |
|---------|---|----------------------|-----------------------------------|------------------------------------|---------------|
| 1       | outline   | lecture              | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Confirmation of evaluation methods |               |
| 2~14    | Formulation of comprehensive treatment plan and preparation of presentation materials | Lectures & Exercises | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Preparing for Case Presentations   |               |
| 15      | Case Presentations  | Presentations        | NAGAMATSU HIROSHI<br>ONIDUKA CHIE | Case Presentations                 |               |

# Endodontics and Restorative Dentistry (Clinical B)

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |          |            |            |          |        |

## Course Description

In the present, the elderly person has many teeth, and the importance of the tooth is recognized. High-precision skills to carry out dental treatment of a tooth is demanded. In this course, you will practice basic skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills for a specialist in the area of Conservative Dentistry.

## Attainment Objectives

To acquire fundamental knowledge and skills for tooth therapeutics, you will practice basic skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics. You should achieve following assignments; • Construction of good relationship with patients and stuffs • Pass to grade tests (1) and (2) • Collection of clinical cases • Acquisition of skills for Endodontics, Pulp Preservation, Pre-treatment before Endodontics • Acquisition of skills for tooth preparation • Acquisition of basic skills for dissection and suturing of gingiva

## Textbooks

| Title   | Author                      | Publisher                 |
|---|-----------------------------|---------------------------|
| Operative Dentistry 7th Edition                   | Akira Senda, et al., Ed     | Ishiyaku Publishers, Inc  |
| Operative Dentistry 21 7th Edition                | Junji Tagami, et al., Ed    | Nagasueshoten             |
| Endodontics 5th Edition                           | Ichiro Katsuimi, et al., Ed | Ishiyaku Publishers, Inc. |
| Endodontics 6th Edition                           | Takafumi Okiji, et al., Ed  | Nagasueshoten             |
| Let's Start Micro-Endodontics                     | Chiaki Kitamura             | Ishiyaku Publishers, Inc. |
| A Clinical Approach to Non-Odontogenic Toothache, | Chiaki Kitamura et al., Ed  | Ishiyaku Publishers, Inc. |

# Endodontics and Restorative Dentistry (Clinical B)

|                        |  |         |          |            |            |          |        |
|------------------------|--|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |         |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |          |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item                  | Ratio |
|----------------------------------|-------|
| the average of Tests (1) and (2) | 50%   |
| evaluation by Rubric sheet       | 50%   |

## Etc

Consultation is available at anytime out of school hour. In addition, a reservation for consultation by e-mail is available.

## Study Method

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
|         |  |          | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA |  |               |
| 1~3     | Basic of Endodontics I<br>You will master basic endodontics skills in simulator to clear Test (1).                     | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Endodontics<br>【After Learning Task】Review about Endodontics                     |               |
| 4~6     | Basic of Restorative Dentistry I<br>You will master basic restorative dentistry skills in simulator to clear Test (1). | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Restorative dentistry<br>【After Learning Task】Review about Restorative dentistry |               |
| 7~9     | Basic of Tooth Preparation I<br>You will master basic prosthodontics skills in simulator to clear Test (1).            | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Prosthodontics<br>【After Learning Task】Review about Prosthodontics               |               |

# Endodontics and Restorative Dentistry (Clinical B)

|                        |  |         |          |            |            |          |        |
|------------------------|--|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |         |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
| 10~12   | Test (1)<br>You will take exams of basic skills in simulator.  | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Endodontics, Restorative dentistry, and Prosthodontics<br>【After Learning Task】Review about Endodontics, Restorative dentistry, and Prosthodontics |               |
| 13~15   | Basic of Endodontics II<br>You will master basic endodontics skills in clinic to clear Test (2).                     | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Endodontics<br>【After Learning Task】Review about Endodontics   |               |
| 16~18   | Basic of Restorative Dentistry II<br>You will master basic restorative dentistry skills in clinic to clear Test (2). | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Restorative dentistry<br>【After Learning Task】Review about Restorative dentistry   |               |
| 19~21   | Basic of Tooth Preparation II<br>You will master basic prosthodontic skills in clinic to clear Test (2).             | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Prosthodontics<br>【After Learning Task】Review about Prosthodontics   |               |
| 22~24   | Basic of Periodontal treatment<br>You will master basic Periodontics skills in clinic to clear Test (2).             | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Periodontics<br>【After Learning Task】Review about Periodontics   |               |

# Endodontics and Restorative Dentistry (Clinical B)

|                        |  |         |          |            |            |          |        |
|------------------------|--|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |         |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
| 25~27   | Test (2)<br>You will take exams of basic skills in clinical cases.                                     | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about Preparation about Endodontics, Restorative dentistry, Prosthodontics, and Periodontics<br><b>【After Learning Task】</b> Review about Preparation about Preparation about Endodontics, Restorative dentistry, Prosthodontics, and Periodontics |               |
| 28~30   | Basic of Dissection and Suturing<br>You will master basic dissection and suturing skills in simulator. | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about dissection and suturing skills<br><b>【After Learning Task】</b> Review about dissection and suturing skills   |               |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |          |            |            |          |        |

## Course Description

In this course, you will collect cases to be a specialist in the area of Conservative Dentistry, and practice basic skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics. Also, you will carry out training of microscope-enhanced dentistry to pass to grade test (3).

## Attainment Objectives

To acquire full knowledge and high-precision skills for tooth therapeutics and be a specialist in the area of Conservative Dentistry, you will practice special skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics. You should achieve following assignments; • Pass to grade test (3) • Acquisition of special skills for Microscope-Enhanced Dentistry • Full planning of dental treatment

## Textbooks

| Title  | Author                      | Publisher                 |
|--|-----------------------------|---------------------------|
| Operative Dentistry 7th Edition                  | Akira Senda, et al., Ed     | Ishiyaku Publishers, Inc. |
| Operative Dentistry 21 7th Edition               | Junji Tagami, et al., Ed    | Nagasueshoten             |
| Endodontics 5th Edition                          | Ichiro Katsuami, et al., Ed | Ishiyaku Publishers, Inc. |
| Endodontics 6th Edition                          | Takafumi Okiji, et al., Ed  | Nagasueshoten             |
| Let's Start Micro-Endodontics                    | Chiaki Kitamura             | Ishiyaku Publishers, Inc. |
| A Clinical Approach to Non-Odontogenic Toothache | Chiaki Kitamura et al., Ed  | Ishiyaku Publishers, Inc. |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |          |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Test (3)                   | 50%   |
| evaluation by Rubric sheet | 50%   |

## Etc

Consultation is available at anytime out of school hour. In addition, a reservation for consultation by e-mail is available.

## Study Method

| Lecture | Contents  | Methods  | Instructor   | before-and-after Learning  | Lecture rooms |
|---------|---|----------|--|--|---------------|
|         |   |          | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA |  |               |
| 1~5     | Micro-Endodontics<br>You will master micro-endodontics skills in simulator to clear Test (3).                                       | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microendodontics<br>【After Learning Task】Review about Microendodontics                                     |               |
| 6~10    | Aesthetic Dentistry under Microscope<br>You will master aesthetic dentistry skills under microscope in simulator to clear Test (3). | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microscope and Aesthetic Dentistry<br>【After Learning Task】Review about Microscope and Aesthetic Dentistry |               |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |         |          |            |              |          |        |
|------------------------|--|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |         |          |            |              |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |          |            |              |          |        |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
| 11 ~ 15 | Tooth Preparation under Microscope<br>You will master prosthodontics skills in simulator to clear Test (3).                          | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microscope and Prosthodontics<br>【After Learning Task】Review about Microscope and Prosthodontics                       |               |
| 16 ~ 20 | Removal of Post under Microscope<br>You will master removal of post under microscope in simulator to clear Test (3).                 | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about removal of post under microscope<br>【After Learning Task】Review about removal of post under microscope                 |               |
| 21 ~ 25 | Dissection and Suturing under Microscope<br>You will master dissection and suturing under microscope in simulator to clear Test (3). | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about dissection and suturing under microscope<br>【After Learning Task】Review about dissection and suturing under microscope |               |
| 26 ~ 30 | Test (3)<br>You will take exams of basic microscope skills in simulator.   | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microscope Enhanced Dentistry<br>【After Learning Task】Review about Microscope Enhanced Dentistry                       |               |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | KITAMURA CHIAKI  |        |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |          |            |            |          |        |

## Course Description

In this course, you will collect cases to be a specialist in the area of Conservative Dentistry, and acquire special skills of microscope-enhanced dentistry to pass to grade test (4). Also, you will acquire skills for presentation and clinical reasoning through clinical seminar.

## Attainment Objectives

To acquire full knowledge and high-precision skills for tooth therapeutics and be a specialist of Conservative Dentistry, you will practice special skills about Microscope Enhanced Dentistry. Also, you will acquire skills for presentation and clinical reasoning. You should achieve following assignments; • Pass to grade test (4) • Acquisition of special skills for Microscope-Enhanced Dentistry • Full planning of dental treatment • Case Presentation

## Textbooks

| Title  | Author                      | Publisher                 |
|--|-----------------------------|---------------------------|
| Operative Dentistry 7th Edition                  | Akira Senda, et al., Ed     | Ishiyaku Publishers, Inc. |
| Operative Dentistry 21 7th Edition               | Junji Tagami, et al., Ed    | Nagasueshot en            |
| Endodontics 5th Edition                          | Ichiro Katsuami, et al., Ed | Ishiyaku Publishers, Inc. |
| Endodontics 6th Edition                          | Takafumi Okiji, et al., Ed  | Nagasueshot en            |
| Let ' s Start Micro-Endodontics                  | Chiaki Kitamura             | Ishiyaku Publishers, Inc. |
| A Clinical Approach to Non-Odontogenic Toothache | Chiaki Kitamura et al., Ed  | Ishiyaku Publishers, Inc. |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |        |          |            |          |         |   |
|------------------------|--|--------|----------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |        | Grades   | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Mehods | Practice | Total time | 120      | Credits | 4 |
| Responsible Instructor | KITAMURA CHIAKI  |        |          |            |          |         |   |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |          |            |          |         |   |

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Test (4)                   | 50%   |
| evaluation by Rubric sheet | 50%   |

## Etc

Consultation is available at anytime out of school hour. In addition, a reservation for consultation by e-mail is available.

## Study Method

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning  | Lecture rooms |
|---------|--|----------|--|--|---------------|
|         |  |          | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA |  |               |
| 1~8     | Micro-Endodontics<br>You will master micro-endodontics skills in clinic to clear Test (4).                                       | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microendodontics<br>【After Learning Task】Review about Microendodontics                                     |               |
| 9~16    | Aesthetic Dentistry under Microscope<br>You will master aesthetic dentistry skills under microscope in clinic to clear Test (4). | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microscope and Aesthetic Dentistry<br>【After Learning Task】Review about Microscope and Aesthetic Dentistry |               |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |         |          |            |            |          |        |
|------------------------|--|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | KITAMURA CHIAKI  |         |          |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
| 17~24   | Micro-Endodontic Surgery<br>You will master micro-endodontic surgery skills in clinic to clear Test (4). | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Endodontic Microsurgery<br>【After Learning Task】Review about Endodontic Microsurgery   |               |
| 25~32   | Test (4)<br>You will take exams of microscope skills in clinical cases.                                  | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Microscope Enhanced Dentistry<br>【After Learning Task】Review about Microscope Enhanced Dentistry                               |               |
| 33~40   | Planning in clinics<br>You will plan to treat in clinic to obtain accredited specialist.                 | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Accredited Specialist and Treatment Planning<br>【After Learning Task】Review about Accredited Specialist and Treatment Planning |               |
| 41~48   | Clinics<br>You will carry out clinical cases to obtain accredited specialist.                            | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about Accredited Specialist and Case Presentation<br>【After Learning Task】Review about Accredited Specialist and Case Presentation   |               |

# Endodontics and Restorative Dentistry (Clinical A)

|                        |  |         |          |              |          |         |   |
|------------------------|--|---------|----------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades   | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Practice | Total time   | 120      | Credits | 4 |
| Responsible Instructor | KITAMURA CHIAKI  |         |          |              |          |         |   |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |          |              |          |         |   |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
| 49 ~ 56 | Case Presentation and Lectures<br>You will carry out clinical case presentations, and attend lectures to obtain accredited specialist. | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about Accredited Specialist and Case Presentation<br><b>【After Learning Task】</b> Review about Accredited Specialist and Case Presentation |               |
| 57 ~ 60 | Preparation of Cases for Accredited Specialists<br>You will prepare clinical case presentations to obtain accredited specialist.       | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about Accredited Specialist and Case Presentation<br><b>【After Learning Task】</b> Review about Accredited Specialist and Case Presentation |               |

# Endodontics and Restorative Dentistry (Research S)

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |         |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |         |            |            |          |        |

## Course Description

In this course, you will read and present papers related your research to acquire logical thinking as well as international point of view. Also, you will present results of your research to discuss.

## Attainment Objectives

To acquire full knowledge and skills for research and presentation, you will read and present international papers related your research to acquire logical thinking as well as international point of view. You should achieve following assignments; • Collect international papers related to your research • Read and present papers • Acquire presentation skills • Case Presentation

## Textbooks

| Title  | Author                     | Publisher                 |
|--|----------------------------|---------------------------|
| Operative Dentistry 7th Edition                  | Akira Senda, et al., Ed    | Ishiyaku Publishers, Inc. |
| Operative Dentistry 21 7th Edition               | Junji Tagami, et al., Ed   | Nagasueshot en            |
| Endodontics 5th Edition                          | Ichiro Katsumi, et al., Ed | Ishiyaku Publishers, Inc. |
| Endodontics 6th Edition                          | Takafumi Okiji, et al., Ed | Nagasueshot en            |
| Let 's Start Micro-Endodontics                   | Chiaki Kitamura            | Ishiyaku Publishers, Inc. |
| A Clinical Approach to Non-Odontogenic Toothache | Chiaki Kitamura et al., Ed | Ishiyaku Publishers, Inc. |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Presentation    | 50%   |

# Endodontics and Restorative Dentistry (Research S

|                        |  |        |         |            |              |          |        |
|------------------------|--|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |         |            |              |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |         |            |              |          |        |

| Evaluation item            | Ratio |
|----------------------------|-------|
| evaluation by Rubric sheet | 50%   |

## Etc

Consultation is available at anytime out of school hour. In addition, a reservation for consultation by e-mail is available.

## Study Method

| Lecture | Contents  | Methods                               | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|---|---------------------------------------|--|--|---------------|
|         |   |                                       | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA |  |               |
| 1~5     | Reading and presentation of research paper<br>You will master reading and presentation of related international research paper. | Introduction and Discussion of Papers | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about reading and presentation of related international research paper<br><b>【After Learning Task】</b> Review about reading and presentation of related international research paper |               |
| 6~10    | Presentation of research<br>You will show and explain your research.  | Discussion of Research                | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about show and explain your research<br><b>【After Learning Task】</b> Review about show and explain your research   |               |

2025年度

subject code:212034

# Endodontics and Restorative Dentistry (Research S

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |         |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |         |            |            |          |        |

| Lecture | Contents  | Methods                               | Instructor   | before-and-after Le  | Lecture rooms |
|---------|---|---------------------------------------|--|--|---------------|
| 11~15   | Introduction of international papers by supervisors<br>You will learn and attend lectures by specialists. | Introduction and Discussion of Papers | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about lectures by specialists<br><b>【After Learning Task】</b> Review about lectures by specialists |               |

# Endodontics and Restorative Dentistry (Research P

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |        |         |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |        |         |            |            |          |        |

## Course Description

In this course, you will acquire skills related to research for PhD.

## Attainment Objectives

To be a international researcher, dentist, and educator, you will acquire abilities to carry out experiments and prepare papers for PhD. You should achieve following assignments; • Acquisition of knowledge and skills to carry out research • Preparation of results from experiments • Presentation in scientific meeting • Prepare scientific papers

## Textbooks

| Title  | Author                     | Publisher                 |
|--|----------------------------|---------------------------|
| Operative Dentistry 7th Edition                  | Akira Senda, et al., Ed    | Ishiyaku Publishers, Inc. |
| Operative Dentistry 21 7th Edition               | Junji Tagami, et al., Ed   | Nagasueshot en            |
| Endodontics 5th Edition                          | Ichiro Katsumi, et al., Ed | Ishiyaku Publishers, Inc. |
| Endodontics 6th Edition                          | Takafumi Okiji, et al., Ed | Nagasueshot en            |
| Let ' s Start Micro-Endodontics                  | Chiaki Kitamura            | Ishiyaku Publishers, Inc. |
| A Clinical Approach to Non-Odontogenic Toothache | Chiaki Kitamura et al., Ed | Ishiyaku Publishers, Inc. |

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Practices                  | 50%   |
| evaluation by Rubric sheet | 50%   |

# Endodontics and Restorative Dentistry (Research P)

|                        |  |         |         |            |            |          |        |
|------------------------|--|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |         |         |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |         |            |            |          |        |

## Study Method

| Lecture | Contents   | Methods                | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|------------------------|--|--|---------------|
|         |  |                        | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA |  |               |
| 1       | Orientation<br>You will discuss and decide your research theme with supervisors. | Lecture                | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about research theme<br>【After Learning Task】Review about research theme   |               |
| 2,3     | Research with Cells<br>You will master research skills with cells.               | Discussion of Research | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about research skills with cells<br>【After Learning Task】Review about research skills with cells                         |               |
| 4,5     | Research with animals<br>You will master research skills with animals.           | Practice               | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about research skills with animals.<br>【After Learning Task】Review about research skills with animals.                   |               |
| 6,7     | Research of Materials<br>You will master research skills about dental materials. | Practice               | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | 【Before Learning Task】Preparation about research skills about dental materials<br>【After Learning Task】Review about research skills about dental materials |               |

# Endodontics and Restorative Dentistry (Research P)

|                        |  |         |         |            |            |          |        |
|------------------------|--|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KITAMURA CHIAKI  |         |         |            |            |          |        |
| Instructor(s)          | KITAMURA CHIAKI, WASHIO AYAKO, ORIMOTO AI, AIHARA RYOSUKE, MURATA KAZUMASA |         |         |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning Task   | Lecture rooms |
|---------|--|----------|--|--|---------------|
| 8,9     | Research of Devices<br>You will master research skills about medical and dental devices.                       | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about research skills about medical and dental devices<br><b>【After Learning Task】</b> Review about research skills about medical and dental devices       |               |
| 10,11   | Clinical Research<br>You will master clinical research skills.   | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about clinical research skills<br><b>【After Learning Task】</b> Review about Eclinical research skills  |               |
| 12~15   | Preparation of Presentation and Papers<br>You will master preparation of presentation and paper to obtain PhD. | Practice | KITAMURA CHIAKI<br>WASHIO AYAKO<br>ORIMOTO AI<br>AIHARA RYOSUKE<br>MURATA KAZUMASA | <b>【Before Learning Task】</b> Preparation about preparation of presentation and paper to obtain PhD<br><b>【After Learning Task】</b> Review about preparation of presentation and paper to obtain PhD |               |

# Periodontology (Clinical Basic Course)

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | USUI MICHIIHIKO  |        |          |            |            |          |        |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANNO KOUTARO, NAKAMURA TAIJI |        |          |            |            |          |        |

## Course Description

【Language】 English and Japanese  
Periodontitis have received a lot of attention as an oral disease associated with systemic disease in recent years. This course deals with effective diagnosis and treatment procedure of periodontitis based on EBM. You will be able to read a number of published articles related to periodontitis all over the world and acquire diagnostic ability and clinical problem resolution skill as a periodontist.

## Attainment Objectives

By the end of the course, students should be able to do the following; 1. Practice a medical interview to patients of periodontitis (1), 2. Describe and explain periodontal tissue examination (2~7, 20), 3. Design a treatment plan based on periodontal tissue examination (8), 4. Practice an effective patient education (9~14), 5. Practice ultrasonic scaling and scaling and root planing (15~19), 6. Recognize basic techniques of periodontal surgery and explain wound healing after surgery (21~23), 7. Recognize periodontal regenerative therapy and explain prognosis after regenerative surgery (24, 25), 8. Describe and explain prosthetics, orthodontics and implant in periodontal therapy (26~28), 9. Explain significance and procedure of SPT (29), 10. Report a case of periodontitis and explain treatment plan and outcome of periodontal therapy (30).

## Core Curriculum Item

| Core Curriculum | Contents                              |
|-----------------|---------------------------------------|
| D-3-2-3         | 歯周疾患の病因と病態を理解している。                    |
| D-3-2-4         | 口腔細菌、プラーク(口腔バイオフィルム)及び歯石を理解している。      |
| D-4-2-3         | 治療方針と治療の優先性及び患者の背景や希望を考慮して治療計画を立案できる。 |
| D-5-1-3         | プラークコントロールの意義と方法を理解している。              |
| D-5-2-3-2       | 歯周疾患の検査法、診断及び治療方針(メンテナンスを含む)を理解している。  |
| D-5-2-3-3       | 歯周治療の術式と適応症を理解している。                   |
| D-5-2-3-4       | 歯周外科治療の種類と適応症を理解している。                 |
| D-5-2-3-5       | 歯周治療後の組織の治癒機転と予後を理解している。              |
| E-2-5-1         | 診断並びに治療に必要な画像検査及び臨床検査を選択し、実施できる。      |
| E-5-3-3-1       | 歯周基本治療としてプラークコントロール指導ができる。( a)        |
| E-5-3-3-2       | 歯周基本治療としてスクレーリングができる。( a)             |
| PS-05           | 病因と病態、生体の構造と機能の異常を理解している。             |
| PS-06           | 診断と治療を理解している。                         |
| PS-07           | 歯科医療における材料と機器の性質と使用法を理解している。          |

# Periodontology (Clinical Basic Course)

|                        |   |        |          |            |            |          |        |  |
|------------------------|---|--------|----------|------------|------------|----------|--------|--|
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| Subject                | Choice  | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | USUI MICHIIHIKO   |        |          |            |            |          |        |  |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |        |          |            |            |          |        |  |

## Textbooks

| Title                              | Author | Publisher |
|------------------------------------|--------|-----------|
| Journal of Periodontology          |        |           |
| Journal of Clinical Periodontology |        |           |

## Reference Books

| Title                                   | Author | Publisher |
|---|--------|-----------|
| Texts will be delivered in every class. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                         | Ratio |
|---|-------|
| oral examination in clinical conference | 100%  |

## Etc

Student consultation: as needed.  
Questions by e-mail are also acceptable.

## Study Method

| Lecture | Contents  | Methods  | Instructor      | before-and-after Le               | Lecture rooms |
|---------|---|----------|-----------------|-----------------------------------|---------------|
| 1,2     | Medical interview to patient of periodontitis                               | Practice | USUI MICHIIHIKO | post-learning : medical interview |               |
| 3,4     | Periodontal Tissue Examination (Intraoral photograph 1)                     | Practice | USUI MICHIIHIKO | post-learning : Intraoral photo   |               |
| 5,6     | Periodontal Tissue Examination (Intraoral photograph 2)                     | Practice | USUI MICHIIHIKO | post-learning : Intraoral photo   |               |
| 7,8     | Periodontal Tissue Examination (Probing)                                    | Practice | USUI MICHIIHIKO | post-learning : probing           |               |
| 9,10    | Periodontal Tissue Examination (Radiologic image reading)                   | Practice | USUI MICHIIHIKO | post-learning : X-ray photo       |               |
| 11,12   | Periodontal Tissue Examination (Measurement and analysis of occlusal force) | Practice | USUI MICHIIHIKO | post-learning : occlusal force    |               |

# Periodontology (Clinical Basic Course)

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
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| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | USUI MICHIIHIKO   |         |          |            |            |          |        |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |         |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor      | before-and-after Learning          | Lecture rooms |
|---------|--|----------|-----------------|------------------------------------|---------------|
| 13,14   | Periodontal Tissue Examination (Tooth mobility measurement)                        | Practice | USUI MICHIIHIKO | post-learning : mobility           |               |
| 15,16   | Design of treatment plan   | Practice | USUI MICHIIHIKO | post-learning : treatment plan     |               |
| 17,18   | Effective Patient Education 1  | Practice | NAKAMURA TAIJI  | post-learning : motivation         |               |
| 19,20   | Effective Patient Education 2  | Practice | NAKAMURA TAIJI  | post-learning : motivation         |               |
| 21,22   | Effective Patient Education 3  | Practice | NAKAMURA TAIJI  | post-learning : motivation         |               |
| 23,24   | Effective Patient Education 4  | Practice | NAKAMURA TAIJI  | post-learning : motivation         |               |
| 25,26   | Effective Patient Education 5  | Practice | NAKAMURA TAIJI  | post-learning : motivation         |               |
| 27,28   | Effective Patient Education 6  | Practice | NAKAMURA TAIJI  | post-learning : motivation         |               |
| 29,30   | Ultrasonic Scaling (supragingiva)  | Practice | NAKAMURA TAIJI  | post-learning : ultrasonic scaling |               |
| 31,32   | Ultrasonic Scaling (subgingiva and furcation)                                      | Practice | NAKAMURA TAIJI  | post-learning : ultrasonic scaling |               |
| 33,34   | Scaling and Root Planing 1 (operator position)                                     | Practice | ONIZUKA SATORU  | post-learning : ultrasonic scaling |               |
| 35,36   | Scaling and Root Planing 2 (sharpening scaler)                                     | Practice | ONIZUKA SATORU  | post-learning : ultrasonic scaling |               |
| 37,38   | Scaling and Root Planing 3 (nonsurgical periodontal therapy)                       | Practice | ONIZUKA SATORU  | post-learning : ultrasonic scaling |               |
| 39,40   | Design of treatment plan based on reevaluation and response to periodontal therapy | Practice | ONIZUKA SATORU  | post-learning : reevaluation       |               |

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| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | USUI MICHIIHIKO   |         |          |            |            |          |        |
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| Lecture | Contents   | Methods  | Instructor     | before-and-after Learning                          | Lecture rooms |
|---------|--|----------|----------------|--|---------------|
| 41,42   | Periodontal Surgery 1 (basic techniques in periodontal surgery; periodontal flap (full and partial thickness) and method for suturing) | Practice | ONIZUKA SATORU | post-learning :<br>Flap operation                  |               |
| 43,44   | Periodontal Surgery 2 (Flap operation)   | Practice | ONIZUKA SATORU | post-learning :<br>Flap operation                  |               |
| 45,46   | Periodontal Surgery 3 (connective tissue graft)  | Practice | ONIZUKA SATORU | post-learning :<br>Flap operation                  |               |
| 47,48   | Periodontal Regenerative Therapy 1 (GTR method)  | Practice | SANO KOUTARO   | post-learning :<br>GTR method                      |               |
| 49,50   | Periodontal Regenerative Therapy 2 (Emdogain)  | Practice | SANO KOUTARO   | post-learning :<br>Emdogain                        |               |
| 51,52   | Periodontal Prosthetics  | Practice | SANO KOUTARO   | post-learning :<br>Periodontal Prosthetics         |               |
| 53,54   | Implants in Periodontal Therapy  | Practice | SANO KOUTARO   | post-learning :<br>Implants in Periodontal Therapy |               |
| 55,56   | Orthodontics in Periodontal Therapy  | Practice | SANO KOUTARO   | post-learning :<br>Emdogain                        |               |
| 57,58   | Practical Significance of Supportive Periodontal Therapy (SPT)   | Practice | SANO KOUTARO   | post-learning :<br>SPT                             |               |
| 59,60   | Clinical Conference  | Practice | SANO KOUTARO   | post-learning :<br>Clinical Conference             |               |

# Periodontology

|                        |   |         |         |            |            |          |        |
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| Subject                | Choice  | Methods | Seminar | Total time | 30         | Credits  | 2      |
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| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |         |         |            |            |          |        |

## Course Description

【Language】 English and Japanese Research of periodontology is constantly advancing field in dentistry. It is important to recognize the latest data of the field before you start research. This course introduces a variety of tools to understand paper in English and also deals with clinical statistics, meta-analysis and sentence writing for scientific paper and presentation.

## Attainment Objectives

By the end of the course, students should be able to do the following;1. Understand content of paper in English using online dictionary2. Create database searching references by PubMed3. Perform basic analysis of clinical data by statistical procedure4. Understand procedure of meta-analysis5. Make simple and logical sentences for scientific papers

## Core Curriculum Item

| Core Curriculum | Contents                             |
|-----------------|--------------------------------------|
| C-6-2-1         | 確率変数とその分布、統計的推測(推定と検定)の原理と方法を理解している。 |
| C-6-2-4         | 調査方法と統計的分析法を理解している。                  |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| oral examination | 100%  |

## Etc

Questions from students are always welcome. Questions may also be submitted via email.

## Study Method

| Lecture | Contents                           | Methods  | Instructor     | before-and-after Le  | Lecture rooms |
|---------|------------------------------------|----------|----------------|--|---------------|
| 1       | Search on Online Dictionary        | practice | NAKAMURA TAIJI | post-learning:<br>Online Dictionary                        | その他           |
| 2       | Search on PubMed                   | practice | NAKAMURA TAIJI | post-learning:<br>PubMed                                   | その他           |
| 3       | Preparation of Literature Database | practice | NAKAMURA TAIJI | post-learning:<br>Preparation of<br>Literature<br>Database | その他           |

# Periodontology

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| Lecture No. | Contents  | Methods  | Instructor     | before-and-after Learning                          | Lecture rooms |
|-------------|---|----------|----------------|--|---------------|
| 4           | Clinical Statistics (Control of data)                     | practice | NAKAMURA TAIJI | post-learning: Control of data                     | その他           |
| 5           | Clinical Statistics (normal distribution of data)         | practice | NAKAMURA TAIJI | post-learning: normal distribution of data         | その他           |
| 6           | Clinical Statistics (mean and comparison between groups)  | practice | ONIZUKA SATORU | post-learning: mean and comparison between groups  | その他           |
| 7           | Clinical Statistics (analysis of variance)                | practice | ONIZUKA SATORU | post-learning: analysis of variance                | その他           |
| 8           | Clinical Statistics (simple linear regression analysis)   | practice | ONIZUKA SATORU | post-learning: simple linear regression analysis   | その他           |
| 9           | Clinical Statistics (multiple linear regression analysis) | practice | ONIZUKA SATORU | post-learning: multiple linear regression analysis | その他           |
| 10          | Analysis of Clinical Data 1                               | practice | ONIZUKA SATORU | post-learning: Analysis of Clinical Data           | その他           |
| 11          | Analysis of Clinical Data 2                               | practice | SANO KOUTARO   | post-learning: Analysis of Clinical Data           | その他           |
| 12          | Basis of meta-analysis                                    | practice | SANO KOUTARO   | post-learning: Basis of meta-analysis              | その他           |
| 13          | Application of meta-analysis                              | practice | SANO KOUTARO   | post-learning: Application of meta-analysis        | その他           |
| 14          | Preparation of a paper in Japanese                        | practice | SANO KOUTARO   | post-learning: Preparation of a paper              | その他           |

2025年度

subject code:212042

# Periodontology

|                        |   |         |         |            |            |          |        |
|------------------------|---|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                      |         |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | USUI MICHIIHIKO   |         |         |            |            |          |        |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |         |         |            |            |          |        |

| Lecture | Contents                          | Methods  | Instructor   | before-and-after Learning                | Lecture rooms |
|---------|-----------------------------------|----------|--------------|--|---------------|
| 15      | Preparation of a paper in English | practice | SANO KOUTARO | post-learning:<br>Preparation of a paper | その他           |

# Periodontology (Clinical Conference)

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                   |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | USUI MICHIIHIKO  |        |         |            |            |          |        |
| Instructor(s)          | USUI MICHIIHIKO,ONIZUKA SATORU,SANO KOUTARO,NAKAMURA TAIJI |        |         |            |            |          |        |

## Course Description

【Language】 English and Japanese You will read a number of the latest articles associated with periodontitis and learn methods for solving problems based on clinical cases.

## Attainment Objectives

By the end of the course, students should be able to do the following;1. Respond to acute and chronic periodontitis2. Develop the knowledge of surgical and nonsurgical periodontal therapy3. Recognize the concept of refractory chronic periodontitis4. Learn dental treatment based on psychosomatic dentistry and respond to the patients5. Develop the knowledge of periodontal regenerative therapy

## Textbooks

| Title                              | Author | Publisher |
|------------------------------------|--------|-----------|
| Journal of Periodontology          |        |           |
| Journal of Clinical Periodontology |        |           |
| Journal of Periodontal Research    |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Select and handout a paper from the following journals each time. |        |           |
| Journal of Periodontology   |        |           |
| Journal of Clinical Periodontology                                |        |           |
| Journal of Periodontal Research                                   |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                                  | Ratio |
|--|-------|
| oral examination in seminar, clinical conference | 100%  |

## Etc

Questions from students are always welcome. Questions may also be submitted via email.

2025年度

subject code:212043

# Periodontology (Clinical Conference)

|                        |   |        |         |            |              |          |        |
|------------------------|---|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                      |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | USUI MICHIIHIKO   |        |         |            |              |          |        |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |        |         |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods                         | Instructor  | before-and-after Le                           | Lecture rooms |
|---------|---|---------------------------------|---|---|---------------|
| 1 ~ 15  | Seminar・Clinical conferences<br>You will consider future development of periodontal research and treatment from the latest articles and examine application of them to clinical case. | Seminar and clinical conference | USUI MICHIIHIKO<br>NAKAMURA TAIJI<br>SANO KOUTARO<br>ONIZUKA SATORU | Post-learning:<br>handouts of clinical papers | その他           |

# Periodontology (Advanced Periodontal Surgery)

|                        |  |        |                     |            |          |         |   |
|------------------------|--|--------|---------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                                   |        | Grades              | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Mehods | Lesson and practice | Total time | 30       | Credits | 2 |
| Responsible Instructor | USUI MICHIIHIKO  |        |                     |            |          |         |   |
| Instructor(s)          | USUI MICHIIHIKO,ONIZUKA SATORU,SANO KOUTARO,NAKAMURA TAIJI |        |                     |            |          |         |   |

## Course Description

【Language】 English and Japanese  
Periodontists need technological capacity and knowledge of periodontal surgery. This course deal with the basic concept and knowledge of periodontal surgery. It also enhances the development of student's skill of periodontal surgery on practicing phantom and porcine jawbone and assistance of supervisory doctor.

## Attainment Objectives

By the end of the course, students should be able to do the following;1. Describe and explain a basic concept of periodontal surgery2. Select appropriate operative procedure according to cases3. Handle and select necessary surgical instruments on periodontal surgery4. Practice periodontal surgery under the guidance of supervisory doctor

## Textbooks

| Title    | Author | Publisher |
|----------|--------|-----------|
| Handouts |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| oral examination | 100%  |

## Etc

Questions from students are always welcome. Questions may also be submitted via email. Texts will be delivered in every class.

## Study Method

| Lecture | Contents  | Methods  | Instructor     | before-and-after Le           | Lecture rooms |
|---------|---|----------|----------------|-------------------------------|---------------|
| 1       | Flap operation using mucoperiosteal flap  | lecture  | NAKAMURA TAIJI | Post-learning: Flap Operation | その他           |
| 2       | Flap operation using mucosal flap   | lecture  | NAKAMURA TAIJI | Post-learning: Flap Operation | その他           |
| 3       | Flap operation<br>You will practice flap operation using phantom and porcine jawbone. | practice | NAKAMURA TAIJI | Post-learning: Flap Operation | その他           |

# Periodontology (Advanced Periodontal Surgery)

|                        |   |         |                     |            |          |         |   |
|------------------------|---|---------|---------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                                      |         | Grades              | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and practice | Total time | 30       | Credits | 2 |
| Responsible Instructor | USUI MICHIIHIKO   |         |                     |            |          |         |   |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |         |                     |            |          |         |   |

| Lecture | Contents  | Methods  | Instructor     | before-and-after Learning                  | Lecture rooms |
|---------|---|----------|----------------|--|---------------|
| 4       | Frenectomy  | lecture  | NAKAMURA TAIJI | Post-learning: Frenectomy                  | その他           |
| 5       | Vestibuloplasty   | lecture  | NAKAMURA TAIJI | Post-learning: Vestibuloplasty             | その他           |
| 6       | Periodontal plastic surgery (pedicle gingival graft)  | lecture  | SANO KOUTARO   | Post-learning: Periodontal plastic surgery | その他           |
| 7       | Periodontal plastic surgery (free gingival graft)   | lecture  | SANO KOUTARO   | Review                                     | その他           |
| 8       | Periodontal plastic surgery (connective tissue graft)   | lecture  | SANO KOUTARO   | Review                                     | その他           |
| 9       | Periodontal plastic surgery<br>You will practice periodontal plastic surgery using phantom and porcine jawbone. | practice | SANO KOUTARO   | Post-learning: Periodontal plastic surgery | その他           |
| 10      | GTR method  | lecture  | SANO KOUTARO   | Post-learning: GTR method                  | その他           |
| 11      | GTR method<br>You will practice GTR method using phantom and porcine jawbone.                                   | practice | ONIZUKA SATORU | Post-learning: GTR method                  | その他           |
| 12      | Emdogain  | lecture  | ONIZUKA SATORU | Post-learning: Emdogain                    | その他           |
| 13      | Autogenous bone graft   | lecture  | ONIZUKA SATORU | Post-learning: Autogenous bone graft       | その他           |
| 14      | Assistance of periodontal plastic surgery<br>You will assist periodontal plastic surgery in clinic.             | practice | ONIZUKA SATORU | Post-learning: Periodontal plastic surgery | 診療室_病院        |

2025年度

subject code:212044

# Periodontology (Advanced Periodontal Surgery)

|                        |   |         |                     |            |            |          |        |
|------------------------|---|---------|---------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                      |         |                     | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and practice | Total time | 30         | Credits  | 2      |
| Responsible Instructor | USUI MICHIIHIKO   |         |                     |            |            |          |        |
| Instructor(s)          | USUI MICHIIHIKO, ONIZUKA SATORU, SANO KOUTARO, NAKAMURA TAIJI |         |                     |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor     | before-and-after Learning              | Lecture rooms |
|---------|---|----------|----------------|--|---------------|
| 15      | Assistance of periodontal regenerative surgery<br>You will assist periodontal regenerative surgery in clinic. | practice | ONIZUKA SATORU | Post-learning:<br>Regenerative Therapy | 診療室_病院        |

# Removable Prosthesis (Basic Course)

|                        |                          |         |                    |            |          |         |   |
|------------------------|--------------------------|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry |         | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 120      | Credits | 4 |
| Responsible Instructor | ARITA MASAHIRO           |         |                    |            |          |         |   |
| Instructor(s)          | ARITA MASAHIRO           |         |                    |            |          |         |   |

## Course Description

Acquire clinical techniques for practicing all-deficiency prosthetic treatment in clinical settings.

## Attainment Objectives

1. All can be clinically and technically performed up to the installation of complete dentures.2. The occlusal adjustment is possible.3. Can adjust dentures.4. Can repair dentures.

## Reference Books

| Title                      | Author | Publisher          |
|----------------------------|--------|--------------------|
| Complete denture technique |        | Ishiyaku Publisher |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 58%   |
| Final test      | 42%   |

## Etc

Learning consultation Arita Watanabe

## Study Method

| Lecture | Contents               | Methods                          | Instructor     | before-and-after Le    | Lecture rooms |
|---------|------------------------|----------------------------------|----------------|------------------------|---------------|
|         |                        |                                  |                |                        | Moodle        |
| 1,2     | Preliminary impression | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Preliminary impression | Moodle        |
| 3,4     | Study model            | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Study model            | Moodle        |
| 5,6     | Individual tray        | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Individual tray        | Moodle        |

# Removable Prosthesis (Basic Course)

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1 ~ 3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 120          | Credits  | 4      |
| Responsible Instructor | ARITA MASAHIRO           |         |                    |            |              |          |        |
| Instructor(s)          | ARITA MASAHIRO           |         |                    |            |              |          |        |

| Lecture | Contents  | Methods                          | Instructor     | before-and-after Le       | Lecture rooms |
|---------|---|----------------------------------|----------------|---------------------------|---------------|
| 7,8     | Border molding  | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Border molding            | Moodle        |
| 9,10    | Precise impression  | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Precise impression        | Moodle        |
| 11,12   | Definitive cast   | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Definitive cast           | Moodle        |
| 13,14   | Bite plate  | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Bite plate                | Moodle        |
| 15,16   | Bite taking 10 occlusal plane   | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Bite taking               | Moodle        |
| 17,18   | Bite taking 2 Vertical dimension  | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Bite taking               | Moodle        |
| 19,20   | Mount to the articulator 1 Face-bow transfer                                  | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Face-bow transfer         | Moodle        |
| 21,22   | Mount to the articulator 2 Mounting plate                                     | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Mounting plate            | Moodle        |
| 23,24   | Gothic arch tracing   | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Gothic arch               | Moodle        |
| 25,26   | Check-bite technique  | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Check-bite                | Moodle        |
| 27,28   | Simultaneous recording method of Gothic arch tracing and check bite technique | Remote Lecture (Moodle) Exercise | ARITA MASAHIRO | Gothic arch<br>Check-bite | Moodle        |

# Removable Prosthesis (Basic Course)

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 120        | Credits  | 4      |
| Responsible Instructor | ARITA MASAHIRO           |         |                    |            |            |          |        |
| Instructor(s)          | ARITA MASAHIRO           |         |                    |            |            |          |        |

| Lecture | Contents                                | Methods                             | Instructor        | before-and-after Le        | Lecture rooms |
|---------|---|-------------------------------------|-------------------|----------------------------|---------------|
| 29,30   | Artificial tooth selection<br>Anterior  | Remote Lecture (Moodle)<br>Exercise | ARITA MASAHIRO    | Artificial tooth           | Moodle        |
| 31,32   | Artificial tooth selection<br>Posterior | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Artificial tooth           | Moodle        |
| 33,34   | Tooth arrangement<br>Anterior           | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Tooth arrangement          | Moodle        |
| 35,36   | Tooth arrangement<br>Posterior          | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Tooth arrangement          | Moodle        |
| 37,38   | Festoon                                 | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Festoon                    | Moodle        |
| 39,40   | Investment                              | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Investment                 | Moodle        |
| 41,42   | Curing                                  | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Curing                     | Moodle        |
| 43,44   | Polishing                               | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Polishing                  | Moodle        |
| 45,46   | Occlusal adjustment                     | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Occlusal adjustment        | Moodle        |
| 47,48   | Fitness of mucosal surface              | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Fitness of mucosal surface | Moodle        |
| 49,50   | Patient education                       | Remote Lecture (Moodle)<br>Exercise | WATANABE TAKAFUMI | Patient education          | Moodle        |

# Removable Prosthesis (Basic Course)

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 120        | Credits  | 4      |
| Responsible Instructor | ARITA MASAHIRO           |        |                    |            |            |          |        |
| Instructor(s)          | ARITA MASAHIRO           |        |                    |            |            |          |        |

| Lecture | Contents  | Methods                          | Instructor        | before-and-after Le    | Lecture rooms |
|---------|---|----------------------------------|-------------------|------------------------|---------------|
| 51,52   | Reline  | Remote Lecture (Moodle) Exercise | WATANABE TAKAFUMI | Reline                 | Moodle        |
| 53,54   | Denture repair 1 Decrease of vertical dimension     | Remote Lecture (Moodle) Exercise | WATANABE TAKAFUMI | Adjust of VD           | Moodle        |
| 55,56   | Denture repair 2 Replacement method for metal teeth | Remote Lecture (Moodle) Exercise | WATANABE TAKAFUMI | Metal teeth            | Moodle        |
| 57,58   | Coping with mucosal redness                         | Remote Lecture (Moodle) Exercise | WATANABE TAKAFUMI | Denture stomatitis     | Moodle        |
| 59,60   | Final test  | Remote Test (Moodle)             | WATANABE TAKAFUMI | Prepare for final test | Moodle        |

# Removable Prosthesis (Flange Technique)

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARITA MASAHIRO           |         |                    |            |            |          |        |
| Instructor(s)          | ARITA MASAHIRO           |         |                    |            |            |          |        |

## Course Description

Learn a basic technique for the higher special technical acquisition

## Attainment Objectives

- You can treat a removable prosthetic treatment with flange technique.

## Reference Books

| Title  | Author | Publisher           |
|--|--------|---------------------|
| Prosthetic treatment for edentulous patients |        | Ishiyaku Publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 70%   |
| Final test      | 30%   |

## Etc

Learning consultation Makihara

## Study Method

| Lecture | Contents                              | Methods                | Instructor     | before-and-after Le    | Lecture rooms |
|---------|---------------------------------------|------------------------|----------------|------------------------|---------------|
| 1       | Orientation                           | Remote Lecture(Moodle) | ARITA MASAHIRO | Denture space          | Moodle        |
| 2       | What is denture space?                | Remote Lecture(Moodle) | ARITA MASAHIRO | Denture space          | Moodle        |
| 3       | Denture space 1Neutral zone technique | Remote Lecture(Moodle) | ARITA MASAHIRO | Neutral zone technique | Moodle        |
| 4       | Denture space 2Piezography            | Remote Lecture(Moodle) | ARITA MASAHIRO | Piezography            | Moodle        |
| 5       | Denture space 3Flange technique       | Remote Lecture(Moodle) | ARITA MASAHIRO | Flange technique       | Moodle        |

# Removable Prosthesis (Flange Technique)

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARITA MASAHIRO           |        |                    |            |            |          |        |
| Instructor(s)          | ARITA MASAHIRO           |        |                    |            |            |          |        |

| Lecture | Contents  | Methods                        | Instructor     | before-and-after Le                          | Lecture rooms |
|---------|---|--------------------------------|----------------|--|---------------|
| 6       | Clinic of Flange technique<br>1Preliminary impressionStudy model            | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Preliminary impressionStudy model            | Moodle        |
| 7       | Clinic of Flange technique<br>2Closed impression technique                  | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Closed impression technique                  | Moodle        |
| 8       | Clinic of Flange technique<br>3Precise impressionDefinitive cast            | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Precise impressionDefinitive cast            | Moodle        |
| 9       | Clinic of Flange technique<br>4Face-bow transferBite taking                 | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Face-bow transferBite taking                 | Moodle        |
| 10      | Clinic of Flange technique<br>5Preparation for denture space taking         | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Preparation for denture space taking         | Moodle        |
| 11      | Clinic of Flange technique<br>6Denture space taking                         | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Denture space taking                         | Moodle        |
| 12      | Clinic of Flange technique<br>7Gypsum core and artificial tooth arrangement | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Gypsum core and artificial tooth arrangement | Moodle        |
| 13      | Clinic of Flange technique<br>8Flange technique for gingival region         | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Flange technique for gingival region         | Moodle        |
| 14      | Clinic of Flange technique<br>9Reline                                       | Remote Lecture(Moodle)Exercise | ARITA MASAHIRO | Reline                                       | Moodle        |
| 15      | Conclusion, final test  | Remote Test(Moodle)            | ARITA MASAHIRO | Prepare for final test                       | Moodle        |

# Removable Prosthesis (Magnet Denture)

|                        |                          |         |                    |            |          |         |   |
|------------------------|--------------------------|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry |         | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | ARITA MASAHIRO           |         |                    |            |          |         |   |
| Instructor(s)          | ARITA MASAHIRO           |         |                    |            |          |         |   |

## Course Description

Learn a basic technique for the higher special technical acquisition

## Attainment Objectives

You can treat a removable prosthetic treatment with dental magnetic attachment.

## Reference Books

| Title                              | Author                             | Publisher          |
|------------------------------------|------------------------------------|--------------------|
| New Dental magnetic attachment Q&A | New Dental magnetic attachment Q&A | Ishiyaku Pub. Inc. |

## Grading Criteria and Method of Evaluation

| Evaluation item                            | Ratio |
|--|-------|
| Report                                     | 42%   |
| Final test                                 | 50%   |
| Total evaluation (Attitude, Interest, etc) | 8%    |

## Etc

Learning consultation

Watanabe: E-mail

## Study Method

| Lecture | Contents  | Methods | Instructor                          | before-and-after Le        | Lecture rooms |
|---------|---|---------|-------------------------------------|----------------------------|---------------|
| 1       | Orientation   | Lecture | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Dental magnetic attachment |               |
| 2       | History of dental magnetic attachment                 | Lecture | ARITA MASAHIRO<br>WATANABE TAKAFUMI | History                    |               |
| 3       | Construction of DMA<br>Cap-york, Sandwich, Split-pole | Lecture | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Construction               |               |

# Removable Prosthesis (Magnet Denture)

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARITA MASAHIRO           |        |                    |            |            |          |        |
| Instructor(s)          | ARITA MASAHIRO           |        |                    |            |            |          |        |

| Lecture | Contents   | Methods             | Instructor                          | before-and-after Le               | Lecture rooms |
|---------|--|---------------------|-------------------------------------|-----------------------------------|---------------|
| 4       | Characteristics of DMA<br>Basic form                         | Lecture             | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Basic form                        |               |
| 5       | Clinical application of DMA                                  | Lecture             | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Clinical application              |               |
| 6       | Effect on MRI 1<br>Dental metal                              | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Dental metal                      |               |
| 7       | Effect on MRI 2<br>Casting method                            | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Casting method                    |               |
| 8       | Countermeasures for MRI<br>Removable attachment              | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Removable attachment              |               |
| 9       | Countermeasures for MRI<br>Modification of commercial keeper | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Modification of commercial keeper |               |
| 10      | New generation magnetic attachment                           | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | New DMA                           |               |
| 11      | Direct bonding method  | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Direct bonding method             |               |
| 12      | Magnet denture (case1)<br>Removable partial denture          | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Direct bonding method             |               |
| 13      | Magnet denture (case2)<br>Maxillofacial prosthesis           | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Maxillofacial prosthesis          |               |
| 14      | Magnet denture (case3)<br>Removable bridge                   | Lecture<br>Exercise | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Removable bridge                  |               |
| 15      | Final test   | Test                | ARITA MASAHIRO<br>WATANABE TAKAFUMI | Prepare for final test            |               |

# Removable Prosthodontics (Obstru

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MAKIHARA ERI             |        |                    |            |            |          |        |
| Instructor(s)          | MAKIHARA ERI             |        |                    |            |            |          |        |

## Course Description

Obstructive sleep apnea (OSA) is a disorder in which the upper airway is partially or completely obstructed during sleep resulting in repeated snoring, hypopnea, and apnea, and causing daytime sleepiness and other problems in daily life. The cause is due to functional or morphological abnormalities of the upper airway, and it is important to select treatment according to the cause. Oral appliance (OA) therapy can be provided by dentists, but it is important to fully understand its therapeutic effects and side effects and to relationship with medical institutions. In this lecture, students will deepen their understanding of the basic knowledge as well as the details of medical treatment and medical-dental cooperation.

## Attainment Objectives

Knowledge of OSA and treatment of patients.

## Core Curriculum Item

| Core Curriculum | Contents                             |
|-----------------|--------------------------------------|
| C-1-3-3         | 医療、保健、福祉、介護における多職種連携と歯科医師の役割を理解している。 |
| C-1-3-5         | 患者情報の守秘と患者等への情報提供の重要性と説明責任を理解している。   |
| D-2-4-2         | 医療情報提供書の記載方法を理解している。                 |
| D-2-4-3         | 医科歯科連携の必要性と歯科医師の関わり方を理解している。         |
| D-3-1-11-6      | 睡眠時無呼吸の原因、診察、検査、診断及び治療方針を理解している。     |
| D-6-2-2         | 歯科技工士と連携する歯科技工の方法の概要を理解している。         |
| D-6-2-3         | 多職種連携に必要となる基本的な専門用語を理解している。          |

## Reference Books

| Title                                    | Author | Publisher        |
|--|--------|------------------|
| Clinical of sleep medicine and dentistry |        | Horon Publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Report           | 42%   |
| Final test       | 50%   |
| Total evaluation | 8%    |

# Removable Prosthodontics (Obstru

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MAKIHARA ERI             |        |                    |            |            |          |        |
| Instructor(s)          | MAKIHARA ERI             |        |                    |            |            |          |        |

## Etc

Learning consultation Makihara E-mail

## Study Method

| Lecture | Contents                                      | Methods                         | Instructor   | before-and-after Le     | Lecture rooms |
|---------|---|---------------------------------|--------------|-------------------------|---------------|
| 1,2     | Orientation                                   | Remote Lecture(Moodl e)         | MAKIHARA ERI | SAS                     |               |
| 3,4     | Overview of sleep apnea (SAS)                 | Remote Lecture(Moodl e)         | MAKIHARA ERI | SAS                     |               |
| 5,6     | Overview of obstructive sleep apnea (OSA)     | Remote Lecture(Moodl e)         | MAKIHARA ERI | OSAS                    |               |
| 7,8     | Diagnosis of SAS                              | Remote Lecture(Moodl e)         | MAKIHARA ERI | ESS, PSG                |               |
| 9,10    | Treatment of SAS                              | Remote Lecture(Moodl e)         | MAKIHARA ERI | Treatment of SAS        |               |
| 11,12   | When an OSA patient comes to the hospital     | Remote Lecture(Moodl e)         | MAKIHARA ERI | Outcome patient         |               |
| 13,14   | OA clinical 1 Examination / diagnosis         | Remote Lecture(Moodl e)Exercise | MAKIHARA ERI | Examination / diagnosis |               |
| 15,16   | OA clinical 2 Impression taking , Bite taking | Remote Lecture(Moodl e)Exercise | MAKIHARA ERI | Fabrication             |               |
| 17,18   | OA clinical 3 Oral appliance (OA) 1           | Remote Lecture(Moodl e)Exercise | MAKIHARA ERI | Fabrication             |               |
| 19,20   | OA clinical 4 Oral appliance (OA) 2           | Remote Lecture(Moodl e)Exercise | MAKIHARA ERI | Fabrication             |               |

2025年度

subject code:212054

# Removable Prosthodontics (Obstru

|                        |                          |        |                    |            |            |          |        |
|------------------------|--------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MAKIHARA ERI             |        |                    |            |            |          |        |
| Instructor(s)          | MAKIHARA ERI             |        |                    |            |            |          |        |

| Lecture | Contents                    | Methods                        | Instructor   | before-and-after Le    | Lecture rooms |
|---------|-----------------------------|--------------------------------|--------------|------------------------|---------------|
| 21,22   | OA clinical 5 Therasnore    | Remote Lecture(Moodle)Exercise | MAKIHARA ERI | Therasnore             |               |
| 23,24   | OA clinical 6 Commercial OA | Remote Lecture(Moodle)         | MAKIHARA ERI | Commercial OA          |               |
| 25,26   | OA clinical 7 Titration     | Remote Lecture(Moodle)Exercise | MAKIHARA ERI | Titration              |               |
| 27,28   | OA clinical 8 Compliance    | Remote Lecture(Moodle)         | MAKIHARA ERI | Compliance             |               |
| 29,30   | Final test                  | Remote Test(Moodle)            | MAKIHARA ERI | prepare for final test |               |

# Removable Prosthodontics (TMD)

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MAKIHARA ERI             |         |                    |            |            |          |        |
| Instructor(s)          | MAKIHARA ERI             |         |                    |            |            |          |        |

## Course Description

TMJ disorder is a comprehensive diagnostic term for a disorder whose main symptoms are pain in the temporomandibular joint and masticatory muscles, TMJ noise, and disorders of mouth opening or abnormal jaw movements. Diagnostic Criteria for Temporomandibular disorders (DC/TMD) have been published as a diagnostic method. In this lecture, students will be able to understand and practice diagnostic methods of TMD and learn clinical aspects of TMD related to occlusion.

## Attainment Objectives

Knowledge of TMD and therapy of patients.

## Core Curriculum Item

| Core Curriculum | Contents                  |
|-----------------|---------------------------|
| D-3-1-7-1       | 顎関節疾患の分類と特徴を理解している。       |
| D-3-1-7-2       | 顎関節疾患の症状、診断法及び治療法を理解している。 |

## Reference Books

| Title                       | Author | Publisher         |
|-----------------------------|--------|-------------------|
| Temporomandibular disorders |        | Nagasue Publisher |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Report           | 42%   |
| Final test       | 50%   |
| Total evaluation | 8%    |

## Etc

Learning consultation: Eri Makihara (E-mail)

## Study Method

| Lecture | Contents    | Methods                 | Instructor   | before-and-after Le | Lecture rooms |
|---------|-------------|-------------------------|--------------|---------------------|---------------|
| 1,2     | Orientation | Remote lecture (Moodle) | MAKIHARA ERI | TMD                 |               |

# Removable Prosthodontics (TMD)

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MAKIHARA ERI             |         |                    |            |            |          |        |
| Instructor(s)          | MAKIHARA ERI             |         |                    |            |            |          |        |

| Lecture | Contents  | Methods                 | Instructor   | before-and-after Le                             | Lecture rooms |
|---------|---|-------------------------|--------------|---|---------------|
| 3,4     | TMD tide  | Remote lecture (Moodle) | MAKIHARA ERI | TMD   |               |
| 5,6     | DC/TMD  | Remote lecture (Moodle) | MAKIHARA ERI | DC/TMD  |               |
| 7,8     | Thought of the Japanese Society for Temporomandibular joint | Remote lecture (Moodle) | MAKIHARA ERI | The Japanese Society fo Temporomandibular joint |               |
| 9,10    | Contribution factors of TMD                                 | Remote lecture (Moodle) | MAKIHARA ERI | Contribution factors                            |               |
| 11,12   | Low vertical occlusion                                      | Remote lecture (Moodle) | MAKIHARA ERI | Low vertical occlusion                          |               |
| 13,14   | Force control   | Remote lecture (Moodle) | MAKIHARA ERI | Force control                                   |               |
| 15,16   | Increase Vertical dimension and TMD                         | Remote lecture (Moodle) | MAKIHARA ERI | Increase VD and TMD                             |               |
| 17,18   | Occlusal adjustment   | Remote lecture (Moodle) | MAKIHARA ERI | Occlusal adjustment                             |               |
| 19,20   | Neuromuscular regulation mechanism                          | Remote lecture (Moodle) | MAKIHARA ERI | Neuromuscular regulation mechanism              |               |
| 21,22   | Habitual mastication  | Remote lecture (Moodle) | MAKIHARA ERI | Habitual mastication                            |               |
| 23,24   | Fabrication of appliance for TMD                            | Remote lecture (Moodle) | MAKIHARA ERI | Fabrication                                     |               |
| 25,26   | Adjustment of appliance 1                                   | Remote lecture (Moodle) | MAKIHARA ERI | Adjustment                                      |               |
| 27,28   | Adjustment of appliance 2                                   | Remote lecture (Moodle) | MAKIHARA ERI | Adjustment                                      |               |
| 29,30   | Final test  | Remote lecture (Moodle) | MAKIHARA ERI | Prepare for final test                          |               |

# Removable Prosthodontics (Research Discussion)

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ARITA MASAHIRO           |        |         |            |            |          |        |
| Instructor(s)          | ARITA MASAHIRO           |        |         |            |            |          |        |

## Course Description

Read the literature in detail to understand the latest trends in dental prosthodontics-related research. Discussions on your research. Temporomandibular disorders team approach, clinical seminar in the field of our division.

## Attainment Objectives

1. Develop the ability to read English literature.
2. Understand the content of the research.
3. Develop the ability to criticize research.
4. Understand the background and trends of research.
5. Develop the latest clinical techniques.

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 90%   |
| Final Report    | 10%   |

## Etc

Learning consultation Tsuda

## Study Method

| Lecture | Contents   | Methods   | Instructor   | before-and-after Le  | Lecture rooms |
|---------|--|---|--|--|---------------|
| 1~30    | Understand the background of research, the contents of the latest literature, and the future prospects of research in related fields | Round reading, literature introduction and discussion Although it is basically a face-to-face meeting, since abstracts of documents are also delivered by e-mail, questions and answers can | ARITA MASAHIRO<br>WATANABE TAKAFUMI<br>OGUSU HIROMICHI | Detailed literature reading and research in related fields |               |

# Prosthodontics Implant supported Prosthesis

|                        |  |        |                     |            |            |          |        |
|------------------------|--|--------|---------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                     | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MASAKI CHIHIRO   |        |                     |            |            |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |        |                     |            |            |          |        |

## Course Description

【Language】 English and Japanese

In this course, you will learn basic theories such as anatomy, diagnostic imaging, and the use of simulation software to pursue implant treatment safely and reliably. You will also need to learn broad clinical knowledge to make total treatment plans. You will be able to train yourselves on phantom or pig bone to place implant, to make incisions, to suture, to take impressions, and other procedures to acquire basic skills needed for implant treatment.

## Attainment Objectives

When you successfully complete this course, you will be able to explain:

- (1) history of dental implant,
- (2) anatomy needed for implant treatment,
- (3) the importance of diagnostic wax-up and stent and actually fabricate them,
- (4) healing process of dental implant,
- (5) basic theory of simulation software,
- (6) prosthodontics procedure for implant treatment,
- (7) importance of maintenance for implant treatment.

## Reference Books

| Title  | Author | Publisher                 |
|--|--------|---------------------------|
| Fundamental Concepts and Techniques of Oral Implants (4th ed.) |        | ISHIYAKU PUBLISHERS, INC. |
| Implant Positioning (Practice in Prosthodontics Extra Issue)   |        | ISHIYAKU PUBLISHERS, INC. |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|--|-------|
| Responses upon consultation with instructors during the practice | 60%   |
| Contents and attitudes at the case conferences                   | 40%   |

# Prosthodontics Implant supported Prosthesis

|                        |  |         |                     |            |            |          |        |
|------------------------|--|---------|---------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                     | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MASAKI CHIHIRO   |         |                     |            |            |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                     |            |            |          |        |

## Etc

Student consultation: Any time

\*Textbooks are not specified, and handouts will be distributed on the lecture day.

## Study Method

| Lecture | Contents  | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|---|----------------------|--|---------------------|------------------------|
| 1~4     | Orientation "What is implant supported prosthesis?": You will learn about the significance of implant treatment in dental medicine.   | Lecture              | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 5~12    | History of dental implant, clinical evidence, major implant system: You will learn about fundamental concept of implant treatment based on implant history.   | Lecture              | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 13~20   | Anatomy important for implant treatment: Pathology of dental implant You will learn about anatomy and pathology crucial for implant treatment.  | Lecture              | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 21~28   | Preoperative diagnosis and treatment planning & Case practice using Simplant (implant simulating software): You will practice using simulation software an actual cases and practice making a treatment plan. | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 29~36   | Diagnostic wax-up and stent fabrication: You will prepare wax-up and fabricate diagnostic stent on ongoing patient.   | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Prosthodontics Implant supported Prosthesis

|                        |  |        |                     |            |            |          |        |
|------------------------|--|--------|---------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                     | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MASAKI CHIHIRO   |        |                     |            |            |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |        |                     |            |            |          |        |

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------------------|--|---------------------|------------------------|
| 37 ~ 44 | Implant placement surgical procedure: You will learn about the total image of implant placement surgery by watching recorded tapes.          | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 45 ~ 52 | Impression procedure and prosthodontics procedure: You will learn about implant prosthesis of different implant system using case materials. | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 53 ~ 60 | Prosthesis by CAD/CAM, occlusal control and postoperative management: You will learn about CAD/CAM prosthesis from actual cases.             | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Prosthodontics Implant supported Prosthesis

|                        |   |        |                     |              |          |         |   |
|------------------------|---|--------|---------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |        | Grades              | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Mehods | Lesson and practice | Total time   | 120      | Credits | 4 |
| Responsible Instructor | MASAKI CHIHIRO  |        |                     |              |          |         |   |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI , NODAI TOMOTAKA |        |                     |              |          |         |   |

## Course Description

【Language】 English and Japanese

In this course, after acquiring basic knowledge necessary, such as anatomy, diagnostic imaging and CT simulation, to make implant treatment plan, you will practice implant treatment on a patient. You will learn about advanced procedures such as bone grafts, sinus elevation, immediate loading, and immediate implant placement in the post-extraction site. You are expected to learn broad knowledge and acquire high skills of implant dentistry through case conferences and various lectures.

## Attainment Objectives

When you successfully complete this course, you will be able to:

- (1) explain advantages and disadvantages of implant treatment in comparison with other prosthodontics treatments.
- (2) plan implant treatment by understanding basic principles of CT simulating software.
- (3) conduct implant placement surgery safely and reliably by undergoing necessary preoperative examinations.
- (4) practice supplemental operating methods such as bone graft, immediate loading and immediate implant placement in the post-extraction site by appropriately judging their necessity.
- (5) apply provisional prosthesis with knowledge of its significance and purpose.
- (6) fabricate adequate implant prosthesis. (7) perform implant maintenance with knowledge of its importance.

## Reference Books

| Title  | Author | Publisher                 |
|--|--------|---------------------------|
| Implant Positioning (Practice in Prosthodontics Extra Issue)             |        | ISHIYAKU PUBLISHERS, INC. |
| Latest Clinical Guide for Japanese Patient-oriented "All-on-4" Treatment |        | ISHIYAKU PUBLISHERS, INC. |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|--|-------|
| Responses upon consultation with instructors during the practice | 60%   |
| Contents and attitudes at the case conferences                   | 40%   |

# Prosthodontics Implant supported Prosthesis

|                        |  |         |                     |              |          |         |   |
|------------------------|--|---------|---------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades              | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and practice | Total time   | 120      | Credits | 4 |
| Responsible Instructor | MASAKI CHIHIRO   |         |                     |              |          |         |   |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                     |              |          |         |   |

## Etc

Student consultation: Any time

\*Textbooks are not specified, and handouts will be distributed on the lecture day

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------------------|--|---------------------|------------------------|
| 1 ~ 4   | Informed consent: You will learn about the informed consent necessary for dental implant treatment.  | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 5 ~ 11  | Diagnostic wax-up and diagnostic stent: You will learn how to prepare diagnostic cast, diagnostic wax-up and to fabricate diagnostic stent.  | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 12 ~ 18 | Treatment planning using simulating software on CT images: You will learn how to use implant simulation software by working on difficult prosthodontics cases.                     | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 19 ~ 25 | Hands-on training to place implant with the instructor: You will learn about the surgical procedure for implant placement.   | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 26 ~ 32 | Bone graft, immediate loading and immediate implant placement in the post-extraction site: You will learn about the supplemental operating methods for implant surgical procedure. | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Prosthodontics Implant supported Prosthesis

|                        |  |         |                     |              |          |         |   |
|------------------------|--|---------|---------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades              | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and practice | Total time   | 120      | Credits | 4 |
| Responsible Instructor | MASAKI CHIHIRO   |         |                     |              |          |         |   |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                     |              |          |         |   |

| Lecture | Contents  | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|---|----------------------|--|---------------------|------------------------|
| 33 ~ 39 | Case report on the outcome of experienced implant treatment cases: You will be required to make a case presentation and get feedbacks and evaluation from multiple instructors. | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 40 ~ 46 | Fabrication of provisional prosthesis with adequate occlusion: You will learn about the timing and the technique to fabricate provisional prosthesis.                           | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 47 ~ 53 | Impression taking and implant denture fabrication: You will learn about the fabrication of implant-supported dentures.  | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 54 ~ 60 | Postoperative management of dental implant treatment: You will learn about postoperative management of dental implant treatment by studying actual cases.                       | Lecture and practice | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Oral Reconstruction and Rehabilitation

|                        |  |        |                    |            |            |          |        |
|------------------------|--|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |        |                    |            |            |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |        |                    |            |            |          |        |

## Course Description

【Language】English and Japanese

The purpose of this course is to conduct basic and clinical research on risk factors of dental implant treatment, such as bone quality, bone metabolism, systemic diseases and intraoral environment (especially, salivary gland function), and to acquire an attitude of viewing clinical dentistry from a scientific perspective.

## Attainment Objectives

When you successfully complete this course, you will learn and acquire:

- 1 Acquire and practice basic concepts of implant treatment and its risk factors.
- 2 Understand and utilize the literature review.
- 3 Explain bone quality and bone metabolism.
- 4 Describe water transport mechanism in salivary glands.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Latest articles on the topic should be handed out before each lecture and exercise. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item             | Ratio |
|-----------------------------|-------|
| Attainment on the subject   | 70%   |
| Attainment on the technique | 30%   |
|                             | 0%    |

## Etc

Student consultation: Any time

\*Textbooks are not specified, and handouts will be distributed on the lecture day.

# Oral Reconstruction and Rehabilitation

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1 ~ 2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |         |                    |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------------------|--|---------------------|------------------------|
| 1       | Orientation (What is basic research in a clinical course?)<br>Preliminary Study Assignment<br>Basic Research                                 | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 2       | Literature review 1 (How to read scientific papers and scientific presentation)<br>Prior Learning Assignment<br>English paper                | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 3       | Literature review 2 (how to search literature, scientific journals, quality of research)<br>Prior Learning Assignment<br>English paper       | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 4       | Laboratory usage 1 (basic use of laboratory equipment)<br>Prior Learning Assignment<br>Laboratory Equipment                                  | Exercise             | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 5       | Laboratory usage 2 (preparation and handling of reagents)<br>Prior Learning Assignment<br>Reagents   | Exercise             | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 6       | Concept of implant treatment and peri-implantitis<br>Pre-Learning Assignment<br>Implants   | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 7       | Preparation of model animals<br>Prior Learning Assignment<br>Diabetes model, xerostomia model, menopause model, chronic kidney disease model | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Oral Reconstruction and Rehabilitation

|                        |   |        |                    |            |          |         |   |
|------------------------|---|--------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |        | Grades             | 1~2 grades | Semester | Winter  |   |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MASAKI CHIHIRO  |        |                    |            |          |         |   |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI , NODAI TOMOTAKA |        |                    |            |          |         |   |

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------------------|--|---------------------|------------------------|
| 8       | Concepts of Bone Quality<br>Prior Learning Assignment Bone Quality                                   | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 9       | Bone metabolism<br>Prior Learning Assignment Bone Metabolism   | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 10      | Salivary gland function<br>Prior Learning Assignment<br>Water Transport Mechanism in Salivary Glands | Exercise             | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Oral Reconstruction and Rehabilitation

|                        |  |        |                    |            |              |          |        |
|------------------------|--|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |        |                    |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |        |                    |            |              |          |        |

## Course Description

【Language】English and Japanese

The purpose of this course is to conduct basic and clinical research on risk factors of dental implant treatment, such as bone quality, bone metabolism, systemic diseases and intraoral environment (especially, salivary gland function), and to acquire an attitude of viewing clinical dentistry from a scientific perspective.

## Attainment Objectives

When you successfully complete this course, you will learn and acquire:

- 1 Acquire and practice basic concepts of implant treatment and its risk factors.
- 2 Understand and utilize the literature review.
- 3 Explain bone quality and bone metabolism.
- 4 Describe water transport mechanism in salivary glands.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Latest articles on the topic should be handed out before each lecture and exercise. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item             | Ratio |
|-----------------------------|-------|
| Attainment on the subject   | 70%   |
| Attainment on the technique | 30%   |
|                             | 0%    |

## Etc

Student consultation: Any time

\*Textbooks are not specified, and handouts will be distributed on the lecture day.

# Oral Reconstruction and Rehabilitation

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |         |                    |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------------------|--|---------------------|------------------------|
| 1       | Orientation (What is basic research in a clinical course?)<br>Preliminary Study Assignment<br>Basic Research                                 | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 2       | Literature review 1 (How to read scientific papers and scientific presentation)<br>Prior Learning Assignment<br>English paper                | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 3       | Literature review 2 (how to search literature, scientific journals, quality of research)<br>Prior Learning Assignment<br>English paper       | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 4       | Laboratory usage 1 (basic use of laboratory equipment)<br>Prior Learning Assignment<br>Laboratory Equipment                                  | Exercise             | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 5       | Laboratory usage 2 (preparation and handling of reagents)<br>Prior Learning Assignment<br>Reagents   | Exercise             | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 6       | Concept of implant treatment and peri-implantitis<br>Pre-Learning Assignment<br>Implants   | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 7       | Preparation of model animals<br>Prior Learning Assignment<br>Diabetes model, xerostomia model, menopause model, chronic kidney disease model | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Oral Reconstruction and Rehabilitation

|                        |   |        |                    |            |              |          |        |
|------------------------|---|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO  |        |                    |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI , NODAI TOMOTAKA |        |                    |            |              |          |        |

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------------------|--|---------------------|------------------------|
| 8       | Concepts of Bone Quality<br>Prior Learning Assignment Bone Quality                                   | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 9       | Bone metabolism<br>Prior Learning Assignment Bone Metabolism   | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 10      | Salivary gland function<br>Prior Learning Assignment<br>Water Transport Mechanism in Salivary Glands | Exercise             | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |

# Oral Reconstruction and Rehabilitation

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |         |                    |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                    |            |              |          |        |

## Course Description

【Language】English and Japanese

The student will select one of the ongoing research themes in our division. They will understand the research background through literature review, formulate a research plan, and conduct preliminary experiments, discussions, main experiments, and critical examination of the results to obtain the foundation for writing a research article.

Few examples for our division research projects are as follows.

- (1) Clinical research on risk factors for immediate loading implant treatment
- (2) Basic research on systemic diseases which are risk factors for dental implant treatment
- (3) Basic research on diagnosis and treatment of peri-implantitis
- (4) Research on jaw bone quality
- (5) Research on salivary gland function and treatment methods for xerostomia

## Attainment Objectives

You should learn scientific background of the subject, inquire into the subject closely, and become a practitioner who can practice medicine based on evidence.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Latest articles on the topic should be handed out before each lecture and exercise. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item             | Ratio |
|-----------------------------|-------|
| Attainment on the subject   | 70%   |
| Attainment on the technique | 30%   |

## Etc

Student consultation: Any time

\*Textbooks are not specified, and handouts will be distributed on the lecture day.

# Oral Reconstruction and Rehabilitation

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 2 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |         |                    |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Learning | Lecture rooms          |
|---------|--|----------------------|--|---------------------------|------------------------|
| 1       | Orientation (Have discussion with the instructors on the theme of each research) | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts           | その他<br>Microsoft Teams |
| 2 ~ 15  | Each instructor will be assigned to lead and carry out each research.            | Lecture and exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts           | その他<br>Microsoft Teams |

# Advanced Oral Reconstruction and Rehabilitation

|                        |  |        |         |            |              |          |        |
|------------------------|--|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MASAKI CHIHIRO   |        |         |            |              |          |        |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |        |         |            |              |          |        |

## Course Description

【Language】 English and Japanese

This course will be in a seminar style using literature review, which include assigned readings and classroom discussions.

Newly published research articles on Clinical Oral Implants Research, International Journal of Oral and Maxillofacial Implant, Journal of Prosthodontic Research, International Journal of Prosthodontics, Journal of Dental Research, Dental Materials, and others should be reviewed.

## Attainment Objectives

To acquire higher knowledge in the field, you should come to understand how to read an outline and scientific backgrounds of a scientific research paper, how to prepare handouts, which efficiently explain the topic, and how to use presentation software and make effective presentation slides.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Latest articles on the topic should be handed out before each seminar. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Contents of the presentation                                  | 60%   |
| Attendance, participation and comprehension in the discussion | 40%   |

## Etc

Student consultation: Any time

\*Textbooks are not specified, and handouts will be distributed on the lecture day.

# Advanced Oral Reconstruction and Rehabilitation

|                        |  |        |         |            |              |          |        |  |
|------------------------|--|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | MASAKI CHIHIRO   |        |         |            |              |          |        |  |
| Instructor(s)          | MASAKI CHIHIRO, KONDOU YUUSUKE, MUKAIBO TARO, MUNEMASA TAKASHI, NODAI TOMOTAKA |        |         |            |              |          |        |  |

## Study Method

| Lecture | Contents   | Methods  | Instructor   | before-and-after Le | Lecture rooms          |
|---------|--|----------|--|---------------------|------------------------|
| 1       | Orientation  | Exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
| 2 ~ 15  | Each allocated should review a paper of ones selection. You should prepare handouts and make a presentation. | Exercise | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA | Review handouts     | その他<br>Microsoft Teams |
|         |  |          | MASAKI CHIHIRO<br>KONDOU YUUSUKE<br>MUKAIBO TARO<br>MUNEMASA TAKASHI<br>NODAI TOMOTAKA |                     | その他<br>Microsoft Teams |

# Basic Studies in Community Oral Health

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | ANSAI TOSHIHIRO  |        |          |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |        |          |            |            |          |        |

## Course Description

【Language】 Japanese and English You can learn the knowledge and practical skills of community oral health standard based health-oriented concept and minimum intervention concept. You can understand biofilm-related diseases such as dental caries and periodontal disease and treatment and prevention as well as clinical skills based health behavior.

## Attainment Objectives

You should achieve following assignments:(1) Acquisition of the fundamental knowledge and skills for standard precaution(2) Acquisition of communication skills(3) Acquisition of risk assessment by saliva- or bacterial tests(4) Acquisition of oral health instruction skills based on health-psychology(5) Acquisition of re-calcification strategy(6) Acquisition of community-based health practice along their life stage

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| D-3-2-3         | 歯周疾患の病因と病態を理解している。                                   |
| D-3-2-4         | 口腔細菌、プラーク(口腔バイオフィルム)及び歯石を理解している。                     |
| D-5-1-1         | 主な歯科疾患(齲蝕、歯周疾患、不正咬合)の予防を理解している。                      |
| D-5-1-2         | 齲蝕予防における予防填塞及びフッ化物の応用方法を理解している。                      |
| D-5-1-4         | ライフステージに応じた歯科疾患の予防を理解している。                           |
| D-5-2-3-2       | 歯周疾患の検査法、診断及び治療方針(メンテナンスを含む)を理解している。                 |
| E-2-1-1-2       | 医療面接における基本的なコミュニケーションができる。( )                        |
| PS-09           | 患者安全と感染対策を理解している。                                    |
| SO-04           | 社会や地域における歯科医療の現状を理解し、口腔の健康を通じて全身の健康の増進の活動に積極的に参加できる。 |

## Reference Books

| Title   | Author | Publisher           |
|---|--------|---------------------|
| Handbook of Practical Preventive Dentistry 2004 |        | Ishiyaku Publishers |
| Preventive Periodontology 2007                  |        | Ishiyaku Publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item    | Ratio |
|--------------------|-------|
| report             | 50%   |
| oral presentations | 30%   |

# Basic Studies in Community Oral Health

|                        |  |         |          |            |            |          |        |  |
|------------------------|--|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                                       |         |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice   | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | ANSAI TOSHIHIRO  |         |          |            |            |          |        |  |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |         |          |            |            |          |        |  |

| Evaluation item | Ratio |
|-----------------|-------|
| discussion      | 20%   |

## Study Method

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le               | Lecture rooms   |
|---------|--|----------------------|-----------------|-----------------------------------|-----------------|
|         |  |                      |                 |                                   | Microsoft Teams |
| 1~2     | Standard precaution<br>You will learn basic knowledge and skills of standard precaution.   | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 3~4     | Disinfectant and classification of Spaulding<br>You will learn basic knowledge kinds of disinfectant and classification of Spaulding.  | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 5~6     | Basic strategy of prevention of infection<br>You will learn basic strategy of prevention of infection.   | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 7~10    | Medical communication<br>You will learn basic knowledge and skills of medical communication.   | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 11~15   | WHO Oral Survey method and method of calibration<br>You will learn the WHO Oral Survey method and method of calibration.   | Lecture and Practice | SHIRAKI HIKARU  | Pre- and post-reading of textbook | Microsoft Teams |
| 16~20   | Diagnosis and clinical devises of dental caries and periodontal disease<br>You will learn up-to-date diagnosis and devices for dental caries and periodontal diseases.         | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 21~24   | Diagnosis techniques using non-invasive samples including saliva<br>You will learn basic knowledge of up-to-date diagnostic techniques using non-invasive samples like saliva. | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |

# Basic Studies in Community Oral Health

|                        |  |         |          |            |              |          |        |  |
|------------------------|--|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                                       |         |          | Grades     | 1 ~ 3 grades | Semester | Winter |  |
| Subject                | Choice   | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | ANSAI TOSHIHIRO  |         |          |            |              |          |        |  |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |         |          |            |              |          |        |  |

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le               | Lecture rooms   |
|---------|--|----------------------|-----------------|-----------------------------------|-----------------|
| 25 ~ 29 | Non-smoking health guidance based on behavioral science<br>You will learn health guidance strategy of preventing smoking.                              | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 30 ~ 34 | Assessment in clinical epidemiology<br>You will learn basic knowledge of various assessment in epidemiological study.                                  | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 35 ~ 38 | Basic fluoride application I (water fluoridation)<br>You will learn basic fluoride application such as water fluoridation.                             | Lecture and Practice | KATAOKA SYOUTA  | Pre- and post-reading of textbook | Microsoft Teams |
| 39 ~ 41 | Basic fluoride application II (topical fluoridation)<br>You will learn basic fluoride application such as topical fluoridation.                        | Lecture and Practice | KATAOKA SYOUTA  | Pre- and post-reading of textbook | Microsoft Teams |
| 42 ~ 45 | Theory and clinical practice of oral biofilm<br>You will learn basic theory and clinical practice regarding oral biofilm.                              | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 46 ~ 50 | Theory and clinical practice of re-mineralization technique<br>You will learn basic theory and clinical practice regarding re-mineralization of teeth. | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 51 ~ 55 | Health/social support according to their life stage I<br>You will learn basic strategy of health/social support in school and work place.              | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 56 ~ 60 | Health/social support according to their life stage II<br>You will learn basic strategy of health/social support of the elderly.                       | Lecture and Practice | ANSAI TOSHIHIRO | pre- and post-reading of textbook | Microsoft Teams |

# Advanced Studies in Community Oral Health

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | ANSAI TOSHIHIRO  |        |          |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |        |          |            |            |          |        |

## Course Description

【Language】 Japanese You can understand community system to support health strategy for community-dwelling population in the medical care, nursing care, and health care. Also, you can learn the knowledge and clinical skills based health behavior and health-oriented guidance.

## Attainment Objectives

You should achieve following assignments:(1) Acquisition of the fundamental knowledge regarding the system and roles of medical care, nursing care, and health care in community(2) Acquisition of the role of system of comprehensive care for elderly(3) Acquisition of health instruction and clinical skills based on behavioral psychology(4) Acquisition of health oriented program construction according to their life stage(5) Acquisition of clinical skills to promote oral health and medical support at emergency

## Core Curriculum Item

| Core Curriculum | Contents  |
|-----------------|---|
| C-1-3-3         | 医療、保健、福祉、介護における多職種連携と歯科医師の役割を理解している。                                  |
| C-1-3-4         | 医療や介護をはじめとする他職種、他業種や他の医療機関との連携を行うための手続きとコミュニケーション(適切な略語などを含む)を理解している。 |
| C-4-3-1         | 地域、職場及び各ライフステージの保健医療施策の背景と概要を理解している。                                  |
| C-4-3-6         | 地域包括ケアシステムをはじめとする、地域における医療・保健・福祉・介護の連携を理解している。                        |
| C-4-3-8         | 災害時の歯科医療の必要性を理解している。  |
| C-5-3           | プライマリヘルスケアとヘルスプロモーションを理解している。   |
| S0-03           | 医療、保健、福祉、介護とそれを取り巻く社会環境を理解している。                                       |
| S0-05           | 地域医療において、各種制度に基づく歯科医師の果たす役割を自覚し、行動できる。                                |
| S0-06           | 災害時における歯科医師の役割を理解している。  |

## Reference Books

| Title   | Author | Publisher        |
|---|--------|------------------|
| Community-based medicine 2009                                   |        | Igakushoin       |
| Behavioral Medicine A Guide for Clinical Practice, 3rd Ed. 2010 |        | Medical Sci. Int |

# Advanced Studies in Community Oral Health

|                        |  |        |          |            |            |          |        |  |
|------------------------|--|--------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                                       |        |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | ANSAI TOSHIHIRO  |        |          |            |            |          |        |  |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |        |          |            |            |          |        |  |

## Grading Criteria and Method of Evaluation

| Evaluation item    | Ratio |
|--------------------|-------|
| report             | 50%   |
| oral presentations | 30%   |
| discussion         | 20%   |

## Study Method

| Lecture | Contents  | Methods              | Instructor      | before-and-after Le               | Lecture rooms   |
|---------|---|----------------------|-----------------|-----------------------------------|-----------------|
|         |   |                      |                 |                                   | Microsoft Teams |
| 1~4     | Outline of Community based oral health strategy I You will learn the knowledge regarding current status and roles of medical care, nursing care, and health care.           | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 5~8     | Outline of Community based oral health strategy II You will learn the knowledge regarding the primary care as basic concept of medical care, nursing care, and health care. | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 9~12    | Outline of Community based oral health system I You will learn the knowledge regarding the system and roles of human resources, medical institutions, and local government. | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 13~16   | Outline of Community based oral health system II You will learn the knowledge regarding the system and roles of nursing care, health and welfare.                           | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 17~20   | Outline of Community based oral health system III You will learn the knowledge regarding the system and roles of community comprehensive care.                              | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |

# Advanced Studies in Community Oral Health

|                        |  |        |          |            |            |          |        |  |
|------------------------|--|--------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                                       |        |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | ANSAI TOSHIHIRO  |        |          |            |            |          |        |  |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |        |          |            |            |          |        |  |

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le               | Lecture rooms   |
|---------|--|----------------------|-----------------|-----------------------------------|-----------------|
| 21 ~ 24 | Outline of Community based oral health system I You will learn the knowledge regarding the health guidance strategy and health support based on health promotion.                              | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 25 ~ 28 | Outline of practical health guidance strategy I You will learn the knowledge regarding the concept and skills of health-communication.   | Lecture and Practice | SHIRAKI HIKARU  | Pre- and post-reading of textbook | Microsoft Teams |
| 29 ~ 32 | Outline of practical health guidance strategy II You will learn the knowledge regarding basic concept of health behavioral psychology and behavioral science.                                  | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 33 ~ 36 | Details of practical health guidance strategy I You will learn the knowledge regarding the dietary education, eating behavior, and health support.   | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 37 ~ 41 | Details of practical health guidance strategy II You will learn the knowledge regarding the non-smoking guidance program and health support.   | Lecture and Practice | SHIRAKI HIKARU  | Pre- and post-reading of textbook | Microsoft Teams |
| 42 ~ 45 | Health support / health guidance according to their life stage I You will learn the knowledge regarding health support/ guidance from maternal and child care stage to school / puberty stage. | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |

# Advanced Studies in Community Oral Health

|                        |  |        |          |            |              |          |        |
|------------------------|--|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |        |          | Grades     | 1 ~ 3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | ANSAI TOSHIHIRO  |        |          |            |              |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |        |          |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor      | before-and-after Le               | Lecture rooms   |
|---------|---|----------------------|-----------------|-----------------------------------|-----------------|
| 46 ~ 48 | Health support / health guidance according to their life stage II You will learn the knowledge regarding health support/ guidance in adults stage including health guidance from adults and occupational field to elderly/care stage. | Lecture and Practice | KAKUTA SATOKO   | Pre- and post-reading of textbook | Microsoft Teams |
| 49 ~ 54 | Multi-professional collaboration in Community You will learn the knowledge and practice home-care in the community.   | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |
| 55 ~ 58 | Details of perioperative period in Hospital You will learn the knowledge and practice perioperative care in the hospital.   | Lecture and Practice | KATAOKA SYOUTA  | Pre- and post-reading of textbook | Microsoft Teams |
| 59 ~ 60 | Oral health support at emergency You will learn the knowledge regarding the practical skills of oral health support program at emergency  | Lecture and Practice | ANSAI TOSHIHIRO | Pre- and post-reading of textbook | Microsoft Teams |

# Practice in Community Oral Health

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |         |                    |            |            |          |        |

## Course Description

【Language】 Japanese This course deals with epidemiological and basic statistical knowledge to conduct oral health research. The aim of this course is to help students acquire an understanding of principles and methodologies of epidemiology by lectures, and an understanding of biostatistical concepts by analyzing data, using the statistical software.

## Attainment Objectives

By the end of the course, students should be able to do following;(1) Describe and explain the roles and relationships between epidemiology and biostatistics in the prevention of disease and the improvement of health.(2) Describe and explain methodologies of descriptive epidemiology for identifying problems and establishing hypotheses.(3) Describe and explain methodologies of analytical epidemiology for clarifying risk and protector factors of diseases.(4) Describe and explain the concept of confounding.(5) Conduct statistical analyses using the statistical software SPSS and R.

## Core Curriculum Item

| Core Curriculum | Contents                             |
|-----------------|--------------------------------------|
| C-6-2-1         | 確率変数とその分布、統計的推測(推定と検定)の原理と方法を理解している。 |
| C-6-2-4         | 調査方法と統計的分析法を理解している。                  |
| PS-04           | 疫学と予防を理解している。                        |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| reports         | 40%   |
| presentations   | 40%   |
| Debates         | 20%   |

## Study Method

| Lecture | Contents  | Methods | Instructor      | before-and-after Le                               | Lecture rooms   |
|---------|---|---------|-----------------|---|-----------------|
| 1       | Epidemiological theory 1 - Variables and probability distribution<br>You will learn variables and probability distribution. | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |

# Practice in Community Oral Health

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |         |                    |            |            |          |        |

| Lecture | Contents   | Methods | Instructor      | before-and-after Le  | Lecture rooms   |
|---------|--|---------|-----------------|--|-----------------|
| 2       | Epidemiological theory 2 - Group comparison and significance level. You will learn basic concept of group comparison and significance level.   | Lecture | KAKUTA SATOKO   | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 3       | Epidemiological theory 3 - Multiple comparison. You will learn various multiple comparison methods and essential points for use.   | Lecture | KAKUTA SATOKO   | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 4       | Epidemiological theory 4 - Bias and confounding. You will learn controlling methods of bias and confounding factors such as CBC based on designing research.   | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 5       | Epidemiological theory 5 - EBM and research design. You will learn 5 steps of EBM and research question, category of clinical research design, and international rules.  | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 6       | Health care service evaluation in oral health care policy. You will learn health care service evaluation methods including effects, efficacy, and benefit in oral health care policy based on concrete examples. | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 7       | Oral health care data analysis 1 - summary statistics. You will learn summary statistics, using the statistical software SPSS.   | Lecture | KAKUTA SATOKO   | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |

# Practice in Community Oral Health

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |         |                    |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor     | before-and-after Le  | Lecture rooms   |
|---------|--|----------|----------------|--|-----------------|
| 8       | Oral health care data analysis 2 - Univariate analysis<br>You will learn Univariate analysis, using the statistical software SPSS.                           | Practice | KAKUTA SATOKO  | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 9       | Oral health care data analysis 3 - Association and regression model<br>You will learn association and regression model, using the statistical software SPSS. | Practice | KAKUTA SATOKO  | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 10      | Oral health care data analysis 4 - Control of confounding<br>You will learn control of confounding and interaction, using the statistical software SPSS.     | Practice | SHIRAKI HIKARU | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 11      | Oral health care data analysis 5 - Cox's proportional hazard model<br>You will learn Cox's proportional hazard model, using the statistical software SPSS.   | Practice | SHIRAKI HIKARU | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 12      | Bayesian statistics I<br>You will learn a concept and basic points of Bayesian statistics including the comparison with the Fisher statistics.               | Practice | KATAOKA SYOUTA | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 13      | Bayesian statistics II<br>You will learn basic concept of the Bayesian inference and MCMC (Markov chain Monte Carlo) methods.                                | Practice | KATAOKA SYOUTA | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |

# Practice in Community Oral Health

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |         |                    |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor      | before-and-after Le  | Lecture rooms   |
|---------|---|----------|-----------------|--|-----------------|
| 14      | Bayesian statistics III You will learn application of the Bayesian statistics using R and basic skills to use the Stan and Rstan. | Lecture  | KATAOKA SYOUTA  | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 15      | Research hypothesis presentation Give a presentation of formulating the research hypothesis of your interesting theme.            | Practice | ANSAI TOSHIHIRO | Submit a report after the lecture.   | Microsoft Teams |

# Practice in Community Oral Health

|                        |                                 |        |                    |            |            |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 2~3 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO                 |        |                    |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KATAOKA SYOUTA |        |                    |            |            |          |        |

## Course Description

【Language】 Japanese High-level scientific report is demanded. This course is designed for students who have basic statistical and epidemiological knowledge to conduct oral health research. The aim of this course is (1) to learn practical reporting skill for research preparation and scientific paper writing based on information provided by statistical analysis, and (2) to archive the practical skills for scientific presentation and writing the papers.

## Attainment Objectives

You should achieve following assignments;(1) Acquisition of effective data reporting methods in health science.(2) Acquisition of basic and advanced reporting methods for values and descriptive statistics.(3) Acquisition of effective way for presenting data using tables and figures.(4) Acquisition of effective presentation skills for research results in health science.

## Core Curriculum Item

| Core Curriculum | Contents  |
|-----------------|---|
| C-2-7           | 各自の興味に応じて科学的研究に積極的に参加できる。   |
| RE              | 科学的探究(Research)/社会に適応する医学を創造していくために、医学・医療の発展のための歯学研究の重要性を理解し、科学的・批判的思考を身に付けながら学術・研究活動に関与していく。 |
| RE-02           | 研究の基礎となる科学的理論や方法論を身に付ける。  |
| RE-06           | 科学的考察に基づいて、研究発表を行うことができる。   |

## Textbooks

| Title         | Author | Publisher |
|---------------|--------|-----------|
| Prepared text |        |           |

## Reference Books

| Title  | Author                           | Publisher           |
|--|----------------------------------|---------------------|
| How to Write, Publish, & Present in the Health Sciences      | Amer<br>College of<br>Physicians | Thomas A.<br>Lang   |
| International rules for epidemiological and clinical studies | Garr<br>Reynolds                 | New Riders<br>Press |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Reports         | 40%   |
| Presentations   | 40%   |
| Debates         | 20%   |

# Practice in Community Oral Health

|                        |                                 |        |                    |            |              |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO                 |        |                    |            |              |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KATAOKA SYOUTA |        |                    |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods | Instructor      | before-and-after Le                               | Lecture rooms   |
|---------|---|---------|-----------------|---|-----------------|
|         |   |         |                 |   | Microsoft Teams |
| 1       | Structure of scientific article and basic skills to write article<br>You will learn structure of scientific article and basic skills to write article.  | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |
| 2       | How to make effective tables and figures essential for article making<br>You will learn basic skills for making effective tables and figures.   | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |
| 3       | Skills to summarize discussion and conclusions<br>You will learn basic concept and skills to summarize discussion and conclusions.  | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |
| 4       | Process to submit article and skill for response for comments<br>You will learn process to submit article and skill for response for comments.  | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |
| 5       | Uniform requirements for manuscripts submitted to scientific journals<br>You will learn uniform requirements for manuscripts submitted to scientific journals: writing and editing for publication. | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |
| 6, 7    | Basic skills for preparation for academic meeting<br>You will learn basic skills for preparation for academic meeting.  | Lecture | ANSAI TOSHIHIRO | Learning material will be distributed in advance. | Microsoft Teams |

# Practice in Community Oral Health

|                        |                                 |         |                    |            |              |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO                 |         |                    |            |              |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KATAOKA SYOUTA |         |                    |            |              |          |        |

| Lecture | Contents   | Methods  | Instructor      | before-and-after Le  | Lecture rooms   |
|---------|--|----------|-----------------|--|-----------------|
| 8, 9    | Presentation methods in health science 1: You will learn effective way for poster presentation.  | Lecture  | KATAOKA SYOUTA  | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 10, 11  | Presentation methods in health science 2: You will learn effective way for oral presentation.  | Practice | KATAOKA SYOUTA  | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 12, 13  | How to write the application of research funding You will learn how to find research funding and apply to it effectively.  | Practice | ANSAI TOSHIHIRO | Learning material will be distributed in advance.                                    | Microsoft Teams |
| 14      | Guideline for medical research ethics and IRB including points to write application of IRB You will learn guideline for research ethics and IRB including how to write application of IRB. | Practice | ANSAI TOSHIHIRO | Learning material will be distributed in advance. Submit a report after the lecture. | Microsoft Teams |
| 15      | Summary Feedback for the presentation and debates. Introduce outstanding poster and oral presentations for reference of future research.   | Lecture  | ANSAI TOSHIHIRO | Learning material will be distributed in advance.                                    | Microsoft Teams |

# Current Topics in Community Oral Health

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                       |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | ANSAI TOSHIHIRO  |        |         |            |            |          |        |
| Instructor(s)          | ANSAI TOSHIHIRO, KAKUTA SATOKO, KATAOKA SYOUTA, SHIRAKI HIKARU |        |         |            |            |          |        |

## Course Description

【Language】 Japanese and English You can learn and study how to read any up-to-date scientific articles, write articles and make presentation regarding any outcomes to understand the knowledge and scientific significance in preventive/ oral health, public health, clinical nutrition and epidemiological research

## Attainment Objectives

To understand the contents of scientific articles, and acquire the skills for exploring any scientific evidence, and learn how to make presentation and write articles of any outcomes.

## Core Curriculum Item

| Core Curriculum | Contents                  |
|-----------------|---------------------------|
| C-2-7           | 各自の興味に応じて科学的研究に積極的に参加できる。 |
| RE-02           | 研究の基礎となる科学的理論や方法論を身に付ける。  |
| RE-06           | 科学的考察に基づいて、研究発表を行うことができる。 |

## Grading Criteria and Method of Evaluation

| Evaluation item    | Ratio |
|--------------------|-------|
| Oral presentations | 50%   |
| Discussion         | 30%   |
| Assessment         | 20%   |

## Study Method

| Lecture | Contents  | Methods   | Instructor   | before-and-after Le                                       | Lecture rooms   |
|---------|---|---|--|---|-----------------|
| 1~15    | To understand the background, contents, and perspective of article interested in every time | Introduction of evidence and discussion (Microsoft Teams) | ANSAI TOSHIHIRO<br>KAKUTA SATOKO<br>KATAOKA SYOUTA<br>SHIRAKI HIKARU | Preparing any needed handouts and slides for participants | Microsoft Teams |

# Internal Medicine for Dentistry

|                        |                          |         |        |            |            |          |        |  |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | NAKAMICHI IKUO           |         |        |            |            |          |        |  |
| Instructor(s)          | NAKAMICHI IKUO           |         |        |            |            |          |        |  |

## Course Description

To improve dental practice, it is important to understand the impact of medical problems on dentistry. In this course, systemic diseases will be discussed using videos. After learning how to diagnose and treat common diseases, pathophysiology will provide a new perspective on clinical dentistry. Pathophysiological considerations, including cell biology and immunology, may enhance the doctoral thesis.

## Attainment Objectives

1. Understand etiology, diagnosis and therapy of common systemic disease.
2. Understand systemic disease's physiology that affects the dental practice.
3. Prevent systemic disease's exacerbation that is due to dental practice.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Discussion after watching the lecture video. |        |           |

## Reference Books

| Title               | Author | Publisher |
|---------------------|--------|-----------|
| (Japanese textbook) |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item             | Ratio |
|-----------------------------|-------|
| Discussion and presentation | 100%  |

## Etc

Please feel free to email us with any questions.

Remote lectures for public absences are available using Microsoft Teams.

## Study Method

| Lecture | Contents    | Methods    | Instructor     | before-and-after Le | Lecture rooms |
|---------|-------------|------------|----------------|---------------------|---------------|
| 1       | Circulation | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 2       | Blood       | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 3       | Respiration | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 4       | Digestion   | Discussion | NAKAMICHI IKUO | Reading books       | その他           |

2025年度

subject code:212081

# Internal Medicine for Dentistry

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | NAKAMICHI IKUO           |        |        |            |            |          |        |
| Instructor(s)          | NAKAMICHI IKUO           |        |        |            |            |          |        |

| Lecture | Contents        | Methods    | Instructor     | before-and-after Le | Lecture rooms |
|---------|-----------------|------------|----------------|---------------------|---------------|
| 5       | Metabolism      | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 6       | Renal function  | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 7       | Neurology       | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 8       | Mental disorder | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 9       | Immunology      | Discussion | NAKAMICHI IKUO | Reading books       | その他           |
| 10      | Oncology        | Discussion | NAKAMICHI IKUO | Reading books       | その他           |

# Diagnosis and Treatment of Hypertension

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUHARA MASAYO          |         |                    |            |            |          |        |
| Instructor(s)          | FUKUHARA MASAYO          |         |                    |            |            |          |        |

## Course Description

【Language】 Japanese Hypertension is one of the most common diseases in Japan. Many dental patients have hypertension. In this course "Diagnosis and Treatment of Hypertension", you learn the evaluation of hypertension and target organ damage. Furthermore, you learn the treatment of hypertension and the perioperative blood pressure management. The course is especially recommended to graduate students, who specialize oral surgery and dental anesthesia.

## Attainment Objectives

You should achieve following assignments;

- To explain the mechanism of blood pressure regulation.
- To explain the evaluation of target organ damage due to hypertension.
- To explain target organ damage of hypertension (stroke, ischemic heart disease, chronic kidney disease).
- To explain the types and characteristics of antihypertensive drugs.
- To explain the characteristics and treatment of hypertension in the elderly.
- To explain the treatment of hypertension in the patients with diabetes or metabolic syndrome.
- To explain blood pressure changes during dental treatment.
- To practice the perioperative blood pressure management.

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| The Japanese Society of Hypertension Guidelines for the Management of Hypertension 2019 |        | JSH       |

## Grading Criteria and Method of Evaluation

| Evaluation item             | Ratio |
|-----------------------------|-------|
| discussion and presentation | 100%  |

# Diagnosis and Treatment of Hypertension

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUHARA MASAYO          |         |                    |            |            |          |        |
| Instructor(s)          | FUKUHARA MASAYO          |         |                    |            |            |          |        |

## Study Method

| Lecture | Contents   | Methods             | Instructor      | before-and-after Le   | Lecture rooms |
|---------|--|---------------------|-----------------|---|---------------|
| 1       | Introduction and epidemiology of hypertension. Measurement and clinical evaluation of blood pressure.  | Lecture<br>Practice | FUKUHARA MASAYO | Text<br>Keywords:<br>epidemiology of<br>hypertension,<br>vital signs                | その他           |
| 2       | Mechanism of blood pressure regulation:<br>Neural and humoral regulation of blood pressure.<br>Blood pressure changes during dental treatment.       | Lecture<br>Practice | FUKUHARA MASAYO | Text<br>Keywords: blood<br>pressure<br>regulation, blood<br>pressure<br>fluctuation | その他           |
| 3       | Hypertension and target organ damage.<br>Clinical evaluation of target organ damage I: Urinalysis and blood test. Fundus examination.                | Lecture<br>Practice | FUKUHARA MASAYO | Text<br>Keywords: target<br>organ damage  | その他           |
| 4       | Clinical evaluation of target organ damage II:<br>Electrocardiogram and chest X-ray.<br>Pulse wave velocity.<br>Basic principles of ultrasonography. | Lecture<br>Practice | FUKUHARA MASAYO | Text  | その他           |
| 5       | Clinical evaluation of target organ damage III:<br>Carotid ultrasonography<br>Echocardiography   | Lecture<br>Practice | FUKUHARA MASAYO | Text  | その他           |
| 6       | Clinical evaluation of target organ damage IV:<br>Carotid ultrasonography .<br>Echocardiography .<br>Abdominal ultrasonography.                      | Lecture<br>Practice | FUKUHARA MASAYO | Text  | その他           |
| 7       | Principles of treatment for hypertension:<br>Lifestyle modifications.  | Lecture<br>Practice | FUKUHARA MASAYO | Text  | その他           |

# Diagnosis and Treatment of Hypertension

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUHARA MASAYO          |         |                    |            |            |          |        |
| Instructor(s)          | FUKUHARA MASAYO          |         |                    |            |            |          |        |

| Lecture | Contents   | Methods            | Instructor      | before-and-after Le    | Lecture rooms |
|---------|--|--------------------|-----------------|------------------------|---------------|
| 8       | Treatment with antihypertensive drugs. Treatment of resistant hypertension.                  | Lecture Practice   | FUKUHARA MASAYO | Text                   | その他           |
| 9       | Hypertension complicated by other diseases:Diabetes.Metabolic syndrome.Sleep apnea syndrome. | Lecture Practice   | FUKUHARA MASAYO | Text                   | その他           |
| 10      | Hypertension in the elderly.Hypertension and dementia.                                       | Lecture Practice   | FUKUHARA MASAYO | Text                   | その他           |
| 11      | Perioperative blood pressure management.   | Lecture Practice   | FUKUHARA MASAYO | Text                   | その他           |
| 12      | Case conference I  | Lecture Discussion | FUKUHARA MASAYO | Text<br>Clinical cases | その他           |
| 13      | Case conference II   | Lecture Discussion | FUKUHARA MASAYO | Text<br>Clinical cases | その他           |
| 14      | Case conference III  | Lecture Discussion | FUKUHARA MASAYO | Text<br>Clinical cases | その他           |
| 15      | Case conference IV   | Lecture Discussion | FUKUHARA MASAYO | Text<br>Clinical cases | その他           |

# Introduction of Internal Medicine

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~3 grades | Semester | Spring |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUHARA MASAYO          |        |        |            |            |          |        |  |
| Instructor(s)          | FUKUHARA MASAYO          |        |        |            |            |          |        |  |

## Course Description

【Language】 Japanese. In this course "Introduction of Internal Medicine", you read the book "Internal Medicine for Dentists" and acquire fundamental knowledge of the internal medicine which dentists need.

## Attainment Objectives

You should achieve following assignments;

- To explain the introduction of medical diagnostics.
- To explain the cardiovascular disease.
- To explain the respiratory disease.
- To explain the digestive diseases.
- To explain the metabolic and endocrine disorders.
- To explain the neuromuscular disease.
- To explain the blood disease.
- To explain the renal disease.
- To explain the collagen disease.
- To explain the elderly medicine.

## Textbooks

| Title                          | Author | Publisher           |
|--------------------------------|--------|---------------------|
| Internal Medicine for Dentists |        | Ishiyaku Publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item             | Ratio |
|-----------------------------|-------|
| discussion and presentation | 45%   |
| test                        | 55%   |

## Study Method

| Lecture | Contents  | Methods                        | Instructor      | before-and-after Le                           | Lecture rooms |
|---------|---|--------------------------------|-----------------|---|---------------|
| 1       | The fundamental knowledge of the internal medicine:Diagnosis, medical interview, physical examination, medical record description, vital signs, laboratory tests. | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>medical examination,<br>symptoms |               |

# Introduction of Internal Medicine

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~3 grades | Semester | Spring |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | FUKUHARA MASAYO          |        |        |            |            |          |        |  |
| Instructor(s)          | FUKUHARA MASAYO          |        |        |            |            |          |        |  |

| Lecture | Contents                 | Methods                        | Instructor      | before-and-after Le   | Lecture rooms |
|---------|--------------------------|--------------------------------|-----------------|---|---------------|
| 2       | Respiratory disease      | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>Chronic obstructive pulmonary disease (COPD), bronchial asthma |               |
| 3       | Endocrine disease        | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>thyroid disease, adrenal disease                               |               |
| 4       | Cardiovascular disease 1 | Lecture and discussion<br>Test | FUKUHARA MASAYO | myocardial infarction, angina pectoris, heart failure                       |               |
| 5       | Cardiovascular disease 2 | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>Infective endocarditis, hypertension, arrhythmia               |               |
| 6       | Gastrointestinal disease | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>gastric ulcer, needlestick injury, hepatitis, liver cirrhosis  |               |
| 7       | Malignant tumor          | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>lung cancer, stomach cancer, colon cancer                      |               |
| 8       | Metabolic diseases       | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>diabetes mellitus  |               |
| 9       | Kidney disease           | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>infusion, chronic kidney disease, renal failure                |               |
| 10      | Blood disease            | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>anemia, leukemia, thrombocytopenic purpura, hemophilia         |               |

# Introduction of Internal Medicine

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 3 grades | Semester | Spring |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUHARA MASAYO          |        |        |            |              |          |        |
| Instructor(s)          | FUKUHARA MASAYO          |        |        |            |              |          |        |

| Lecture | Contents   | Methods                        | Instructor      | before-and-after Le  | Lecture rooms |
|---------|--|--------------------------------|-----------------|--|---------------|
| 11      | Neuromuscular disease                                | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>cardiovascular disease, dementia, epilepsy, Parkinson's disease                                   |               |
| 12      | Autoimmune disease                                   | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>rheumatoid arthritis, systemic lupus erythematosus, Sjogren's syndrome, Behcet's disease, allergy |               |
| 13      | Elderly medicine                                     | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>elderly, aging  |               |
| 14      | Infection  | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>hepatitis, bacterial change phenomenon, AIDS  |               |
| 15      | Dental treatment for patients with medical disorders | Lecture and discussion<br>Test | FUKUHARA MASAYO | Keywords:<br>Dental treatment for patients with medical disorders  |               |

# Pediatric Dentistry (Basic Course)

|                        |                          |        |          |            |            |          |        |
|------------------------|--------------------------|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |            |          |        |

## Course Description

To acquire comprehensive levels of knowledge, technique, and skill for continued management by taking into consideration physical and mental growth and development in childhood for guidance to normal permanent dentition.

## Attainment Objectives

- 1.Gain ability to provide treatment to pediatric patients.
- 2.Gain ability to treat dental caries.
- 3.Gain ability to provide protective care and health guidance.
- 4.Gain ability to treat dental injuries.
- 5.Gain ability to perform surgical treatment.
- 6.Gain ability to provide dental treatment for uncooperative or handicapped children.
- 7.Gain ability to deal with occlusal development.

## Textbooks

| Title                             | Author                  | Publisher          |
|-----------------------------------|-------------------------|--------------------|
| Textbook of Pediatric Stomatology | Tetsuo Shirakawa et al. | Ishiyaku Pub, Inc. |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Tests using Teams (Evaluation sheet will be distributed to the students.)             | 30%   |
| Case presentation using Teams (Evaluation sheet will be distributed to the students.) | 30%   |
| Test  | 40%   |

## Etc

[office hours]

If necessary, contact instructors by e-mail.

Koji Watanabe or Ikuko Nishida

# Pediatric Dentistry (Basic Course)

|                        |                          |        |          |            |            |          |        |
|------------------------|--------------------------|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |            |          |        |

## Study Method

| Lecture | Contents  | Methods                         | Instructor  | before-and-after Le   | Lecture rooms  |
|---------|---|---------------------------------|---|---|----------------|
|         |   |                                 | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA |   | その他            |
| 1,2     | Medical care interview II                               | Practical training<br>Role play | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Medical care interview<br>Mental and physical growth of children<br>【review】<br>The contents of the lecture        | その他            |
| 3,4     | Behavior modification therapy for pedodontic patients I | Practical training<br>Role play | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Mental and physical growth of children<br>Behavior modification therapy<br>【review】<br>The contents of the lecture | その他            |
| 5,6     | Radiography I   | Practical training              | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Diagnostic imaging for pedodontic cases<br>【review】<br>The contents of the lecture                                 | その他            |
| 7,8     | Impression taking                                       | Practical training              | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Developmental growth of oral cavity<br>【review】<br>The contents of the lecture                                     | その他<br>臨床実習_病院 |

# Pediatric Dentistry (Basic Course)

|                        |                          |        |          |            |              |          |        |  |
|------------------------|--------------------------|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1 ~ 3 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |              |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |              |          |        |  |

| Lecture | Contents   | Methods            | Instructor  | before-and-after Le   | Lecture rooms  |
|---------|--|--------------------|---|---|----------------|
| 9,10    | Drafting of the treatment plan<br>You learn a diagnosis, treatment strategy while standing on a medical interview, an Xray photograph, the treatment plan using the study model about the drafting of the treatment plan | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Diagnosis and treatment strategy<br>【review】<br>The contents of the lecture      | その他            |
| 11,12   | Oral examination 1<br>Discussion<br>Case presentation  | Examination        | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Review of the training<br>【review】<br>The contents of the lecture                | その他            |
| 13,14   | Local anesthesia I   | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Procedure of local anesthesia<br>【review】<br>The contents of the lecture         | その他<br>臨床実習_病院 |
| 15,16   | Exclusion of moisture with rubber dam  | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Exclusion of moisture with rubber dam<br>【review】<br>The contents of the lecture | その他<br>臨床実習_病院 |
| 17,18   | Crown restoration for primary teeth I  | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Characteristics of primary teeth<br>【review】<br>The contents of the lecture      | その他<br>臨床実習_病院 |

# Pediatric Dentistry (Basic Course)

|                        |                          |         |          |            |            |          |        |  |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |

| Lecture | Contents   | Methods            | Instructor  | before-and-after Le  | Lecture rooms  |
|---------|--|--------------------|---|--|----------------|
| 19,20   | Crown restoration for immature permanent teeth I                 | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Characteristics of immature permanent teeth<br><b>【review】</b><br>The contents of the lecture              | その他<br>臨床実習_病院 |
| 21,22   | Inlay restoration of the deciduous teeth                         | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Inlay restoration of the deciduous teeth<br><b>【review】</b><br>The contents of the lecture                 | その他<br>臨床実習_病院 |
| 23,24   | Preformed crown restoration of the deciduous teeth               | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Preformed crown restoration<br>Casting crown restoration<br><b>【review】</b><br>The contents of the lecture | その他<br>臨床実習_病院 |
| 25,26   | Pulp capping of deciduous tooth and the immature permanent tooth | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Pulp capping<br><b>【review】</b><br>The contents of the lecture   | その他<br>臨床実習_病院 |
| 27,28   | Pulpotomy to deciduous tooth                                     | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Pulpotomy<br><b>【review】</b><br>The contents of the lecture  | その他<br>臨床実習_病院 |

# Pediatric Dentistry (Basic Course)

|                        |                          |         |          |            |            |          |        |  |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |

| Lecture | Contents  | Methods            | Instructor  | before-and-after Le  | Lecture rooms  |
|---------|---|--------------------|---|--|----------------|
| 29,30   | Pulpectomy、 Infection Root Canal Treatment 、 Root Canal Filling | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Pulpectomy<br>Infected root canal treatment<br>Root canal filling<br><b>【review】</b><br>The contents of the lecture                      | その他<br>臨床実習_病院 |
| 31,32   | Oral examination 2<br>Discussion                                | Oral examination   | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Review of the training<br><b>【review】</b><br>The contents of the lecture   | その他            |
| 33,34   | A diagnosis and measures of periodontal disease                 | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Periodontal disease of the infant period diagnosis and measures of periodontal disease<br><b>【review】</b><br>The contents of the lecture | その他            |
| 35,36   | Diagnosis of the dental trauma                                  | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Diagnosis<br>Fixing method<br>Prognosis<br><b>【review】</b><br>The contents of the lecture  | その他            |
| 37,38   | Tooth extraction I  | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Diagnosis<br>Tooth extraction<br><b>【review】</b><br>The contents of the lecture  | その他<br>臨床実習_病院 |

# Pediatric Dentistry (Basic Course)

|                        |                          |         |          |            |            |          |        |  |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |

| Lecture | Contents                         | Methods            | Instructor  | before-and-after Le   | Lecture rooms  |
|---------|----------------------------------|--------------------|---|---|----------------|
| 39,40   | Resolution measure               | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Diagnosis<br>Fenestration<br>Incision<br><b>【review】</b><br>The contents of the lecture                       | その他<br>臨床実習_病院 |
| 41,42   | Oral examination 3<br>Discussion | Oral examination   | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Review of the training<br><b>【review】</b><br>The contents of the lecture                                      | その他            |
| 43,44   | Preventive treatment             | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Pit and fissure sealant<br><b>【review】</b><br>The contents of the lecture                                     | その他<br>臨床実習_病院 |
| 45,46   | Preventive treatment II          | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Preventive treatment<br>Health guidance<br><b>【review】</b><br>The contents of the lecture                     | その他<br>臨床実習_病院 |
| 47,48   | Treatment of apprehensive child  | Practical training | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Restraining<br>Nitrous oxide and oxygen inhalation sedation<br><b>【review】</b><br>The contents of the lecture | その他<br>臨床実習_病院 |

# Pediatric Dentistry (Basic Course)

|                        |                          |        |          |            |            |          |        |  |
|------------------------|--------------------------|--------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |            |          |        |  |

| Lecture | Contents   | Methods                   | Instructor  | before-and-after Le   | Lecture rooms  |
|---------|--|---------------------------|---|---|----------------|
| 49,50   | The Denture guidance diagnosis and explanation method to a protector | Practical training        | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Diagnosis<br>Treatment plan and explanation<br>【review】<br>The contents of the lecture | その他            |
| 51,52   | Preparation of appliances for occlusal guidance I                    | Practical training        | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Space maintenance<br>【review】<br>The contents of the lecture                           | その他<br>診療室_病院  |
| 53,54   | Preparation of appliances for occlusal guidance II                   | Practical training        | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Space regainer<br>【review】<br>The contents of the lecture                              | その他<br>診療室_病院  |
| 55,56   | Dental treatment of the child with a disability                      | Practical training        | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Child with disability<br>【review】<br>The contents of the lecture                       | その他<br>臨床実習_病院 |
| 59,60   | Case presentation<br>Examination for accreditation                   | Case presentation<br>Test | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | 【preparation】<br>Review of the practical training<br>【review】<br>The contents of the lecture            | その他            |

# Pediatric Dentistry (Advanced Course)

|                        |                          |        |          |            |            |          |        |
|------------------------|--------------------------|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |            |          |        |

## Course Description

To acquire comprehensive levels of knowledge, technique, and skill for continued management by taking into consideration physical and mental growth and development in childhood for guidance to normal permanent dentition.

## Attainment Objectives

1. Gain ability to provide treatment to pediatric patients.
2. Gain ability to treat dental caries.
3. Gain ability to provide protective care and health guidance.
4. Gain ability to treat dental injuries.
5. Gain ability to perform surgical treatment.
6. Gain ability to provide dental treatment for uncooperative or handicapped children.
7. Gain ability to deal with occlusal development.
8. Gain ability to provide basic treatment for the oral cavity as a single unit.
9. Gain ability to practice continuous management by taking growth into consideration.

## Textbooks

| Title               | Author              | Publisher                             |
|---------------------|---------------------|---------------------------------------|
| Pediatric Dentistry | Shirakawa T. et al. | Fukumoto S. Ishiyaku Publishers, Inc. |

## Reference Books

| Title                             | Author           | Publisher        |
|-----------------------------------|------------------|------------------|
| Textbook of Pediatric Stomatology | Asada Y., et al. | Gakkenshoin Ltd. |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Case presentation (Evaluation sheet will be distributed to the students.) | 30%   |
| Oral examination (Evaluation sheet will be distributed to the students.)  | 30%   |
| Teast   | 40%   |

# Pediatric Dentistry (Advanced Course)

|                        |                          |        |          |            |            |          |        |  |
|------------------------|--------------------------|--------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |            |          |        |  |

## Etc

[office hours]

If necessary, contact instructors by e-mail.

Koji Watanabe or Ikuko Nishida

## Study Method

| Lecture | Contents   | Methods                         | Instructor                         | before-and-after Le  | Lecture rooms     |
|---------|--|---------------------------------|------------------------------------|--|-------------------|
|         |  |                                 | NISHIDA IKUKO<br>MORIKAWA KAZUMASA |  | 臨床実習_病院<br>診療室_病院 |
| 1,2     | Medical care interview II                                | Practical training<br>Role play | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Medical care interview<br>・ Adjacent area of medical science<br><b>【review】</b><br>The contents of the lecture         | 診療室_病院            |
| 3,4     | Behavior modification therapy for pedodontic patients II | Practical training<br>Role play | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Mental and physical growth of children-Behavior modification therapy<br><b>【review】</b><br>The contents of the lecture | 診療室_病院            |
| 5,6     | Radiography II   | Practical training              | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Diagnostic imaging for pedodontic cases<br><b>【review】</b><br>The contents of the lecture                              | 診療室_病院            |

# Pediatric Dentistry (Advanced Course)

|                        |                          |         |          |            |            |          |        |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |

| Lecture | Contents  | Methods            | Instructor                         | before-and-after Le   | Lecture rooms |
|---------|---|--------------------|------------------------------------|---|---------------|
| 7,8     | Oral roentgenography                                  | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Developmental growth of oral cavity in children<br><b>【review】</b><br>The contents of the lecture | 診療室_病院        |
| 9,10    | Whole-body management                                 | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Pharmacotherapy Systemic illness<br><b>【review】</b><br>The contents of the lecture                | 診療室_病院        |
| 11,12   | Oral examination 1<br>Discussion<br>Case presentation | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Review of practical training<br><b>【review】</b><br>The contents of the lecture  | その他           |
| 13,14   | Local anesthesia II                                   | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Complications<br><b>【review】</b><br>The contents of the lecture                                   | 診療室_病院        |
| 15,16   | Crown restoration for primary teeth I                 | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>・ Characteristics of primary teeth<br>・ Resin jacket crown<br><b>【review】</b><br>The contents of the lecture                        | 診療室_病院        |

# Pediatric Dentistry (Advanced Course)

|                        |                          |         |          |            |            |          |        |  |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |

| Lecture | Contents   | Methods            | Instructor                         | before-and-after Le   | Lecture rooms |
|---------|--|--------------------|------------------------------------|---|---------------|
| 17,18   | Crown restoration in child patients  | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Crown restoration<br>・ Continued management<br><b>【review】</b><br>The contents of the lecture                   | 診療室_病院        |
| 19,20   | Temporary indirect pulp capping for immature permanent teeth                               | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Immature permanent teeth<br>・ Temporary indirect pulp capping<br><b>【review】</b><br>The contents of the lecture | 診療室_病院        |
| 21,22   | Endodontic treatment for immature permanent teeth  | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Immature permanent teeth<br>・ Endodontic treatment<br><b>【review】</b><br>The contents of the lecture            | 診療室_病院        |
| 23,24   | Diagnosis and treatment for acute symptoms of diseases of the pulp, apex, and periodontium | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Acute symptom<br>・ Diagnosis and treatment<br><b>【review】</b><br>The contents of the lecture                    | 診療室_病院        |

# Pediatric Dentistry (Advanced Course)

|                        |                          |         |          |            |              |          |        |  |
|------------------------|--------------------------|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1 ~ 3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |              |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |              |          |        |  |

| Lecture | Contents  | Methods            | Instructor                         | before-and-after Le  | Lecture rooms |
|---------|---|--------------------|------------------------------------|--|---------------|
| 25,26   | Diagnosis and treatment for tooth discoloration   | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Tooth discoloration<br>・ Diagnosis and treatment<br><b>【review】</b><br>The contents of the lecture | 診療室_病院        |
| 27,28   | Study how to deal with intractable cases of diseases of the pulp, apex, and periodontium in light of deciduous and immature permanent tooth characteristics, indications, and operative procedures. | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Intractable cases<br>・ Diagnosis and treatment<br><b>【review】</b><br>The contents of the lecture   | 診療室_病院        |
| 29,30   | Oral examination 2<br>Discussion  | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Review of practical training<br><b>【review】</b><br>The contents of the lecture   | その他           |
| 31,32   | Study continuing management of periodontal diseases in child patients in light of the characteristics of periodontal diseases occurring in childhood.   | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Periodontal surgery<br>・ Continuing management<br><b>【review】</b><br>The contents of the lecture   | 診療室_病院        |

# Pediatric Dentistry (Advanced Course)

|                        |                          |         |          |            |            |          |        |  |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |  |

| Lecture | Contents   | Methods            | Instructor                         | before-and-after Le   | Lecture rooms |
|---------|--|--------------------|------------------------------------|---|---------------|
| 33,34   | Fixation techniques for injured teeth<br>Study fixation methods for mixed dentition period in light of fixation techniques used for injured teeth. | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br><ul style="list-style-type: none"> <li>• Diagnosis</li> <li>• Fixation technique</li> <li>• Prognosis</li> </ul> <b>【review】</b><br>The contents of the lecture             | 診療室_病院        |
| 35,36   | Treatment of injured teeth<br>Study reimplantation techniques in light of related indications. Practical training                                  | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br><ul style="list-style-type: none"> <li>• Injured teeth</li> <li>• Reimplantation</li> <li>• Orthodontic extrusion</li> </ul> <b>【review】</b><br>The contents of the lecture | 診療室_病院        |
| 37,38   | Tooth extraction II<br>Study tooth extraction methods in light of examination findings and diagnosis of impacted supernumerary teeth.              | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br><ul style="list-style-type: none"> <li>• Extraction methods</li> <li>• Impacted supernumerary teeth</li> </ul> <b>【review】</b><br>The contents of the lecture               | 診療室_病院        |
| 39,40   | Surgical procedures<br>Study surgical procedures for child patients in light of diagnosis and treatment of cysts, tumors, and soft tissue disease. | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br><ul style="list-style-type: none"> <li>• Surgical procedures</li> </ul> <b>【review】</b><br>The contents of the lecture  | 診療室_病院        |

# Pediatric Dentistry (Advanced Course)

|                        |                          |        |          |            |            |          |        |
|------------------------|--------------------------|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |          |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |          |            |            |          |        |

| Lecture | Contents   | Methods            | Instructor                         | before-and-after Le   | Lecture rooms |
|---------|--|--------------------|------------------------------------|---|---------------|
| 41,42   | Oral examination 3<br>Discussion   | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | 【preparation】<br>Review of practical training<br>【review】<br>The contents of the lecture  | その他           |
| 43,44   |  |                    | NISHIDA IKUKO<br>MORIKAWA KAZUMASA |   | 診療室_病院        |
| 45,46   | Preparation of appliances for occlusal guidance<br>Study methods used for manufacturing a Muh-shield by taking into consideration the indications.           | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | 【preparation】<br>confirmation of the textbook<br>・ Muh-shield<br>【review】<br>The contents of the lecture  | 診療室_病院        |
| 47,48   | Muscle function training   | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | 【preparation】<br>confirmation of the textbook<br>・ Muscle function training<br>【review】<br>The contents of the lecture                                    | 診療室_病院        |
| 49,50   | Dental therapy for disabled child patients II Study how to cope with dental therapy for disabled children in light of characteristics of the related disease | Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | 【preparation】<br>confirmation of the textbook<br>・ Disabled children<br>・ Behavior control<br>・ Dental therapy<br>【review】<br>The contents of the lecture | 診療室_病院        |

# Pediatric Dentistry (Advanced Course)

|                        |                          |         |          |            |            |          |        |
|------------------------|--------------------------|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |          |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |          |            |            |          |        |

| Lecture | Contents   | Methods                          | Instructor                         | before-and-after Le   | Lecture rooms |
|---------|--|----------------------------------|------------------------------------|---|---------------|
| 51,52   | Study methods of dental therapy performed under general anesthesia by taking into consideration the characteristics and general health of child patients. Practical training | Practical training               | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ General anesthesia<br><b>【review】</b><br>The contents of the lecture                                    | 診療室_病院        |
| 53,54   | Study intraoral management by taking developmental stage into consideration. Practical training  | Practical training               | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Developmental stages-intraoral management<br><b>【review】</b><br>The contents of the lecture             | 診療室_病院        |
| 55,56   | Study maternal and child health guidance in light of prevention for pregnant women and feeding instructions for children.  | Practical training               | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>・ Pregnancy factors<br>・ Maternal and child health care<br><b>【review】</b><br>The contents of the lecture | 診療室_病院        |
| 57,58   | Oral examination 4<br>Discussion   | Discussion<br>Practical training | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Review of practical training<br><b>【review】</b><br>The contents of the lecture  | その他           |
| 59,60   | Case presentation<br>Examination for accreditation   | Presentation<br>Test             | NISHIDA IKUKO<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Review of practical training<br><b>【review】</b><br>The contents of the lecture  | その他           |

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |            |          |         |   |
|------------------------|--------------------------|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry |         | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |            |          |         |   |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |            |          |         |   |

## Course Description

For providing comprehensive pedodontic treatment, lectures on topics ranging from basic medicine to the latest state-of-the-art therapies are given by lead instructors. The students then organize and analyze related studies, and make a presentation.

## Attainment Objectives

1. Deepen knowledge regarding clinical pedodontic care in general and ability to understand it.
2. Understand basic medicine (anatomy, histology, etc.) in order to conduct clinical pedodontic practice.
3. Master methods needed to prepare materials for both presentation and clinical practice.
4. Gain ability to collect and organize appropriate research articles and analyze them.

## Textbooks

| Title               | Author              | Publisher          |
|---------------------|---------------------|--------------------|
| Pediatric Dentistry | Shirakawa T. et al. | Ishiyaku Pub, Inc. |

## Reference Books

| Title                             | Author           | Publisher        |
|-----------------------------------|------------------|------------------|
| Textbook of Pediatric Stomatology | Asada Y., et al. | Gakkenshoin Ltd. |

## Grading Criteria and Method of Evaluation

| Evaluation item                       | Ratio |
|---------------------------------------|-------|
| Average of test scores of (1) and (2) | 100%  |

## Etc

[office hours]

If necessary, contact instructors by e-mail.

Koji Watanabe or Ikuko Nishida

## Study Method

| Lecture | Contents | Methods | Instructor  | before-and-after Le | Lecture rooms |
|---------|----------|---------|---|---------------------|---------------|
|         |          |         | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA |                     | その他           |

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |            |          |         |   |
|------------------------|--------------------------|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry |         | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |            |          |         |   |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |            |          |         |   |

| Lecture | Contents                                    | Methods | Instructor        | before-and-after Le   | Lecture rooms |
|---------|---|---------|-------------------|---|---------------|
| 1       | Orientation                                 | Lecture | MORIKAWA KAZUMASA | <b>【preparation】</b><br>confirmation of the textbook<br>Outline of pediatric dentistry<br><b>【review】</b><br>The contents of the lecture            | その他           |
| 2       | Growth of teeth and the dentition           | Lecture | MORIKAWA KAZUMASA | <b>【preparation】</b><br>Case report, commentary of the topics<br>・Tooth development<br><b>【review】</b><br>The contents of the lecture               | その他           |
| 3       | Mechanism of the teeth eruption             | Lecture | MORIKAWA KAZUMASA | <b>【preparation】</b><br>Case report, commentary of the topics<br>・Tooth eruption<br><b>【review】</b><br>The contents of the lecture                  | その他           |
| 4       | Endodontic treatment of the deciduous tooth | Lecture | SAEKI KATSURA     | <b>【preparation】</b><br>Case report, commentary of the topics<br>・Endodontics for deciduous teeth<br><b>【review】</b><br>The contents of the lecture | その他           |

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |            |          |         |   |
|------------------------|--------------------------|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry |         | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |            |          |         |   |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |            |          |         |   |

| Lecture | Contents   | Methods | Instructor        | before-and-after Learning   | Lecture rooms |
|---------|--|---------|-------------------|---|---------------|
| 5       | Endodontic treatment of the immature permanent tooth | Lecture | NISHIDA IKUKO     | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Endodontics for immature permanent teeth<br><b>【review】</b><br>The contents of the lecture | その他           |
| 6       | Teeth trauma of the childhood                        | Lecture | NISHIDA IKUKO     | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Trauma<br><b>【review】</b><br>The contents of the lecture                                   | その他           |
| 7       | Space Maintenance                                    | Lecture | MORIKAWA KAZUMASA | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Space maintenance<br><b>【review】</b><br>The contents of the lecture                        | その他           |
| 8       | Active Denture Guidance                              | Lecture | SAEKI KATSURA     | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Active Denture Guidance<br><b>【review】</b><br>The contents of the lecture                  | その他           |

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |            |            |          |        |

| Lecture | Contents   | Methods | Instructor        | before-and-after Le  | Lecture rooms |
|---------|--|---------|-------------------|--|---------------|
| 9       | Coronal restoration of deciduous tooth and the early permanent tooth | Lecture | NISHIDA IKUKO     | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Coronal restoration of deciduous and immature permanent tooth<br><b>【review】</b><br>The contents of the lecture | その他           |
| 10      | Dental treatment of the child with a disability                      | Lecture | MORIKAWA KAZUMASA | <b>【preparation】</b><br>Case report, commentary of the topic<br>・ disability<br><b>【review】</b><br>The contents of the lecture   | その他           |
| 11      | Correspondence to trauma teeth of the childhood                      | Lecture | NISHIDA IKUKO     | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Trauma<br><b>【review】</b><br>The contents of the lecture  | その他           |
| 12      | Surgical treatment of children (I)                                   | Lecture | MORIKAWA KAZUMASA | <b>【preparation】</b><br>Case report, commentary of the topics<br>・ Surgery<br><b>【review】</b><br>The contents of the lecture   | その他           |

2025年度

subject code:212093

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |            |            |          |        |
|------------------------|--------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |            |            |          |        |

| Lecture No. | Contents                            | Methods | Instructor  | before-and-after Learning   | Lecture rooms |
|-------------|-------------------------------------|---------|---|---|---------------|
| 13          | Surgical treatment of children (II) | Lecture | NISHIDA IKUKO                                       | <b>【preparation】</b><br>Case report, commentary of the topics<br>・Surgery<br><b>【review】</b><br>The contents of the lecture               | その他           |
| 14          | General Discussion                  | Lecture | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Case report, commentary of the topics about pediatric dentistry<br><b>【review】</b><br>The contents of the lecture | その他           |
| 15          | Test                                | Test    | MORIKAWA KAZUMASA                                   | <b>【preparation】</b><br>Case report, commentary of the topics about pediatric dentistry<br><b>【review】</b><br>The contents of the lecture | その他           |

# Developmental Stomatognathic Function Science (C)

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |         |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |         |            |            |          |        |

## Course Description

Read published studies to increase understanding of the latest research trends in pedodontics and those related to bone morphometry. Conduct debriefing and discussion sessions regarding the content and progress status of each study, and present seminars by osteologists in other basic medicine fields.

## Attainment Objectives

- 1.Improve the ability to read studies written in English.
- 2.Gain ability to understand the content of published studies.
- 3.Improve the capability to comment regarding research activates.
- 4.Gain ability to understand the trend and background of the study, and enhance knowledge.
- 5.Enhance knowledge by obtaining the latest information in regard to pedodontics and bone morphometry.

## Textbooks

| Title               | Author              | Publisher                 |
|---------------------|---------------------|---------------------------|
| Pediatric Dentistry | Shirakawa T. et al. | Ishiyaku Publishers, Inc. |

## Reference Books

| Title                             | Author           | Publisher        |
|-----------------------------------|------------------|------------------|
| Textbook of Pediatric Stomatology | Asada Y., et al. | Gakkenshoin Ltd. |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|--|-------|
| Average score of presentation and report (Evaluation sheet will be distributed to the students.) | 100%  |

## Etc

[office hours]

If necessary, contact instructors by e-mail.

Koji Watanabe or Ikuko Nishida

# Developmental Stomatognathic Function Science (C)

|                        |                          |        |         |            |            |          |        |
|------------------------|--------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MORIKAWA KAZUMASA        |        |         |            |            |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |        |         |            |            |          |        |

## Study Method

| Lecture | Contents   | Methods   | Instructor  | before-and-after Le  | Lecture rooms |
|---------|--|---|---|--|---------------|
| 1~15    | By taking into consideration the background of the study, contents of recent reports in the field of pedodontics and those related to bone morphometry, and the results of studies performed in related fields, gain ability to understand the application of those findings to both research and clinical practice. | Discussion and commentary of academic articles. | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Read original Articles and get knowledge on the pediatric dentistry.<br><b>【review】</b><br>The contents of the lecture | その他           |

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |            |              |          |        |
|------------------------|--------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |            |              |          |        |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |            |              |          |        |

## Course Description

Read published studies to improve understanding on the latest research trends in pedodontics, especially on occlusal nurturing. In practicals of making devices for occlusal guidance, the instructors will show demonstrations before the students practice the procedure. Conduct debriefing and discussion sessions regarding the content and progress status of each study, and present seminars by osteologists in other basic medicine fields.

## Attainment Objectives

1. Improve the ability to read studies written in English.
2. Obtain information and knowledge on pedodontics and orthodontics.
3. Learn making devices for occlusal guidance through lectures and practicals.

## Textbooks

| Title                                       | Author                   | Publisher          |
|---|--------------------------|--------------------|
| Basic and clinical Practical in Pedodontics | Tetsuo Shirakawa, et al. | Ishiyaku Bub, Inc. |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Presentation (50%) and reports (50%). Evaluation sheet will be distributed to the students. | 100%  |

## Etc

[office hours]

If necessary, contact instructors by e-mail.

Koji Watanabe or Ikuko Nishida

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|------------------|---------|------------|---------------------|---------------|
|                  |         |            |                     |               |

2025年度

subject code:212095

# Developmental Stomatognathic Function Science

|                        |                          |         |                    |              |          |         |   |
|------------------------|--------------------------|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice                   | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | MORIKAWA KAZUMASA        |         |                    |              |          |         |   |
| Instructor(s)          | MORIKAWA KAZUMASA        |         |                    |              |          |         |   |

| Lecture | Contents   | Methods   | Instructor  | before-and-after Le  | Lecture rooms |
|---------|--|---|---|--|---------------|
| 1 ~ 15  | Taking into consideration the latest information of the studies on pedodontics, orthodontics, and their related fields, the students will learn how to apply it in their studies and clinical practices. | Discussion and Commentary on academic articles. | NISHIDA IKUKO<br>SAEKI KATSURA<br>MORIKAWA KAZUMASA | <b>【preparation】</b><br>Commentary on the topics in the field of pediatric dentistry.・<br>Outline of Pedodontics<br><b>【review】</b><br>The contents of the lecture | その他           |

# Orthodontics (Basic)

|                        |  |        |                    |            |            |          |        |
|------------------------|--|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |                    |            |            |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |                    |            |            |          |        |

## Course Description

【Language】 Japanese You will master the basic knowledge of Orofacial orthodontics through understanding about planning and implementing of clinical research.

## Attainment Objectives

You should achieve following assignments.

1. Analysis of the various information required for diagnosis, can be summed up
- .2. To understand the biological and bio-mechanical fundamentals required for orthodontic treatment.
3. Analysis and evaluation of Orofacial function.
4. To understand the indications and mechanism of action of orthodontic appliances.
5. To understand the physiological and pathological problems with jaw deformities, cleft lip and cleft palate.
6. To understand the biology of bone and soft tissue.
7. To understand the principle of the dentition and occlusion of Craniofacial growth and development.
8. To understand and implement of the occlusion with development concepts.
9. To understand the pathogenesis of congenital diseases.
10. To understand the materials of orthodontic.

## Reference Books

| Title  | Author                 | Publisher           |
|--|------------------------|---------------------|
| Contemporary Orthodontics, 6th Edition       | W. R. Profitt          | Mosby               |
| Basics of head X-ray standard                | K. Miyashita           | Quintessence        |
| The latest orthodontic atlas                 | N. Inoue               | Ishiyaku publishers |
| Orthodontics, 6th Edition                    | J. Iida et al.         | Ishiyaku publishers |
| Orthodontic clinical series 1 "malocclusion" | Susami T., Chugo T.    | Ishiyaku publishers |
| Orthodontic clinical series 2 "malocclusion" | Yamauchi K., Sakuta M. | Ishiyaku publishers |

# Orthodontics (Basic)

|                        |  |        |                    |            |            |          |        |
|------------------------|--|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |                    |            |            |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |                    |            |            |          |        |

| Title                                     | Author                    | Publisher           |
|---|---------------------------|---------------------|
| Orthodontic clinical series 3 "open bite" | Kawada T., Ozeki T.       | Ishiyaku publishers |
| Orthodontic clinical series 4 "crowding"  | Matsumoto M., Nakagawa H. | Ishiyaku publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item                               | Ratio |
|---|-------|
| Judgments by the Tests.                       | 80%   |
| After the lecture to the exam (exam and lab). | 20%   |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

## Study Method

| Lecture | Contents   | Methods             | Instructor         | before-and-after Le                    | Lecture rooms |
|---------|--|---------------------|--------------------|--|---------------|
|         |  |                     |                    |  | 診療室_病院        |
| 1       | Preparation of diagnostic materials, impression, creating a gnathostatic model, Cephalometric tracing, Model analysis, Cephalometric analysis<br>You will master the method of the evaluation skills based on basic diagnostic data. | Lecture<br>Practice | SHIRAKAWA TOMOHIKO | Review of reference books and handouts | 診療室_病院        |

# Orthodontics (Basic)

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |            |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |            |            |          |        |

| Lecture | Contents  | Methods             | Instructor         | before-and-after Le                    | Lecture rooms |
|---------|---|---------------------|--------------------|--|---------------|
| 2       | Diagnostics, Tooth extraction, Model set-up, Treatment planning, Orthodontic appliance. You will master basic treatment planning and treatment methods skills based on basic diagnostic.  | Lecture<br>Practice | MIZUHARA MASAHIRO  | Review of reference books and handouts | 診療室_病院        |
| 3       | Diagnostic imaging of the CT and MRI You will learn the relevant cases and imaging, based on the basic diagnostic imaging.  | Lecture<br>Practice | MIYAMOTO JUN       | Review of reference books and handouts | 診療室_病院        |
| 4       | Orofacial function, jaw movement, chewing, biting, chewing efficiency, Temporomandibular disorders. You will master the method of the evaluation skills about basic Orofacial function tests, methods, results based on the relevance of cases. | Lecture             | MIYAMOTO JUN       | Review of reference books and handouts | 診療室_病院        |
| 5       | Orthodontic force and tooth movement, Anchorage, Biologic control of tooth movement, Orthodontic implants You will master the principles of tooth movement and learn the orthotic devices.  | Lecture             | SHIRAKAWA TOMOHIKO | Review of reference books and handouts | 診療室_病院        |
| 6       | Tissue reactions and orthodontic force You will learn about tooth movement and periodontal tissue reactions caused by orthodontic treatment which include root resorption, the reactions of blood flow in the periodontal ligament and hyaline. | Lecture             | KUROISHI KAYOKO    | Review of reference books and handouts | 診療室_病院        |

# Orthodontics (Basic)

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |            |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |            |            |          |        |

| Lecture | Contents  | Methods             | Instructor         | before-and-after Le                    | Lecture rooms |
|---------|---|---------------------|--------------------|--|---------------|
| 7       | Orthopedic force and reactions. You will learn about the reaction and growth change of the bone caused by orthopedic force which include growth of cartilages and growth of bone sutures. | Lecture             | SHIRAKAWA TOMOHIKO | Review of reference books and handouts | 診療室_病院        |
| 8       | Bone metabolism, Bone biology, Molecular cell biology You will learn about the bone metabolism based on work on the orthodontic tooth movement periodontal tissue cells.                  | Lecture             | KUROISHI KAYOKO    | Review of reference books and handouts | 診療室_病院        |
| 9       | Materials science on orthodontic materials You will learn about the characteristics of the materials required for orthodontic treatment and its selection                                 | Lecture             | GUNJIKAKE KAORI    | Review of reference books and handouts | 診療室_病院        |
| 10      | Each orthodontic appliance usage and mechanisms of action You will learn about the basic orthodontic structure and mechanism of action, indications, considerations.                      | Lecture             | MIYAMOTO JUN       | Review of reference books and handouts | 診療室_病院        |
| 11      | Multibracket technique You will learn about multibracket structure and active orthodontic treatment   | Lecture<br>Practice | GUNJIKAKE KAORI    | Review of reference books and handouts | 診療室_病院        |
| 12      | Orthodontic treatment for facial deformity You will learn about surgical orthodontic treatment based on facial deformity for therapeutic purpose, indications, treatment procedures.      | Lecture             | GUNJIKAKE KAORI    | Review of reference books and handouts | 診療室_病院        |

# Orthodontics (Basic)

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1 ~ 2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |              |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |            |              |          |        |

| Lecture | Contents  | Methods | Instructor        | before-and-after Le                    | Lecture rooms |
|---------|---|---------|-------------------|--|---------------|
| 13      | Malocclusion due to congenital anomalies<br>You will learn about malocclusion due to congenital anomalies, which include causes, systemic findings and malocclusion.  | Lecture | KUROISHI KAYOKO   | Review of reference books and handouts | 診療室_病院        |
| 14      | Orthopedic treatment with presurgical nasoalveolar molding and bone graft for patient of cleft lip and palate<br>You will learn about secular orthodontic treatment for cleft lip and palate and learn growth and development | Lecture | MIZUHARA MASAHIRO | Review of reference books and handouts | 診療室_病院        |
| 15      | Retention and retainers (Removable, fixed)<br>You will learn about various types of retainers and static treatment based on physiological and orthodontic treatment   | Lecture | GUNJIKAKE KAORI   | Review of reference books and handouts | 診療室_病院        |
| 16      | Myofunctional therapy (MFT)<br>You will learn about prevention and treatment and the effects of bad habit to individual dental arch.  | Lecture | KAWAMOTO TATSUO   | Review of reference books and handouts | 診療室_病院        |
| 17      | Dentition and occlusion, and Craniofacial growth and development<br>You will learn about Craniofacial growth and development, tooth, dentition and occlusion, normal growth and development.                                  | Lecture | MIZUHARA MASAHIRO | Review of reference books and handouts | 診療室_病院        |
| 18      | Growth and development with orthodontic treatment<br>You will learn about various types of malocclusion and secular treatment based on the growth and development   | Lecture | KAWAMOTO TATSUO   | Review of reference books and handouts | 診療室_病院        |

2025年度

subject code:212101

# Orthodontics (Basic)

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |            |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |            |            |          |        |

| Lecture | Contents  | Methods | Instructor      | before-and-after Le                    | Lecture rooms |
|---------|---|---------|-----------------|--|---------------|
| 19      | Occlusion with development concepts<br>You will learn about Occlusion with development based on secular growth and development, malocclusion. | Lecture | KAWAMOTO TATSUO | Review of reference books and handouts | 診療室_病院        |
| 20      | A comprehensive dental treatment<br>You will learn about team approach with overall treatment for oral.                                       | Lecture | KAWAMOTO TATSUO | Review of reference books and handouts | 診療室_病院        |

# Orthodontics (Basic)

|                        |  |         |          |            |         |          |        |
|------------------------|--|---------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |         |          |        |

## Course Description

【Language】 Japanese You will learn about the optimal materials needed for clinical research and analysis. You will learn about the basic orthodontic appliances and the mechanism of reaction.

## Attainment Objectives

You should achieve following assignments.

1. To understand about taking materials for clinical research.
2. To understand the mechanism of reaction of the orthodontic treatment, can be constructed.
3. To understand the Orofacial function and analysis and evaluation.
4. To get ability of creating the materials for the presentation and utilization.

## Reference Books

| Title                                  | Author             | Publisher               |
|--|--------------------|-------------------------|
| The latest orthodontic atlas           | N. Inoue           | ishiyaku publishers inc |
| Contemporary Orthodontics, 6th Edition | William R. Proffit | Mosby                   |

## Grading Criteria and Method of Evaluation

| Evaluation item                       | Ratio |
|---------------------------------------|-------|
| Judgements by all of the instructors. | 100%  |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|------------------|---------|------------|---------------------|---------------|
|                  |         |            |                     | 診療室_病院        |

# Orthodontics (Basic)

|                        |  |         |          |            |         |          |        |
|------------------------|--|---------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |         |          |        |

| Lecture | Contents  | Methods  | Instructor         | before-and-after Le   | Lecture rooms |
|---------|---|----------|--------------------|---|---------------|
| 1       | Preparation of diagnostic materials (Oral photo, Facial photo) You will master the method of the diagnostic material taking skills with oral photo and facial photo.  | Practice | KUROISHI KAYOKO    | Preparation for a basic practice manual, The latest orthodontic atlas | 診療室_病院        |
| 2       | Preparation of diagnostic materials (impression, gnathostatic model) You will master the method of impression and taking diagnostic materials for creating a gnathostatic model based on the technique of snap impression using alginate impression material and face bow instrument. | Practice | SHIRAKAWA TOMOHIKO | Preparation for a basic practice manual, The latest orthodontic atlas | 診療室_病院        |
| 3       | Preparation of diagnostic materials (Cephalometric tracing, Cephalometric analysis, model analysis) You will master taking diagnostic materials based on cephalometric tracing, cephalometric analysis, model analysis.   | Practice | MIZUHARA MASAHIRO  | Preparation for a basic practice manual, The latest orthodontic atlas | 診療室_病院        |
| 4       | Orofacial function and analysis and evaluation You will learn basic Orofacial function inspection equipment based on its usage method and analysis data.  | Practice | MIYAMOTO JUN       | Preparation for a basic practice manual, The latest orthodontic atlas | 診療室_病院        |
| 5       | Diagnostics, Tooth extraction, Model set-up, Treatment planning, Orthodontic appliance You will master basic treatment planning and treatment methods skills based on basic diagnostic.   | Practice | GUNJIKAKE KAORI    | Preparation for a basic practice manual, The latest orthodontic atlas | 診療室_病院        |

# Orthodontics (Basic)

|                        |  |         |          |            |         |          |        |
|------------------------|--|---------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |         |          |        |

| Lecture | Contents  | Methods  | Instructor         | before-and-after Le  | Lecture rooms |
|---------|---|----------|--------------------|--|---------------|
| 6       | PresentationBased on the usage of digital data capture and PowerPoint, Photo shop, learn to create a presentation.                                      | Practice | MIZUHARA MASAHIRO  | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 7       | Basic practice (Lingual arch)You will master the technique of the lingual arch and method of adjustment.  | Practice | SHIRAKAWA TOMOHIKO | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 8       | Basic practice (Lingual arch)You will master the technique of the lingual arch and method of adjustment.  | Practice | MIYAMOTO JUN       | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 9       | Basic practice (Activator)You will learn the method of construction bite and functional orthodontic appliances and method of adjustment.                | Practice | KUROISHI KAYOKO    | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 10      | Basic practice (Activator)You will learn the method of construction bite and functional orthodontic appliances and method of adjustment.                | Practice | KUROISHI KAYOKO    | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 11      | Basic practice (Retainer)You will learn about Begg type retainer and method of adjustment.  | Practice | GUNJIKAKE KAORI    | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 12      | Basic practice (Retainer)You will learn about Begg type retainer and method of adjustment.  | Practice | GUNJIKAKE KAORI    | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |
| 13      | Analysis and evaluation of the treatment effectYou will learn orthodontic treatment by considering the analysis and evaluation of the treatment effect. | Practice | KAWAMOTO TATSUO    | Preparation for a basic practice manual,The latest orthodontic atlas | 診療室_病院        |

2025年度

subject code:212102

# Orthodontics (Basic)

|                        |  |        |          |            |         |          |        |
|------------------------|--|--------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |          |            |         |          |        |

| Lecture | Contents  | Methods  | Instructor      | before-and-after Le               | Lecture rooms |
|---------|---|----------|-----------------|-----------------------------------|---------------|
| 14      | Analysis and evaluation of growth and development<br>You will learn orthodontic treatment by considering the growth and development.                        | Practice | KAWAMOTO TATSUO | Preparation for a clinical manual | 診療室_病院        |
| 15      | Orthodontic materials and movement of the tooth<br>You will learn orthodontic treatment by considering the orthodontic materials and movement of the tooth. | Practice | KAWAMOTO TATSUO | Preparation for a clinical manual | 診療室_病院        |

# First Year-Research Practice Program

|                        |  |         |        |            |         |          |        |
|------------------------|--|---------|--------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |        | Grades     | 1 grade | Semester | Spring |
| Subject                | Required   | Methods | Lesson | Total time | 16      | Credits  | 1      |
| Responsible Instructor | ONO KENTAROU   |         |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, IKEDA HIROSHI, ARIYOSHI WATARU, ANSAI TOSHIHIRO, MASAKI CHIHIRO, NAGAMATSU YUKI |         |        |            |         |          |        |

## Course Description

This course provides the most fundamental knowledge and techniques required for conducting research at the graduate level.

## Attainment Objectives

Students will learn about the various types of research and academic papers, their overviews, and the associated rights, as well as how to use essential tools, English language skills, and methods of thinking.

## Grading Criteria and Method of Evaluation

| Evaluation item      | Ratio |
|----------------------|-------|
| Moodle Online Tests  | 68%   |
| Lecture Video Survey | 32%   |

## Etc

Since questions related to the course content should be shared among participants and instructors, please post them as Class-wide questions in the designated Teams channel. Be sure to "mention" the assigned instructor using "@" when posting. For personal questions, such as those regarding grades, please contact the course coordinator via Teams chat as a Private question, rather than messaging the instructor of each lecture video.

## Study Method

| Lecture | Contents                     | Methods | Instructor                        | before-and-after Le  | Lecture rooms |
|---------|------------------------------|---------|-----------------------------------|--|---------------|
| 1       | Types of Research and Papers | Lecture | IKEDA HIROSHI                     | Academic Research in Dentistry, Academic Papers in Dentistry   | Moodle        |
| 2       | Basic Research               | Lecture | ARIYOSHI WATARU<br>ONO KENTAROU   | In Vitro Study, In Vivo Research                               | Moodle        |
| 3       | Clinical Research            | Lecture | ANSAI TOSHIHIRO<br>MASAKI CHIHIRO | Overview of Epidemiological Study, Clinical Practice Guideline | Moodle        |

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| Subject                | Required   | Mehods | Lesson | Total time | 16      | Credits  | 1      |
| Responsible Instructor | ONO KENTAROU   |        |        |            |         |          |        |
| Instructor(s)          | Director of the Graduate School, ONO KENTAROU, IKEDA HIROSHI, ARIYOSHI WATARU, ANSAI TOSHIHIRO, MASAKI CHIHIRO, NAGAMATSU YUKI |        |        |            |         |          |        |

| Lecture | Contents  | Methods | Instructor                    | before-and-after Le   | Lecture rooms |
|---------|---|---------|-------------------------------|---|---------------|
| 4       | Patents and Material Transfer Agreements (MTAs) | Lecture | ONO KENTAROU                  | Drug Patents, Material Transfer Agreements  | Moodle        |
| 5       | Essential Apps for Research                     | Lecture | NAGAMATSU YUKI                | Word & Excel, PowerPoint & Outlook  | Moodle        |
| 6       | Research English                                | Lecture | IKEDA HIROSHI                 | Academic Writing, Paper Submission, Revise, and Accept                                | Moodle        |
| 7       | Laboratory Notebooks and ICT Utilization        | Lecture | IKEDA HIROSHI                 | Experimental Notebook, Information and Communication Technology for Academic Research | Moodle        |
| 8       | Research Evaluation and Logical Thinking        | Lecture | IKEDA HIROSHI<br>ONO KENTAROU | Assessment of Academic Papers   | Moodle        |

# Orthodontics (Typodont exercise)

|                        |  |        |          |            |         |          |        |
|------------------------|--|--------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |          |            |         |          |        |

## Course Description

【Language】 Japanese

To understand the mechanics of proper tooth movement and performed on typodont.

## Attainment Objectives

You should achieve following assignments.

1. To understand relationships of tooth movement to orthodontic force.
2. To understand the frictional resistance of wires and brackets.
3. To understand the relationship of forces to moments.
4. To understand necessity of anchorage about intramaxillary anchorage, intermaxillary anchorage, extraoral anchorage.
5. To understand the properties of the wire.

## Reference Books

| Title                        | Author              | Publisher               |
|------------------------------|---------------------|-------------------------|
| Contemporary orthodontics    | W. R. Profitt       | Mosby                   |
| The latest orthodontic atlas | N. Inoue            | ishiyaku publishers inc |
| Common Sense Mechanics       | Thomas. Mulligan    |                         |
| Biomechanics in Orthodontics | Ram S., Ph.D. Nanda | Quintessence            |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Evaluation of the instructor for each step. Present each steps and discuss. | 100%  |

# Orthodontics (Typodont exercise)

|                        |  |         |          |            |         |          |        |
|------------------------|--|---------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |         |          |        |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

## Study Method

| Lecture | Contents   | Methods  | Instructor         | before-and-after Le                      | Lecture rooms |
|---------|--|----------|--------------------|--|---------------|
|         |  |          |                    |  | 診療室_病院        |
| 1       | Preparation of Typodont 1You will master the method of Multibracket therapy through brackets bonding, brackets positioning for full metal tooth and preparation of the molar band, electrical soldering. | Practice | SHIRAKAWA TOMOHIKO | Typodont syllabus preparation and review | 診療室_病院        |
| 2       | Preparation of Typodont 1You will master the method of Multibracket therapy through brackets bonding, brackets positioning for full metal tooth and preparation of the molar band, electrical soldering. | Practice | KUROISHI KAYOKO    | Typodont syllabus preparation and review | 診療室_病院        |
| 3       | Preparation of Typodont 1You will master the method of Multibracket therapy through brackets bonding, brackets positioning for full metal tooth and preparation of the molar band, electrical soldering. | Practice | KUROISHI KAYOKO    | Typodont syllabus preparation and review | 診療室_病院        |
| 4       | Wire bending 1Learn about standard edgewise arch wire morphology and bending round wire.   | Practice | KAWAMOTO TATSUO    | Typodont syllabus preparation and review | 診療室_病院        |
| 5       | Wire bending 2Learn about standard edgewise rectangular wire and bend.   | Practice | MIZUHARA MASAHIRO  | Typodont syllabus preparation and review | 診療室_病院        |

# Orthodontics (Typodont exercise)

|                        |  |         |          |            |         |          |        |
|------------------------|--|---------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |         |          |        |

| Lecture | Contents  | Methods  | Instructor         | before-and-after Le                      | Lecture rooms |
|---------|---|----------|--------------------|--|---------------|
| 6       | Wire bending 3Learn about the adjustment of the arch wire and bending.  | Practice | MIYAMOTO JUN       | Typodont syllabus preparation and review | 診療室_病院        |
| 7       | Typodont 1 (leveling)You will learn the early changes of malocclusion by multibracket system based on physiological responses.  | Practice | SHIRAKAWA TOMOHIKO | Typodont syllabus preparation and review | 診療室_病院        |
| 8       | Typodont 2 (leveling)You will learn the early changes of malocclusion by multibracket system based on physiological responses.  | Practice | SHIRAKAWA TOMOHIKO | Typodont syllabus preparation and review | 診療室_病院        |
| 9       | Typodont 3 (Canine tooth retraction)You will learn the purpose of distal movement of canine tooth and the method and considerations.  | Practice | MIZUHARA MASAHIRO  | Typodont syllabus preparation and review | 診療室_病院        |
| 10      | Typodont 3 (Canine tooth retraction)You will learn the purpose of distal movement of canine tooth and the method and considerations.  | Practice | MIZUHARA MASAHIRO  | Typodont syllabus preparation and review | 診療室_病院        |
| 11      | Typodont 5 (Incisors retraction)You will learn distal movement of incisors of multibracket method based on high need presence about reinforced anchorage, incisor torque control, arch width control. | Practice | MIYAMOTO JUN       | Typodont syllabus preparation and review | 診療室_病院        |
| 12      | Typodont 5 (Incisors retraction)You will learn distal movement of incisors of multibracket method based on high need presence about reinforced anchorage, incisor torque control, arch width control. | Practice | MIYAMOTO JUN       | Typodont syllabus preparation and review | 診療室_病院        |

# Orthodontics (Typodont exercise)

|                        |  |        |          |            |         |          |        |
|------------------------|--|--------|----------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Mehods | Practice | Total time | 30      | Credits  | 1      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |          |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |          |            |         |          |        |

| Lecture | Contents  | Methods      | Instructor      | before-and-after Le                      | Lecture rooms |
|---------|---|--------------|-----------------|--|---------------|
| 13      | Typodont 7 (Ideal arch, Finish) You will learn to establish a normal occlusion based on physiological and orthodontic equipment                         | Practice     | GUNJIKAKE KAORI | Typodont syllabus preparation and review | 診療室_病院        |
| 14      | Typodont 7 (Ideal arch, Finish) You will learn to establish a normal occlusion based on physiological and orthodontic equipment                         | Practice     | GUNJIKAKE KAORI | Typodont syllabus preparation and review | 診療室_病院        |
| 15      | Typodont presentation (Course description) To understand the multi-bracket system method by describing the progress of the whole for typodont practice. | Presentation | KAWAMOTO TATSUO | Typodont syllabus preparation and review | 診療室_病院        |

# Orthodontics (Clinical training)

|                        |  |        |          |            |              |          |        |  |
|------------------------|--|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Practice | Total time | 30           | Credits  | 1      |  |
| Responsible Instructor | KAWAMOTO TATSUO  |        |          |            |              |          |        |  |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |          |            |              |          |        |  |
|                        |  |        |          |            |              |          |        |  |

## Course Description

【Language】 Japanese

Carry out the treatment to the end from the start of treatment on the basis of the basic knowledge and skills that you learn in the first year. To update the knowledge and skills for the planning of clinical research.

## Attainment Objectives

You should achieve following assignments.

1. To get ability of communicate effectively with patients.
2. Analysis of the various information needed for diagnosis, can be summed up.
3. To understand the biological and bio-mechanical fundamentals required for orthodontic treatment.
4. To get ability of analysis for changes in treatment and apply to the treatment step.
5. Analysis and evaluation of the treatment mechanism.

## Reference Books

| Title                     | Author           | Publisher |
|---------------------------|------------------|-----------|
| Contemporary orthodontics | W. R. Profit     |           |
| Common Sense Mechanics    | Thomas. Mulligan |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|---|-------|
| Evaluation of the instructor for each step. Present each steps and discuss. | 100%  |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

# Orthodontics (Clinical training)

|                        |  |         |          |            |              |          |        |  |
|------------------------|--|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice   | Methods | Practice | Total time | 30           | Credits  | 1      |  |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |              |          |        |  |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |              |          |        |  |

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le                                      | Lecture rooms |
|---------|--|----------------------|--|--|---------------|
| 1       | Preparation of diagnostic materials (Oral photo, Facial photo, impression, gnathostatic model) You will master the diagnostic material taking skills based on the technique of taking oral photo and facial photo by digital cameras, snap impression using alginate impression and face bow instrument, creating a gnathostatic model about patients. | Lectures<br>practice | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summary of each steps from diagnosis to end of treatment | 診療室_病院        |
| 2       | Preparation of diagnostic materials (Cephalometric tracing, Cephalometric analysis, model analysis) You will master taking diagnostic materials based on cephalometric tracing, cephalometric analysis, model analysis about patients.   | Lectures<br>practice | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summary of each steps from diagnosis to end of treatment | 診療室_病院        |
| 3       | Analysis and evaluation of Orofacial function (chewing, occlusion, breathing) You will learn Orofacial function by considering the evaluation of chewing, occlusion, breathing.  | Lectures<br>practice | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summary of each steps from diagnosis to end of treatment | 診療室_病院        |
| 4~5     | Diagnostics, Presentation You will master basic treatment planning, treatment methods skills, and creating the presentation based on basic diagnostic and the usage of digital data capture and PowerPoint, Photo shop, learn to create a presentation about patients.   | Lectures<br>practice | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summary of each steps from diagnosis to end of treatment | 診療室_病院        |

2025年度

subject code:212104

# Orthodontics (Clinical training)

|                        |  |         |          |            |              |          |        |  |
|------------------------|--|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 2 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice   | Methods | Practice | Total time | 30           | Credits  | 1      |  |
| Responsible Instructor | KAWAMOTO TATSUO  |         |          |            |              |          |        |  |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |          |            |              |          |        |  |

| Lecture | Contents  | Methods              | Instructor   | before-and-after Le                                      | Lecture rooms |
|---------|---|----------------------|--|--|---------------|
| 6~12    | Orthodontic materials and movement of the tooth<br>You will learn orthodontic treatment by considering the orthodontic materials and movement of the tooth about patients.                                | Lectures<br>practice | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summary of each steps from diagnosis to end of treatment | 診療室_病院        |
| 13~15   | Analysis and evaluation of the treatment effect, growth and development<br>You will learn orthodontic treatment by considering the evaluation of treatment effect, growth and development about patients. | Lectures<br>practice | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summary of each steps from diagnosis to end of treatment | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |        |                    |            |         |          |        |
|------------------------|--|--------|--------------------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 1 grade | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30      | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |                    |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIYAMOTO JUN, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO |        |                    |            |         |          |        |

## Course Description

【Language】 Japanese

You will learn about the organization and analysis of related documents of your research. You have to do oral presentation about your research. You will consider about the method of research.

## Attainment Objectives

You should achieve following assignments.

1. To get ability of creating the materials for the presentation and utilization.
2. To get ability of analysis and collect information for research.
3. To get ability of consider methodology of research.
4. To get ability of collecting data.

## Reference Books

| Title   | Author             | Publisher      |
|---|--------------------|----------------|
| Title Author Publisher Contemporary Orthodontics, 6th Edition | William R. Proffit | Mosby          |
| Color atlas X-ray anatomy and cephalometric analysis          | K. Miyashita       | Quintessence   |
| Orthodontics Current Principles & Techniques                  | T.M.Grabner        | ELSEVIER/MOSBY |

## Grading Criteria and Method of Evaluation

| Evaluation item                                 | Ratio |
|---|-------|
| Summary background research for their research. | 50%   |
| The protocol for research.                      | 50%   |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

# Orofacial Function and Orthodontics

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1 grade    | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |          |         |   |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIYAMOTO JUN, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO |         |                    |            |          |         |   |

## Study Method

| Lecture | Contents   | Methods                            | Instructor   | before-and-after Le  | Lecture rooms |
|---------|--|------------------------------------|--|--|---------------|
| 1~3     | Literature search and organize<br>You will learn about research based on literature search and how to organize research.   | Lectures<br>seminars               | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | The use of the Internet, PubMed<br>Understanding of the usage, usage of File maker                 | 診療室_病院        |
| 4~7     | Background of the research and literature summary<br>You will learn about research based on literature search and how to organize research.  | Exercises and small group seminars | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Preparation for the consolidation of the literature using literature using PubMed for your collect | 診療室_病院        |
| 8~9     | Biology, genetics, molecular cell and orthodontic treatment<br>You will learn the research through orthodontic treatment information based on genetics and molecular cell biology. | Exercises and small group seminars | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Preparation for the consolidation of the literature using literature using PubMed for your collect | 診療室_病院        |
| 10~12   | Discussion of the research methodology<br>You will learn how to appeal your research topics through the result of research.  | Exercises and small group seminars | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | PowerPoint<br>Preparation of presentation  | 診療室_病院        |
| 13~15   | Literature Review (Related to domestic and foreign paper summarization)<br>You will learn how to make discussion of paper through related domestic and international paper.        | Exercises and small group seminars | KAWAMOTO TATSUO<br>GUNJIKAKE KAORI<br>KUROISHI KAYOKO<br>MIZUHARA MASAHIRO<br>SHIRAKAWA TOMOHIKO<br>MIYAMOTO JUN | Summarization of domestic and international related to the theme of your article                   | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |        |                    |            |              |          |        |  |
|------------------------|--|--------|--------------------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 2 ~ 3 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 60           | Credits  | 4      |  |
| Responsible Instructor | KAWAMOTO TATSUO  |        |                    |            |              |          |        |  |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |                    |            |              |          |        |  |

## Course Description

【Language】 Japanese

Organize the collected documents and information, analyzes the presentation. Consider the method of research. Make presentations and article submission.

## Attainment Objectives

You should achieve following assignments.

1. To understand the significance of Orofacial function and occlusion with development concept.
2. To understand the biological and bio-mechanical fundamentals required for orthodontic treatment.
3. To get ability of creating the materials for the presentation and utilization.
4. To get ability of analyzsis and collect information for research.
5. To get ability of considering the methodology of research.
6. To get ability of writing the article and submitting.

## Reference Books

| Title  | Author                             | Publisher           |
|--|------------------------------------|---------------------|
| Contemporary Orthodontics, 6th Edition                         | W. R. Proffitt                     | Mosby               |
| Comprehensive Cleft Care                                       | Joseph Losee, Richard E. Kirschner | CRC Press           |
| Atlas of Orthodontic Treatment for Patients with Birth Defects | Takayuki Kuroda, Kimie Ohyama      | Needham Press, Inc. |
| New atlas of congenital anomaly                                | T. Kajii                           | Nanzando Publishing |
| Contemporary Treatmnet of Dentofacial Deformity                | W.R.Proffitt                       | Mosby               |
| Gorlin's Syndrome of the Head and Neck                         | Hennekam/Krantz/Allanson           | Oxford University   |

# Orofacial Function and Orthodontics

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |              |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |            |              |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item                        | Ratio |
|--|-------|
| Evaluate the progress of the research. | 100%  |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

## Study Method

| Lecture | Contents   | Methods        | Instructor        | before-and-after Le        | Lecture rooms |
|---------|--|----------------|-------------------|----------------------------|---------------|
| 1~2     | Orofacial function and occlusion with development concept. You will learn the history of occlusion by understanding the basics of Orofacial function.                    | Lectureseminar | MIYAMOTO JUN      | Reviewhandouts             | 診療室_病院        |
| 3~4     | Developments of Orofacial Function and Orthodontics researchYou will learn to understand the basic and clinical research related to orthodontic correction of consensus. | Lectureseminar | KUROISHI KAYOKO   | Review of 1 grade lectures | 診療室_病院        |
| 5~6     | Histological changes during experimental tooth movementYou will learn about reaction of teeth and periodontal tissue by orthodontic tooth movement.                      | Lectureseminar | MIZUHARA MASAHIRO | Review of 1 grade lectures | 診療室_病院        |
| 7~8     | Mechanics of tooth movementYou will learn about tooth movement which include Tipping, Bodily movement, Intrusion, Extrusion, Rotation, Torque.                           | Lectureseminar | GUNJIKAKE KAORI   | Typodontsyllabus           | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |         |                    |              |          |         |   |
|------------------------|--|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 2 ~ 3 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time   | 60       | Credits | 4 |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |              |          |         |   |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |              |          |         |   |

| Lecture | Contents   | Methods        | Instructor         | before-and-after Le                                 | Lecture rooms |
|---------|--|----------------|--------------------|---|---------------|
| 9 ~ 10  | Biology, Molecular cell biology, Genetics and Orthodontic treatment<br>To understand the basic science, to learn the need for orthodontic treatment. | Lectureseminar | SHIRAKAWA TOMOHIKO | Review of first year lectures                       | 診療室_病院        |
| 11      | Background of the research and literature research<br>You need to presentation of the academic background of your research.                          | Lectureseminar | KAWAMOTO TATSUO    | Create a Power point on each research, individually | 診療室_病院        |
| 12      | Background of the research and literature research<br>You need to presentation of the academic background of your research.                          | Lectureseminar | GUNJIKAKE KAORI    | Create a Power point on each research, individually | 診療室_病院        |
| 13      | Background of the research and literature research<br>You need to presentation of the academic background of your research.                          | Lectureseminar | KUROISHI KAYOKO    | Create a Power point on each research, individually | 診療室_病院        |
| 14      | Presentation of the background of the research and literature research<br>You need to presentation of your research (Research presses etc. ).        | Lectureseminar | MIZUHARA MASAHIRO  | Create a Power point on each research, individually | 診療室_病院        |
| 15      | Presentation of the background of the research and literature research<br>You need to presentation of your research (Research presses etc. ).        | Lectureseminar | SHIRAKAWA TOMOHIKO | Create a Power point on each research, individually | 診療室_病院        |
| 16      | Presentation of the background of the research and literature research<br>You need to presentation of your research (Research presses etc. ).        | Lectureseminar | MIYAMOTO JUN       | Create a Power point on each research, individually | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |         |                    |              |          |         |   |
|------------------------|--|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 2 ~ 3 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time   | 60       | Credits | 4 |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |              |          |         |   |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |              |          |         |   |

| Lecture | Contents  | Methods            | Instructor         | before-and-after Le                                 | Lecture rooms |
|---------|---|--------------------|--------------------|---|---------------|
| 17      | Methodology for the research<br>You will learn about the methodology of your research based on literature search and gathered information.  | Lecture<br>seminar | KAWAMOTO TATSUO    | Create a Power point on each research, individually | 診療室_病院        |
| 18      | Methodology for the research<br>You will learn about the methodology of your research based on literature search and gathered information.  | Lecture<br>seminar | GUNJIKAKE KAORI    | Create a Power point on each research, individually | 診療室_病院        |
| 19      | Methodology for the research<br>You will learn about the methodology of your research based on literature search and gathered information.  | Lecture<br>seminar | KUROISHI KAYOKO    | Create a Power point on each research, individually | 診療室_病院        |
| 20      | Announcement of research methodology<br>You will learn about presentation of the methodology of your research based on fabrication of research methods, figures and tables using Power point. | Lecture<br>seminar | MIZUHARA MASAHIRO  | Create a Power point on each research, individually | 診療室_病院        |
| 21      | Announcement of research methodology<br>You will learn about presentation of the methodology of your research based on fabrication of research methods, figures and tables using Power point. | Lecture<br>seminar | SHIRAKAWA TOMOHIKO | Create a Power point on each research, individually | 診療室_病院        |
| 22      | Announcement of research methodology<br>You will learn about presentation of the methodology of your research based on fabrication of research methods, figures and tables using Power point. | Lecture<br>seminar | MIYAMOTO JUN       | Create a Power point on each research, individually | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 2 ~ 3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 60           | Credits  | 4      |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |            |              |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |            |              |          |        |

| Lecture | Contents  | Methods        | Instructor         | before-and-after Le                                 | Lecture rooms |
|---------|---|----------------|--------------------|---|---------------|
| 23      | Data collection analysis presentation<br>The analysis of data collected for research presentation.  | Lectureseminar | KAWAMOTO TATSUO    | Create a Power point on each research, individually | 診療室_病院        |
| 24      | Data collection analysis presentation<br>The analysis of data collected for research presentation.  | Lectureseminar | GUNJIKAKE KAORI    | Create a Power point on each research, individually | 診療室_病院        |
| 25      | Meeting presentations and media creation<br>You have to present your research in the form of oral or poster proceedings at academic exhibits (No. 1). | Lectureseminar | KUROISHI KAYOKO    | Create a Power point on each research, individually | 診療室_病院        |
| 26      | Meeting presentations and media creation<br>You have to present your research in the form of oral or poster proceedings at academic exhibits (No. 1). | Lectureseminar | MIZUHARA MASAHIRO  | Create a Power point on each research, individually | 診療室_病院        |
| 27      | Meeting presentations and media creation<br>You have to present your research in the form of oral or poster proceedings at academic exhibits (No. 2). | Lectureseminar | SHIRAKAWA TOMOHIKO | Create a Power point on each research, individually | 診療室_病院        |
| 28      | Meeting presentations and media creation<br>You have to present your research in the form of oral or poster proceedings at academic exhibits (No. 2). | Lectureseminar | MIYAMOTO JUN       | Create a Power point on each research, individually | 診療室_病院        |
| 29 ~ 30 | Write an article and submit<br>You will learn about the proper method of writing an article to understand the guidelines of the journal.              | Lectureseminar | KAWAMOTO TATSUO    | Review journals submission guideline                | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |        |                    |            |         |          |        |
|------------------------|--|--------|--------------------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 2 grade | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30      | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |                    |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |                    |            |         |          |        |

## Course Description

【Language】 Japanese

Understand the relationship between occlusion and orthodontics (related to research) through chewing, swallowing and respiratory function. Also consider the cause of the risk which include root resorption and pain associated with treatment.

## Attainment Objectives

You should achieve following assignments.

1. To get ability of evaluating the respiratory function.
2. To clarify and to understand the relationship between activity of masticatory muscle EMG and occlusal sound.
3. To clarify and to understand the relationship between mouth breathing and bite if training.
4. To clarify and to understand the regulation of bone metabolism through the trigeminal ganglion.
5. To clarify and to understand the elucidation of the mechanism of periodontal tissue osteoactivin.
6. To clarify and understand the friction on the wire between the brackets.

## Reference Books

| Title  | Author             | Publisher     |
|--|--------------------|---------------|
| Contemporary Orthodontics, 6th Edition       | William R. Proffit | Mosby         |
| Orthodontics Current Principles & Techniques | T.M.Graber         | ELSEVER/MOSBY |

## Grading Criteria and Method of Evaluation

| Evaluation item                   | Ratio |
|-----------------------------------|-------|
| Evaluation of a research protocol | 100%  |

## Etc

Student consultation: Any time (e-Mail)

Remote response due to the equivalent of official leave: Consultation with the responsible instructor when such circumstances arise.

# Orofacial Function and Orthodontics

|                        |  |         |                    |        |            |    |          |        |  |
|------------------------|--|---------|--------------------|--------|------------|----|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades | 2 grade    |    | Semester | Winter |  |
| Subject                | Choice   | Methods | Lesson and seminar |        | Total time | 30 | Credits  | 2      |  |
| Responsible Instructor | KAWAMOTO TATSUO  |         |                    |        |            |    |          |        |  |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |         |                    |        |            |    |          |        |  |

## Study Method

| Lecture | Contents   | Methods                            | Instructor         | before-and-after Le                 | Lecture rooms |
|---------|--|------------------------------------|--------------------|-------------------------------------|---------------|
| 1~3     | Orofacial function<br>You will learn about the Orofacial function based on growth and development.   | Lecture                            | SHIRAKAWA TOMOHIKO | Review<br>handouts                  | 診療室_病院        |
| 4~6     | Biological study on the optimal orthodontic force<br>(1) You will learn about the biological study of orthodontic periodontal tissue cells of the bone resorption and mechanism based on optimal orthodontic forces. | Exercises and small group seminars | MIZUHARA MASAHIRO  | One-year review of the next lecture | 診療室_病院        |
| 7~8     | Tooth movement and bone remodeling<br>You will learn about the orthodontic tooth movement during bone remodeling based on functions of periodontal ligament fibroblast cells, osteoclasts.                           | Exercises and small group seminars | KUROISHI KAYOKO    | A perusal of related papers         | 診療室_病院        |
| 9       | Tooth movement and bone remodeling<br>You will learn about the orthodontic tooth movement during bone remodeling, based on functions of osteoblasts.   | Exercises and small group seminars | KUROISHI KAYOKO    | A perusal of related papers         | 診療室_病院        |
| 10~11   | Evaluation of masticatory function<br>You will learn about the necessity of the Orthodontic treatment to understand the basics of the masticatory function   | Exercises and small group seminars | MIYAMOTO JUN       | A perusal of related papers         | 診療室_病院        |
| 12      | Evaluation of masticatory function<br>You will learn about the necessity of the Orthodontic treatment to understand the basics of the masticatory function   | Exercises and small group seminars | KAWAMOTO TATSUO    | A perusal of related papers         | 診療室_病院        |

# Orofacial Function and Orthodontics

|                        |  |        |                    |            |         |          |        |
|------------------------|--|--------|--------------------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |                    | Grades     | 2 grade | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 30      | Credits  | 2      |
| Responsible Instructor | KAWAMOTO TATSUO  |        |                    |            |         |          |        |
| Instructor(s)          | KAWAMOTO TATSUO, GUNJIKAKE KAORI, KUROISHI KAYOKO, MIZUHARA MASAHIRO, SHIRAKAWA TOMOHIKO, MIYAMOTO JUN |        |                    |            |         |          |        |

| Lecture | Contents   | Methods                            | Instructor      | before-and-after Le         | Lecture rooms |
|---------|--|------------------------------------|-----------------|-----------------------------|---------------|
| 13      | Regulation of bone metabolism through the trigeminal ganglion<br>You will learn about the relationship of the nervous system and bone metabolism   | Exercises and small group seminars | GUNJIKAKE KAORI | A perusal of related papers | 診療室_病院        |
| 14      | Mechanism of reaction of bone metabolism in periodontal tissue<br>You will learn about bone metabolism in periodontal tissue and the bone formation mechanism of traction side during orthodontic tooth movement based on the mechanism of reaction and osteoactivin on periodontal ligament fibroblast cells in bone formation factors. | Exercises and small group seminars | GUNJIKAKE KAORI | A perusal of related papers | 診療室_病院        |
| 15      | Mechanism of reaction of bone metabolism in periodontal tissue<br>You will learn about bone metabolism in periodontal tissue and the bone formation mechanism of traction side during orthodontic tooth movement based on the mechanism of reaction and osteoactivin on periodontal ligament fibroblast cells in bone formation factors. | Exercises and small group seminars | KAWAMOTO TATSUO | A perusal of related papers | 診療室_病院        |

# Oral and Maxillofacial Radiology

|                        |  |        |          |            |            |          |        |  |
|------------------------|--|--------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |        |          | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIMOTO YASUHIRO  |        |          |            |            |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |        |          |            |            |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |        |          |            |            |          |        |  |

## Course Description

You can study the diagnostic methods using six hundred teaching files in our department and in fact produce the imaging diagnostic reports on the respective case. After then, you can understand the important and essential points on the respective case based on the explanations on the case by the instructors. At the same time, you can study and appropriately comprehend the pathological findings on the respective case through the textbook "Contemporary Oral and Maxillofacial Pathology". In imaging interpretation of the respective case, you should use "CT, MRI in head and neck" and "Handbook of diagnostic imaging in head and neck" as the textbook.

## Attainment Objectives

To understand the diagnostic methods for many kinds of lesions in oral and maxillofacial regions through imaging findings on dental X-ray radiographs, panoramic radiographs, CT, MRI, ultrasonography, and 18F-FDG-PET-CT. At the same time, you should comprehend the usefulness of the judgment based on together with the medical interview of patients, anthroposcopy, and the palpation for the lesion in imaging diagnosis of the many kind of lesion in oral and maxillofacial regions.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Head and Neck Imaging<br>3rd edition 1996                                 |        |           |
| CT, MRI in head and neck, Handbook of diagnostic imaging in head and neck |        |           |
| Contemporary Oral and Maxillofacial Pathology                             |        |           |
| Basic radiology   |        |           |
| Oral Anatomy  |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item    | Ratio |
|--------------------|-------|
| Oral presentations | 50%   |

# Oral and Maxillofacial Radiology

|                        |  |         |          |            |            |          |        |
|------------------------|--|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |          |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |            |          |        |

| Evaluation item   | Ratio |
|-------------------|-------|
| Oral examinations | 50%   |

## Etc

【Office Hours】 Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents  | Methods  | Instructor   | before-and-after Le               | Lecture rooms |
|---------|---|----------|--|-----------------------------------|---------------|
| 1,2     | Diagnosis of 20 teeth-related lesions in 600 cased teaching files               | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 3,4     | Diagnosis of 20 teeth and jaw-related lesions in 600 cased teaching files       | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 5,6     | Diagnosis of 20 periodontal lesions in 600 cased teaching files                 | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 7,8     | Diagnosis of 20 periodontal and jaw-related lesions in 600 cased teaching files | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Radiology

|                        |   |         |          |            |            |          |        |  |
|------------------------|---|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |          |            |            |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |            |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |            |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Learning         | Lecture rooms |
|---------|---|----------|---|-----------------------------------|---------------|
| 9,10    | Diagnosis of 20 oral mucosa-related lesions in 600 cased teaching files I                   | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 11,12   | Diagnosis of 20 oral mucosa-related lesions in 600 cased teaching files II                  | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 13,14   | Diagnosis of 20 parapharyngeal space-related lesions in 600 cased teaching files            | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 15,16   | Diagnosis of 20 carotid and perivertebral space-related lesions in 600 cased teaching files | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 17,18   | Diagnosis of 20 larynx and pharynx-related lesions in 600 cased teaching files              | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Radiology

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |          |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---|----------|---|-----------------------------------|---------------|
| 19,20   | Diagnosis of 20 sublingual space-related lesions in 600 cased teaching files I                  | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 21,22   | Diagnosis of 20 sublingual space-related lesions in 600 cased teaching files II                 | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 23,24   | Diagnosis of 20 submandibular space-related lesions in 600 cased teaching files I               | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 25,26   | Diagnosis of 20 submandibular space-related lesions in 600 cased teaching files II              | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 27,28   | Diagnosis of 20 submandibular and sublingual spaces-related lesions in 600 cased teaching files | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Radiology

|                        |   |         |          |            |              |          |        |  |
|------------------------|---|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |          |            |              |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |              |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |              |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Learning         | Lecture rooms |
|---------|---|----------|---|-----------------------------------|---------------|
| 29,30   | Diagnosis of 20 masticator space-related lesions in 600 cased teaching files      | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 31,32   | Diagnosis of 20 maxillary sinus-related lesions in 600 cased teaching files       | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 33,34   | Diagnosis of 20 TMJ-related lesions in 600 cased teaching files                   | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 35,36   | Diagnosis of 20 maxilla and mandible-related lesions in 600 cased teaching files  | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 37,38   | Diagnosis of 20 retropharyngeal space-related lesions in 600 cased teaching files | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Radiology

|                        |   |         |          |            |              |          |        |  |
|------------------------|---|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |          |            |              |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |              |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |              |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---|----------|---|-----------------------------------|---------------|
| 39,40   | Diagnosis of 20 parapharyngeal and retropharyngeal spaces-related lesions in 600 cased teaching files | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 41,42   | Diagnosis of 20 pharynx and masticator space-related lesions in 600 cased teaching files              | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 43,44   | Diagnosis of 20 pharynx-related lesions in 600 cased teaching files                                   | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 45,46   | Diagnosis of 20 lymph nodes-related lesions in 600 cased teaching files                               | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 47,48   | Diagnosis of 20 cystic masses in 600 cased teaching files   | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Radiology

|                        |   |         |          |            |            |          |        |  |
|------------------------|---|---------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |          |            |            |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |            |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |            |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Learning         | Lecture rooms |
|---------|---|----------|---|-----------------------------------|---------------|
| 49,50   | Diagnosis of 20 salivary glands-related lesions in 600 cased teaching files                 | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 51,52   | Diagnosis of 20 thyroid and parathyroid glands-related lesions in 600 cased teaching files  | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 53,54   | Diagnosis of 20 base of skull and temporal bone-related lesions in 600 cased teaching files | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 55,56   | Diagnosis for 20 kinds of diseases in oral and maxillofacial regions I                      | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 57,58   | Diagnosis for 20 kinds of diseases in oral and maxillofacial regions II                     | Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Radiology

|                        |  |         |          |            |              |          |        |
|------------------------|--|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |          |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |          |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |          |            |              |          |        |

| Lecture | Contents   | Methods  | Instructor   | before-and-after Learning         | Lecture rooms |
|---------|--|----------|--|-----------------------------------|---------------|
| 59,60   | Diagnosis for 20 kinds of diseases in oral and maxillofacial regions III | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Conference of Oral and Maxillofacial Radiology

|                        |  |        |         |            |            |          |        |
|------------------------|--|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO  |        |         |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |        |         |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |        |         |            |            |          |        |

## Course Description

Learn radiographic interpretation in dental radiology through a conference-style format.

## Attainment Objectives

Develop the ability to accurately interpret real case images.

## Grading Criteria and Method of Evaluation

| Evaluation item                 | Ratio |
|---------------------------------|-------|
| Presentation during the seminar | 50%   |
| Oral examiantion                | 50%   |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents  | Methods  | Instructor   | before-and-after Le                              | Lecture rooms |
|---------|---|----------|--|--|---------------|
| 1~15    | Examine the imaging findings and diagnoses of five cases and create an interpretation report. | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Read reference books for preparation and review. |               |

# Outline of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 60         | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |            |          |        |

## Course Description

Firstly, you can sufficiently review the oral anatomy and the oral pathology. After then, you can learn the basic imaging diagnosis, the basic radiobiology, and the basic radiological physics. As the form of the present subject, you will present the respective content in front of our professors after the respective tutorial study, and the professor in charge of the respective content will precisely explain it

## Attainment Objectives

To perfectly comprehend the basic oral anatomy and oral pathology. To understand the basic imaging principles, technique of many kinds of imaging modalities, imaging diagnostic interpretation, and the basic radiobiology.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Head and Neck Imaging<br>3rd edition  |        |           |
| MRI in head and neck,<br>Handbook of diagnostic<br>imaging in head and neck |        |           |
| Contemporary Oral and<br>Maxillofacial Pathology                            |        |           |
| Basic radiology   |        |           |
| Oral Anatomy  |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item    | Ratio |
|--------------------|-------|
| Oral presentations | 50%   |
| Oral examinations  | 50%   |

# Outline of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 60         | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |            |          |        |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents                                   | Methods              | Instructor   | before-and-after Learning         | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 1       | History of Radiology, Physics of radiation | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 2       | Radiation chemistry                        | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 3       | Basic radiobiology                         | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 4       | Basic radiation measurement methods I      |                      | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 60           | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |                    |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---|----------------------|---|-----------------------------------|---------------|
| 5       | Basic radiation measurement methods II                | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 6       | Radiation-related laws and ordinances                 | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 7       | Medical image engineering                             | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 8       | Image storage translation, reproduction, and transfer | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 9       | Reviews of basic radiology from 1 to 8.               | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |  |         |                    |              |          |         |   |
|------------------------|--|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time   | 60       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |              |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |              |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |              |          |         |   |

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 10      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Dental and Panoramic radiographs) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 11      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly X-ray CT scans)                   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 12      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly MRI)                              | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 13      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Ultrasonography)                  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 14      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Scintigraphy)                     | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 60       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |                    |              |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |              |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |              |          |         |   |

| Lecture | Contents  | Methods              | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---|----------------------|---|-----------------------------------|---------------|
| 15      | Reviews of imaging techniques from 10 to 14.  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 16      | Diagnosis for many kinds of diseases in oral and maxillofacial regions I (Mainly maxillary sinus-related diseases)                                | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 17      | Diagnosis for many kinds of diseases in oral and maxillofacial regions II (Mainly TMJ-related diseases)   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 18      | Diagnosis for many kinds of diseases in oral and maxillofacial regions III (Mainly Maxilla and mandible-related diseases)                         | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 19      | Diagnosis for many kinds of diseases in oral and maxillofacial regions IV (Mainly Parapharyngeal, Masticator, and Carotid space-related diseases) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 60       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |                    |              |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |              |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |              |          |         |   |

| Lecture | Contents   | Methods              | Instructor  | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|---|-----------------------------------|---------------|
| 20      | Diagnosis for many kinds of diseases in oral and maxillofacial regions V (Mainly Retropharyngeal, Perivertebral, Sublingual, and Submandibular space-related diseases) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 21      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VI (Mainly Oropharynx-related diseases)   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 22      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VII (Mainly Epipharynx, Hypopharynx, Larynx-related diseases)                                   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 23      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VII (Mainly Lymph nodes-related diseases)   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 24      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VIII (Mainly Cystic masses)   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 60       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |                    |              |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |              |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |              |          |         |   |

| Lecture | Contents  | Methods              | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---|----------------------|---|-----------------------------------|---------------|
| 25      | Diagnosis for many kinds of diseases in oral and maxillofacial regions IX (Mainly Salivary glands-related diseases)                 | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 26      | Diagnosis for many kinds of diseases in oral and maxillofacial regions IX (Mainly Thyroid and Parathyroid glands-related diseases)  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 27      | Diagnosis for many kinds of diseases in oral and maxillofacial regions X (Mainly Base of skull and Temporary bone-related diseases) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 28      | Review of diagnosis for many kinds of diseases in oral and maxillofacial regions from 16 to 27                                      | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 29      | Interventional Radiology for many kinds of diseases in maxillofacial regions  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 60         | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |            |          |        |

| Lecture | Contents                      | Methods              | Instructor   | before-and-after Learning         | Lecture rooms |
|---------|-------------------------------|----------------------|--|-----------------------------------|---------------|
| 30      | Radiotherapy for oral cancers | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |          |         |   |

## Course Description

You can learn the applied imaging diagnosis, the applied radiobiology, and the applied radiological physics based on your knowledge through Basic Dental Radiology.

## Attainment Objectives

To understand the applied imaging diagnosis, the applied radiobiology, and the applied radiological physics.

## Reference Books

| Title           | Author | Publisher |
|-----------------|--------|-----------|
| Basic Radiology |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| Oral presentation | 50%   |
| Oral examination  | 50%   |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 1       | The examinations of radiation protection supervisor I and II | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |          |         |   |

| Lecture | Contents                                     | Methods              | Instructor   | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 2       | History of Radiology, Physics of radiation I | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 3       | Physics of radiation II                      | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 4       | Radioisotope                                 | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 5       | Basic radiation measurement methods          | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 6       | Radiation control                            | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |          |         |   |

| Lecture | Contents                                 | Methods              | Instructor   | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 7       | Radiation protection                     | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 8       | Radiation-related laws and ordinances I  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 9       | Radiation-related laws and ordinances II | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 10      | Radiobiology                             | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 11      | Radiation chemistry I                    | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |                    |              |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |              |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |              |          |         |   |

| Lecture | Contents                        | Methods              | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---------------------------------|----------------------|---|-----------------------------------|---------------|
| 12      | Radiation chemistry II          | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 13      | Review I (Compound questions)   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 14      | Review II (Compound questions)  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 15      | Review III (Compound questions) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |          |         |   |

## Course Description

You can study and examine many kinds of the recent imaging diagnostic investigations based on your knowledge through Basic Dental Radiology.

## Attainment Objectives

You can basically and specially operate the CT scan and MRI system, and can take photographs of CT images and MRI. In addition, you can easily use the special software on analysis of CT and MRI imaging data in attached workstation. Moreover, you can apply the analytical software "SPSS" on imaging data analysis.

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| Oral presentation | 50%   |
| Oral examination  | 50%   |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents   | Methods              | Instructor   | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 1       | Imaging techniques and analysis of conventional X-ray CT scans | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |          |         |   |

| Lecture | Contents   | Methods              | Instructor   | before-and-after Learning         | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 2       | Imaging techniques and analysis of CT angiography            | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 3       | Data analysis using statistical analytical software SPSS (I) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 4       | Imaging techniques and analysis of conventional MRI (I)      | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 5       | Imaging techniques and analysis of conventional MRI (II)     | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 6       | Imaging techniques and analysis of conventional MRI (III)    | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |            |          |         |   |
|------------------------|--|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |            |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |            |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |            |          |         |   |

| Lecture | Contents   | Methods              | Instructor   | before-and-after Learning         | Lecture rooms |
|---------|--|----------------------|--|-----------------------------------|---------------|
| 7       | Imaging analysis for Dynamic MR sialography (I)  | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 8       | Imaging analysis for Dynamic MR sialography (II) | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 9       | Imaging analysis for Functional MRI (I)          | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 10      | Imaging analysis for Functional MRI (II)         | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 11      | Imaging analysis for Functional MRI (III)        | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Practice of Oral and Maxillofacial Radiology

|                        |  |         |                    |              |          |         |   |
|------------------------|--|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry   |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice   | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | MORIMOTO YASUHIRO  |         |                    |              |          |         |   |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |         |                    |              |          |         |   |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |         |                    |              |          |         |   |

| Lecture | Contents  | Methods              | Instructor   | before-and-after Le               | Lecture rooms |
|---------|---|----------------------|--|-----------------------------------|---------------|
| 12      | Imaging analysis for MR angiography (I)                       | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 13      | Imaging analysis for MR angiography (II)                      | Practice             | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 14      | Data analysis using statistical analytical software SPSS (II) | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 15      | Review from 1 to 14   | Lecture and Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# A reading circle on Oral and Maxillofacial Radiolo

|                        |  |        |         |            |              |          |        |
|------------------------|--|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO  |        |         |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |        |         |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |        |         |            |              |          |        |

## Course Description

You can learn and study the imaging diagnostic method for many kind of diseases in oral and maxillofacial regions through the representative textbook "Head and Neck Imaging 3rd edition" by Som, Curtin et al

## Attainment Objectives

To understand of imaging findings on many kind of diseases in oral and maxillofacial regions through the representative textbook "Head and Neck Imaging 3rd edition" by Som, Curtin et al

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| Oral presentation | 50%   |
| Oral examiantion  | 50%   |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents                                    | Methods  | Instructor   | before-and-after Le   | Lecture rooms |
|---------|---|----------|--|---|---------------|
| 1 ~ 15  | A reading circle of "Head and Neck Imaging" | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook "Head and Neck Imaging 3rd edition" |               |

# Basic treatment strategy of Oral and Maxillofacial

|                        |   |        |          |            |            |          |        |
|------------------------|---|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |        |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |        |          |            |            |          |        |

## Course Description

【Language】 English and Japanese To acquire basic treatment skills and strategies of Oral and Maxillofacial Surgery including systemic management for hospitalized patients.

## Attainment Objectives

- 1.To acquire the basic skills of minor oral surgery
- 2.To acquire the basic knowledge of major oral and maxillofacial surgery
- 3.To acquire the basic skills of pre- and post- operative management for oral surgery
4. To acquire the basic skills of systemic management for hospitalized patients
- 5.To acquire the basic skills of management for medical emergency

## Textbooks

| Title                                       | Author | Publisher |
|---|--------|-----------|
| Contemporary Oral and Maxillofacial Surgery | Mosby  |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                                | Ratio |
|--|-------|
| case presentations and oral/paper examinations | 30%   |
| report   | 30%   |
| test   | 40%   |

## Etc

Student consultation at anytime

## Study Method

| Lecture | Contents                             | Methods  | Instructor                          | before-and-after Le                  | Lecture rooms |
|---------|--------------------------------------|----------|-------------------------------------|--------------------------------------|---------------|
| 1,2     | Uncomplicated exodontia              | Practice | TAKAHASHI OSAMU                     | Preparation and review of text books |               |
| 3,4     | Preparation and review of text books | Practice | TAKAHASHI OSAMU<br>HARAGUCHI KAZUYA | Preparation and review of text books |               |

# Basic treatment strategy of Oral and Maxillofacial

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |         |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |          |            |            |          |        |

| Lecture | Contents   | Methods                                | Instructor                      | before-and-after Le                    | Lecture rooms |
|---------|--|--|---------------------------------|--|---------------|
| 5,6     | Management of impacted teeth                           | Practice                               | HARAGUCHI KAZUYA                | Preparation and review of text books   |               |
| 7,8     | Oral examination 1                                     | Case presentation and oral examination | HABU MANABU                     | Case presentation and oral examination |               |
| 9,10    | Surgical management of cysts of the jaws               | Practice                               | HARAGUCHI KAZUYA                | Preparation and review of text books   |               |
| 11,12   | Periapical surgery                                     | Practice                               | HARAGUCHI KAZUYA                | Preparation and review of text books   |               |
| 13,14   | Surgical management of jaw tumors                      | Practice                               | HARAGUCHI KAZUYA                | Preparation and review of text books   |               |
| 15,16   | Preprosthetic surgery                                  | Practice                               | TABE SHIROU                     | Preparation and review of text books   |               |
| 17,18   | Prevention of surgical site infection                  | Practice                               | TABE SHIROU                     | Preparation and review of text books   |               |
| 19,20   | Oral examination 2                                     | Case presentation and oral examination | HABU MANABU                     | Preparation of case presentation       |               |
| 21,22   | Preparation for orthognathic surgery                   | Practice                               | TABE SHIROU                     | Preparation and review of text books   |               |
| 23,24   | Surgical management of jaw deformities                 | Practice                               | TABE SHIROU                     | Preparation and review of text books   |               |
| 25,26   | Postsurgical management of orthognathic surgery        | Practice                               | TABE SHIROU<br>MORIOKA MASAHIKO | Preparation and review of text books   |               |
| 27,28   | Oral examination 3                                     | Case presentation and oral examination | TAKAHASHI OSAMU                 | Preparation of case presentation       |               |
| 29,30   | Principles of anti-cancer chemotherapy for oral cancer | Practice                               | MORIOKA MASAHIKO                | Preparation and review of text books   |               |

# Basic treatment strategy of Oral and Maxillofacial

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |         |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |          |            |            |          |        |

| Lecture | Contents   | Methods                                | Instructor        | before-and-after Le                  | Lecture rooms |
|---------|--|--|-------------------|--------------------------------------|---------------|
| 31,32   | Principles of irradiation therapy for oral cancer    | Practice                               | MORIOKA MASAHIKO  | Preparation and review of text books |               |
| 33,34   | Surgical management of oral cancer                   | Practice                               | MORIOKA MASAHIKO  | Preparation and review of text books |               |
| 35,36   | Surgical reconstruction of oro-facial region         | Practice                               | MORIOKA MASAHIKO  | Preparation and review of text books |               |
| 37,38   | Postsurgical management of oral cancer patients      | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 39,40   | Principles of terminal care for oral cancer patients | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 41,42   | Oral examination 4                                   | Case presentation and oral examination | TAKAHASHI OSAMU   | Preparation of case presentation     |               |
| 43,44   | Surgical management of temporomandibular disorders   | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 45,46   | Preparation for cleft lip and palate (CLP) surgery   | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 47,48   | Postsurgical management of CLP patients              | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 49,50   | Surgical management of CLP                           | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 51,52   | Oral examination 5                                   | Case presentation and oral examination | TAKAHASHI OSAMU   | Preparation of case presentation     |               |
| 53,54   | Intravenous sedation for oral surgery                | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 55,56   | General anesthesia for oral surgery                  | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 57,58   | Management of medical emergenc                       | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |

2025年度

subject code:212121

# Basic treatment strategy of Oral and Maxillofacial

|                        |   |        |          |            |            |          |        |
|------------------------|---|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |        |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |        |          |            |            |          |        |

| Lecture | Contents           | Methods                                | Instructor  | before-and-after Le              | Lecture rooms |
|---------|--------------------|--|-------------|----------------------------------|---------------|
| 59,60   | Oral examination 6 | Case presentation and oral examination | HABU MANABU | Preparation of case presentation |               |

# Basic diagnostic strategy of Oral and Maxillofacia

|                        |   |        |          |            |            |          |        |
|------------------------|---|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |        |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |        |          |            |            |          |        |

## Course Description

【Language】 English and Japanese To acquire basic treatment skills and strategies of Oral and Maxillofacial Surgery including systemic management for hospitalized patients.

## Attainment Objectives

- 1.To acquire the basic skills of minor oral surgery
- 2.To acquire the basic knowledge of major oral and maxillofacial surgery
- 3.To acquire the basic skills of pre- and post- operative management for oral surgery
4. To acquire the basic skills of systemic management for hospitalized patients
- 5.To acquire the basic skills of management for medical emergency

## Textbooks

| Title                                       | Author | Publisher |
|---|--------|-----------|
| Contemporary Oral and Maxillofacial Surgery |        | Mosby     |

## Grading Criteria and Method of Evaluation

| Evaluation item                                | Ratio |
|--|-------|
| case presentations and oral/paper examinations | 30%   |
| report   | 30%   |
| test   | 40%   |

## Etc

Student consultation at anytime

## Study Method

| Lecture | Contents   | Methods  | Instructor      | before-and-after Le                  | Lecture rooms |
|---------|--|----------|-----------------|--------------------------------------|---------------|
| 1,2     | Medical interview  | Practice | TAKAHASHI OSAMU | Preparation and review of text books |               |
| 3,4     | Clinical laboratory test<br>1;Blood test, biochemical test | Practice | TAKAHASHI OSAMU | Preparation and review of text books |               |

# Basic diagnostic strategy of Oral and Maxillofacia

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |         |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |          |            |            |          |        |

| Lecture | Contents   | Methods                                | Instructor                          | before-and-after Le                  | Lecture rooms |
|---------|--|--|-------------------------------------|--------------------------------------|---------------|
| 5,6     | Clinical laboratory test 2; Immunochemical blood test    | Practice                               | TAKAHASHI OSAMU<br>HARAGUCHI KAZUYA | Preparation and review of text books |               |
| 7,8     | Image reading of computed tomography                     | Practice                               | HARAGUCHI KAZUYA                    | Preparation and review of text books |               |
| 9,10    | Image reading of magnetic resonance image                | Practice                               | HARAGUCHI KAZUYA                    | Preparation and review of text books |               |
| 11,12   | Image reading of ultrasound examination                  | Practice                               | HARAGUCHI KAZUYA                    | Preparation and review of text books |               |
| 13,14   | Selection of the optimal modalities for various diseases | Practice                               | HARAGUCHI KAZUYA                    | Preparation and review of text books |               |
| 15,16   | Analysis of the collected data and diagnosis             | Practice                               | TABE SHIROU                         | Preparation and review of text books |               |
| 17,18   | Oral examination 1                                       | Case presentation and oral examination | HABU MANABU                         | Preparation of case presentation     |               |
| 19,20   | Pathological characteristics of mucous membrane diseases | Practice                               | TABE SHIROU                         | Preparation and review of text books |               |
| 21,22   | Clinical characteristics of mucous membrane diseases     | Practice                               | TABE SHIROU                         | Preparation and review of text books |               |
| 23,24   | Basic strategy for diagnosis of mucous membrane diseases | Practice                               | TABE SHIROU                         | Preparation and review of text books |               |
| 25,26   | Diagnosis of odontogenic infection                       | Practice                               | TABE SHIROU<br>MORIOKA MASAHIKO     | Preparation and review of text books |               |
| 27,28   | Management of odontogenic infection                      | Practice                               | MORIOKA MASAHIKO                    | Preparation and review of text books |               |
| 29,30   | Diagnosis of temporomandibular disorders                 | Practice                               | MORIOKA MASAHIKO                    | Preparation and review of text books |               |
| 31,32   | Principles of management of temporomandibular disorders  | Practice                               | HABU MANABU                         | Preparation and review of text books |               |

# Basic diagnostic strategy of Oral and Maxillofacia

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |         |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |          |            |            |          |        |

| Lecture | Contents   | Methods                                | Instructor        | before-and-after Le                  | Lecture rooms |
|---------|--|--|-------------------|--------------------------------------|---------------|
| 33,34   | Diagnosis of oral psychosomatic disorders                        | Practice                               | MORIOKA MASAHIKO  | Preparation and review of text books |               |
| 35,36   | Principles of management of oral psychosomatic disorders         | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 37,38   | Oral examination 2   | Case presentation and oral examination | HABU MANABU       | Preparation of case presentation     |               |
| 39,40   | Dental management of the patients with diabetes mellitus         | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 41,42   | Dental management of the patients with cardiovascular disorders  | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 43,44   | Dental management of the patients under anticoagulant therapy    | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 45,46   | Dental management of the patients with liver and kidney diseases | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 47,48   | Dental management of the patients under bisphosphonate therapy   | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 49,50   | Dental management of medically compromised host                  | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 51,52   | Oral examination 3   | Case presentation and oral examination | TAKAHASHI OSAMU   | Preparation of case presentation     |               |
| 53,54   | Medical and dental ethics  | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |
| 55,56   | Medical record writing based on problem oriented system          | Practice                               | SASAGURI MASA AKI | Preparation and review of text books |               |

2025年度

subject code:212122

# Basic diagnostic strategy of Oral and Maxillofacia

|                        |   |        |          |            |            |          |        |
|------------------------|---|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | HABU MANABU   |        |          |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |        |          |            |            |          |        |

| Lecture | Contents                             | Methods                                | Instructor      | before-and-after Le              | Lecture rooms |
|---------|--------------------------------------|--|-----------------|----------------------------------|---------------|
| 57,58   | Oral examination 4                   | Case presentation and oral examination | TAKAHASHI OSAMU | Preparation of case presentation |               |
| 59,60   | Final test of basic diagnosis course | Paper examination                      | HABU MANABU     | Paper examination                |               |

# Oral and Maxillofacial Surgery 1(Pathology and dis

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | HABU MANABU   |         |                    |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese To acquire the basic knowledge of various disease models in orofacial region

## Attainment Objectives

- 1.To acquire the basic skills of histopathological specimens
- 2.To acquire the basic skills of immunohistopathological staining
- 3.To acquire the knowledge of osteonecrosis model induced by bisphosphonate
- 4.To acquire the knowledge of arthritis model of temporomandibular joint
- 5.To acquire the knowledge of transplanted cancer model

## Grading Criteria and Method of Evaluation

| Evaluation item                       | Ratio |
|---------------------------------------|-------|
| practice outcome and oral examination | 50%   |
| test                                  | 50%   |

## Etc

Student consultation at anytime

## Study Method

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le                 | Lecture rooms |
|---------|--|----------------------|-----------------|-------------------------------------|---------------|
| 1       | Processing of histopathological specimens 1: from tissue fixation to embedding | Lecture and practice | TAKAHASHI OSAMU | Preparation and review of text book |               |
| 2       | Processing of histopathological specimens 2: decalcification and slicing       | Lecture and practice | TAKAHASHI OSAMU | Preparation and review of text book |               |
| 3       | Processing of histopathological specimens 3: H-E staining                      | Lecture and practice | TABE SHIROU     | Preparation and review of text book |               |
| 4       | Immunohistopathological staining 1: undecalcified specimens                    | Lecture and practice | TABE SHIROU     | Preparation and review of text book |               |

# Oral and Maxillofacial Surgery 1(Pathology and dis

|                        |   |        |                    |            |          |         |   |
|------------------------|---|--------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |        | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | HABU MANABU   |        |                    |            |          |         |   |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |        |                    |            |          |         |   |

| Lecture | Contents   | Methods              | Instructor        | before-and-after Le                  | Lecture rooms |
|---------|--|----------------------|-------------------|--------------------------------------|---------------|
| 5       | Immunohistopathological staining 2: decalcified specimens                                | Lecture and practice | HARAGUCHI KAZUYA  | Preparation and review of text book  |               |
| 6       | Arthritis model of the temporomandibular joint: the impact and the mechanisms            | Lecture and practice | HARAGUCHI KAZUYA  | Preparation and review of text book  |               |
| 7       | Histopathological findings of the arthritis model  | lecture              | HABU MANABU       | Preparation and review of text book  |               |
| 8       | Model of bisphosphonate related osteonecrosis of the jaw : the impact and the mechanisms | lecture              | HABU MANABU       | Preparation and review of text book  |               |
| 9       | BRONJ model on osteoporotic animals: the impact and the mechanisms                       | lecture              | MORIOKA MASAHIKO  | Preparation and review of text book  |               |
| 10      | Histopathological findings of the BRONJ model  | lecture              | MORIOKA MASAHIKO  | Preparation and review of text book  |               |
| 11      | Immunohistopathological findings of the BRONJ model                                      | lecture              | SASAGURI MASA AKI | Preparation and review of text book  |               |
| 12      | Development of treatment methods using BRONJ models                                      | lecture              | SASAGURI MASA AKI | Preparation and review of text book  |               |
| 13      | Transplanted cancer: the impact and the mechanisms                                       | lecture              | SASAGURI MASA AKI | Preparation and review of text book  |               |
| 14      | Histopathological findings of the transplanted cancer                                    | lecture              | SASAGURI MASA AKI | Preparation and review of text book  |               |
| 15      | Oral examination   | Oral examination     | HABU MANABU       | Preparation of research presentation |               |

# Oral and Maxillofacial Surgery 2 (Drug and gene in

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | HABU MANABU   |         |                    |            |          |         |   |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |                    |            |          |         |   |

## Course Description

【Language】 English and Japanese To acquire the skills of electroporation and sonoporation

## Attainment Objectives

- 1.To acquire the basic skills of cell culture
- 2.To acquire the basic skills of microorganisms culture
- 3.To acquire the basic skills of DNA management
4. To acquire the basic skills of electroporation and sonoporation
- 5.To acquire the basic analyzing methods

## Grading Criteria and Method of Evaluation

| Evaluation item                       | Ratio |
|---------------------------------------|-------|
| practice outcome and oral examination | 50%   |
| test                                  | 50%   |

## Etc

Student consultation at anytime

## Study Method

| Lecture | Contents                           | Methods              | Instructor       | before-and-after Le                 | Lecture rooms |
|---------|------------------------------------|----------------------|------------------|-------------------------------------|---------------|
| 1       | cell culture 1: aseptic processing | Lecture and practice | TAKAHASHI OSAMU  | Preparation and review of text book |               |
| 2,3     | Cell culture 2: subcultivation     | Lecture and practice | HARAGUCHI KAZUYA | Preparation and review of text book |               |
| 4       | Bacterial culture                  | Lecture and practice | TAKAHASHI OSAMU  | Preparation and review of text book |               |
| 5,6     | Extraction of DNA                  | Lecture and practice | TABE SHIROU      | Preparation and review of text book |               |
| 7       | Electroporation                    | Lecture and practice | MORIOKA MASAHIKO | Preparation and review of text book |               |

2025年度

subject code:212124

# Oral and Maxillofacial Surgery 2 (Drug and gene in

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | HABU MANABU   |         |                    |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |                    |            |            |          |        |

| Lecture | Contents                                       | Methods              | Instructor        | before-and-after Le                  | Lecture rooms |
|---------|--|----------------------|-------------------|--------------------------------------|---------------|
| 8       | Sonoporation                                   | Lecture and practice | MORIOKA MASAHIKO  | Preparation and review of text book  |               |
| 9,10    | Analyzing method 1: polymerase chain reaction  | Lecture and practice | SASAGURI MASA AKI | Preparation and review of text book  |               |
| 11,12   | Analyzing method 2: western blotting and ELISA | Lecture and practice | SASAGURI MASA AKI | Preparation and review of text book  |               |
| 13,14   | Analyzing method 3: flowcytometry              | Lecture and practice | HABU MANABU       | Preparation and review of text book  |               |
| 15      | Oral examination                               | Oral examination     | HABU MANABU       | Preparation of research presentation |               |

# Oral and Maxillofacial Surgery 3 (Conferences)

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | HABU MANABU   |         |                    |            |            |          |        |
| Instructor(s)          | HABU MANABU, TAKAHASHI OSAMU, TABE SHIROU, HARAGUCHI KAZUYA, MORIOKA MASAHIKO |         |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese Case conference, Research conference, Circle reading of English text book of OMFS, Attending to team approach conference

## Attainment Objectives

1. To improve reading comprehension of English literature
2. Deep understanding of researches
3. To improve critical view for researches
4. To understand background or trend of researches
5. To understand researches of interdisciplinary area

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| presentation    | 100%  |

## Etc

Student consultation at anytime

## Study Method

| Lecture | Contents   | Methods                 | Instructor   | before-and-after Le          | Lecture rooms |
|---------|--|-------------------------|--|------------------------------|---------------|
| 1~15    | Back ground and future scope of individual researches and clinical cases | Conference presentation | HABU MANABU<br>TAKAHASHI OSAMU<br>TABE SHIROU<br>HARAGUCHI KAZUYA<br>MORIOKA MASAHIKO<br>SASAGURI MASAHIKO | Research of related articles |               |

# Oral Medicine (Basic Course)

|                        |   |        |                    |            |              |          |        |
|------------------------|---|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |                    |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |                    |            |              |          |        |

## Course Description

The purpose of oral medicine is not only to examine the oral cavity of a dental patient, but also diagnose and treat oral disease in consideration of the patient's systemic backgrounds. Oral Medicine is the discipline of dentistry with the internal medical approach. We will study about the basic way of thinking of oral medicine.

## Attainment Objectives

1. You can diagnose and treat oral disease in consideration of systemic disease. 2. You can understand the effects that oral disease can affect to systemic status and systemic disease can affect to oral disease, when you treat the patient of oral disease with systemic disease. 3. You can understand the medical relationship and team medicine between medical doctors, co-staff and other related people.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                    | Author  | Publisher                |
|--------------------------|---|--------------------------|
| Oral Surgery (Japanese)  | Kanemitsu Shirasuna, Kogo Mikihiko ed                         | Ishiyaku Publishers, Inc |
| Oral Medicine (Japanese) | Genyuki Yamane, Miki o Kusama, Hideaki Kubota, Seiji Nakamura | Nagasue shoten           |

## Grading Criteria and Method of Evaluation

| Evaluation item                                | Ratio |
|--|-------|
| report after each lecture (1*4points) 1st-15th | 60%   |
| portfolios (1*4points) 1st-10th                | 40%   |

# Oral Medicine (Basic Course)

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |              |          |         |   |

## Etc

Student consultation: From Monday to Friday : 17:00 ~

## Study Method

| Lecture | Contents   | Methods | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|---------|---|--|---------------|
|         |  |         | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |
| 1       | General statements of Oral Medicine, diagnoses of Oral Medicine. You will study the diagnoses and treatments of oral disease with internal medical approach. And you can study the relationship between oral and systemic disease. | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 2       | Treatment and diagnoses of disease of oral mucosa. You will study about the structure of Oral mucosa. And you can study about the characteristics, symptom, diagnoses and treatments of disease of oral mucosa.                    | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 3       | Treatment and diagnoses of temporomandibular disease. You will study the function and structure of temporomandibular joint, classification of temporomandibular disease, and differential diagnoses.                               | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Basic Course)

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |              |          |         |   |

| Lecture | Contents   | Methods | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|---------|---|--|---------------|
| 4       | Treatment and diagnoses of Dry Mouth. You will study the classification, symptom, differential diagnosis and treatment of Dry Mouth.                                   | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 5       | Treatment and diagnoses of oral psychosomatic disease. You will study the classification, symptom, differential diagnosis and treatment of oral psychosomatic disease. | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 6       | Treatments of Oro-facial pain and taste disorder. You will study the diagnoses and treatment plan of Oro-facial pain and taste disorder.                               | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 7       | General principles of antibiotic therapy. You will study the classification, characteristics and usage of antibiotic therapy.  | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Basic Course)

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |              |          |         |   |

| Lecture | Contents  | Methods | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|---------|---|--|---------------|
| 8       | Practical managements of arthrocentesis of TMJ. You will study about arthrocentesis of TMJ  | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 9       | Perioperative oral management on patients of cancer. You will study about the significance of perioperative oral management on patients of cancer and practical techniques of management. | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 10      | Non-surgical treatment of Oral cancer. You will study about non-surgical treatment of oral malignancy such as chemotherapy, immunotherapy and so on.                                      | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 11      | Oral treatment of cardiovascular disease and respiratory patients. You will study about the important points about oral treatment of cardiovascular and respiratory disease patients.     | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Basic Course)

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |              |          |         |   |

| Lecture | Contents   | Methods | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|---------|---|--|---------------|
| 12      | Oral treatment of metabolism, endocrinology and gynecological diseases patients. You will study about the important points about oral treatment of metabolism, endocrinology and gynecological diseases patients.        | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 13      | Oral treatment of digestive, urological diseases patients. You will study about the important points about the oral treatment of digestive, urological diseases patients.  | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 14      | Oral treatment of blood, autoimmune disease patients. You will study about the important points about the oral treatment of blood, autoimmune disease patients.  | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 15      | Medical cooperation/ Summary You will study about clinic, hospital collaboration, medical collaboration, medical-dental collaboration multidisciplinary collaboration and consultation for the purpose of team medicine. | Lecture | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

## Course Description

【Language】 English and Japanese In this course, you will practice basic skills about oral mucosal disease, temporomandibular disorders cancer, orofacial pain and dry mouth. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills for a specialist in the area of oral medicine.

## Attainment Objectives

To acquire fundamental knowledge and skills about oral mucosal disease, temporomandibular disorders and dry mouth. You should achieve following assignments; • Construction of good relationship with patients and stuffs • Collection of clinical cases • Acquisition of skills about oral mucosal disease, temporomandibular disorders cancer, orofacial pain and dry mouth.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                    | Author  | Publisher                |
|--------------------------|---|--------------------------|
| Oral Surgery (Japanese)  | Kanemitsu Shirasuna, Kogo Mikihiko ed                         | Ishiyaku Publishers, Inc |
| Oral Medicine (Japanese) | Genyuki Yamane, Miki o Kusama, Seiji Nakamura, Hideaki Kubota | Nagasue shoten           |

## Grading Criteria and Method of Evaluation

| Evaluation item                                | Ratio |
|--|-------|
| report after each lecture (1*4points) 1st-15th | 60%   |
| portfolios (1*4points) 1st-10th                | 40%   |

2025年度

subject code:212132

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |              |          |        |
|------------------------|---|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 120          | Credits  | 4      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |              |          |        |

Etc

Student consultation: From Monday to Friday : 17:00 ~

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                           | Lecture rooms |
|---------|--|----------|---|---|---------------|
|         |  |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |   |               |
| 1,2     | Oral mucosal diseases1You will learn clinical diagnostic reasoning.(1) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook10 case |               |
| 3,4     | Oral mucosal diseases2You will learn clinical diagnostic reasoning.(2) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case  |               |
| 5,6     | Oral mucosal diseases3You will learn clinical diagnostic reasoning.(3) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case  |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |              |          |        |  |
|------------------------|---|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |              |          |        |  |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                           | Lecture rooms |
|---------|--|----------|---|---|---------------|
| 7,8     | Oral mucosal diseases4You will learn treatment for oral mucosal disease.     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case  |               |
| 9,10    | Temporomandibular disorder1You will learn clinical diagnostic reasoning. (1) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook 10case |               |
| 11,12   | Temporomandibular disorder2You will learn clinical diagnostic reasoning. (2) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5case   |               |
| 13,14   | Temporomandibular disorder3You will learn clinical diagnostic reasoning. (3) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case  |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                          | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 15,16   | Temporomandibular disorder4You will learn treatment for TMD.( physical therapy) | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case |               |
| 17,18   | Temporomandibular disorder5You will learn treatment for TMD.( splint therapy)   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 19,20   | Temporomandibular disorder6You will learn treatment for TMD.( manipulation)     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 21,22   | Temporomandibular disorder7You will learn treatment for TMD.( arthrocentesis)   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                          | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 23,24   | Temporomandibular disorder8You will learn treatment for TMD.( surgical operation)  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case |               |
| 25,26   | Dislocation of the temporomandibular joint1 You will learn conservative treatment. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 27,28   | Dislocation of the temporomandibular joint2You will learn surgical operation.      | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 29,30   | Tumor of the temporomandibular jointYou will learn surgical operation.             | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                          | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 31,32   | Dry mouth1You will learn clinical diagnostic reasoning. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case |               |
| 33,34   | Dry mouth2You will learn clinical diagnostic reasoning. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case |               |
| 35,36   | Dry mouth3You will learn clinical diagnostic reasoning. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case |               |
| 37,38   | Dry mouth4You will learn treatment for dry mouth.       | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook5 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                          | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 39,40   | Oral psychosomatic disease<br>1You will learn clinical diagnostic reasoning.            | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook3 case |               |
| 41,42   | Oral psychosomatic disease<br>2You will learn clinical diagnostic reasoning.            | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 43,44   | Oral psychosomatic disease<br>3You will learn clinical diagnostic reasoning.            | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 45,46   | Oral psychosomatic disease<br>4You will learn treatment for oral psychosomatic disease. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                              | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 47,48   | Orofacial pain1<br>You will learn clinical diagnostic reasoning. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>1 case |               |
| 49,50   | Orofacial pain2<br>You will learn clinical diagnostic reasoning. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>1 case |               |
| 51,52   | Orofacial pain3<br>You will learn clinical diagnostic reasoning. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>1 case |               |
| 53,54   | Orofacial pain4<br>You will learn treatment for orofacial pain.  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>1 case |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |              |          |         |   |
|------------------------|---|---------|----------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades   | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Practice | Total time   | 120      | Credits | 4 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |              |          |         |   |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Learning                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 55,56   | Chemotherapy You will learn chemotherapy for oral cancer.                    | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 57,58   | Radiation therapy You will learn radiation therapy for oral cancer.          | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |
| 59,60   | Chemoradiation therapy You will learn chemoradiation therapy for oral cancer | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>NISHIMUTA FUMIKA<br>SAKAGUCHI OSAMU<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook1 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |
|------------------------|---|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |

## Course Description

【Language】 English and Japanese In this course, you will practice basic skills about oral treatment of the patients with systemic disease. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills for a specialist in the area of oral medicine.

## Attainment Objectives

To acquire fundamental knowledge and skills about oral treatment of the patients with systemic disease. .You should achieve following assignments; • Construction of good relationship with patients and stuffs • Collection of clinical cases • Acquisition of skills about oral treatment of the patients with systemic disease.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                          | Author  | Publisher          |
|--------------------------------|---|--------------------|
| Oral and maxillofacial surgery | Shirasuna K., kogou M.  | Ishiyaku Published |
| Oral Medicine                  | Genyuki Yamane, Miki o Kusama, Hideaki Kubota, Seiji Nakamura | Nagasue shoten     |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| case presentation | 60%   |
| report            | 40%   |

## Etc

Student consultation: From Monday to Friday : 17:00~

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |              |          |        |
|------------------------|---|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                              | Lecture rooms |
|---------|--|----------|---|--|---------------|
|         |  |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |
| 1,2     | Hypertension You will learn oral treatment for patients with hypertension.               | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>2 case |               |
| 3,4     | Heart disease You will learn oral treatment for patients with heart disease.             | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>2 case |               |
| 5,6     | Respiratory disease You will learn oral treatment for patients with respiratory disease. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook<br>2 case |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                          | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 7,8     | Diabetes mellitus<br>You will learn oral treatment for patients with diabetes mellitus.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |
| 9,10    | Gynecological disease - pregnant women<br>You will learn oral treatment for patients with gynecological disease and pregnant women. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |
| 11,12   | Hemodyscrasia<br>You will learn oral treatment for patients with hemodyscrasia.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |
| 13,14   | Autoimmune disease<br>You will learn oral treatment for patients with autoimmune disease.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                          | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 15,16   | Hepatic disease You will learn oral treatment for patients with hepatic disease.           | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |
| 17,18   | Renal disease You will learn oral treatment for patients with renal disease.               | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |
| 19,20   | Orthopedic disorder You will learn oral treatment for patients with orthopedic disorder.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |
| 21,22   | Neurological disease You will learn oral treatment for patients with neurological disease. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |            |          |        |
|------------------------|---|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le  | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 23,24   | Neurosurgical disease You will learn oral treatment for patients with neurosurgical disease.                   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case   |               |
| 25,26   | Otorhinolaryngological disease You will learn oral treatment for patients with otorhinolaryngological disease. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case   |               |
| 27,28   | Infection You will learn oral treatment for patients with infection.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook2 case   |               |
| 29,30   | Dermatological disease You will learn oral treatment for patients with dermatological disease.                 | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Iwanaga Otani<br>Tsurushima<br>Sakaguchi Tanaka<br>Nishimuta<br>Pre reading of literature and textbook2 case |               |

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |  |
|------------------------|---|--------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Practice | Total time | 60           | Credits  | 2      |  |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |  |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |  |

## Course Description

Learn medical cooperation through practical training.

## Attainment Objectives

Understand medical cooperation and team medical care with people in related occupations, including doctors in other departments.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                   | Author  | Publisher                |
|-------------------------|---|--------------------------|
| Oral Surgery (Japanese) | Kanemitsu Shirasuna, Kogo Mikihiko ed                         | Ishiyaku Publishers, Inc |
| Oral Medicine           | Genyuki Yamane, Miki o Kusama, Hideaki Kubota, Seiji Nakamura | Nagasue shoten           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Presentation    | 60%   |
| Report          | 40%   |

## Etc

contact: From Monday to Friday : 17:00 ~ Ohtani T.

# Oral Medicine (Advanced Course )

|                        |   |        |          |            |              |          |        |
|------------------------|---|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |          |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |          |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
|         |  |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |
| 1,2,3,4 | Hospital and hospital cooperation<br>You will learn the hospital and hospital cooperation. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 5,6     | Medical Consultation<br>You will learn about the consultation.                             | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 7,.8    | Medical and dental cooperation<br>You will learn the medical and dental cooperation.       | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 9,10    | Multidisciplinary collaboration<br>You will learn the collaboration with doctors.                 | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 11,12   | Multidisciplinary collaboration<br>You will learn the collaboration with nurses.                  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 13,14   | Multidisciplinary collaboration<br>You will learn the collaboration with registered dietitians.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 15,16   | Multidisciplinary collaboration<br>You will learn about the collaboration with dental hygienists. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 17,18   | Multidisciplinary collaboration<br>You will learn about the collaboration with medical social workers.                                     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 19,20   | Multidisciplinary collaboration<br>You will learn the collaboration with personal care workers.  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 21,22   | Multidisciplinary collaboration<br>You will learn the collaboration with medical assistants.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 23,24   | Perioperative oral management of cancer patients<br>You will learn the oral management of the patient with cancer undergoing chemotherapy. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Advanced Course )

|                        |   |         |          |            |              |          |        |
|------------------------|---|---------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |          |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |          |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 25,26   | Perioperative oral management of cancer patients 2You will learn the oral management of patient with cancer undergoing radiation therapy.                     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 27,28   | Oral management of patient taking Anti-resorptive agents.You will learn the oral management of patient taking Anti-resorptive agents.                         | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 29,30   | The treatment of Anti-resorptive agents-related Osteonecrosis of the Jaw.You will learn treatment of Anti-resorptive agents-related Osteonecrosis of the Jaw. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
|         |   |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |

# Oral Medicine (Jaw Deformity)

|                        |   |        |                    |            |            |          |        |
|------------------------|---|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |                    |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this course, you will get knowledge and practice basic skills about the research of jaw deformity.

## Attainment Objectives

You should understand following subjects;1. The methods of analysis and evaluation about the form of jaw deformity.2. The methods of analysis and evaluation about the function of jaw deformity.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                          | Author  | Publisher                 |
|--------------------------------|---|---------------------------|
| Oral and Maxillofacial Surgery | Kanemitsu Shirasuna, Kogo Mikihiko ed                         | Ishiyaku Publishers, Inc. |
| Oral Medicine                  | Genyuki Yamane, Miki o Kusama, Hideaki Kubota, Seiji Nakamura | Nagasue shoten            |

## Grading Criteria and Method of Evaluation

| Evaluation item                   | Ratio |
|-----------------------------------|-------|
| reports after the lectures (4x15) | 60%   |
| assignments (4x10)                | 40%   |

# Oral Medicine (Jaw Deformity)

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |              |          |         |   |

## Study Method

| Lecture | Contents   | Methods               | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|-----------------------|---|--|---------------|
|         |  |                       | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |
| 1       | Survey of jaw deformities<br>You will learn about the trends of jaw deformities.     | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 2       | Inspection of jaw deformities<br>You will learn about the trends of jaw deformities. | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 3       | Analysis of jaw deformities<br>You will learn about the analysis of jaw deformities. | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Jaw Deformity)

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |          |         |   |

| Lecture | Contents   | Methods               | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|-----------------------|---|--|---------------|
| 4       | Preoperative assessment of jaw deformities. You will learn about the Pre-operative assessment.   | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 5       | Preoperative association of jaw deformities. You will learn about the pre-operative association. | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 6       | Medical cooperation of jaw deformities. You will learn about the medical cooperation.            | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 7       | Orthognatic surgery You will learn about the orthognatic surgery.                                | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Jaw Deformity)

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |          |         |   |

| Lecture | Contents   | Methods               | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|-----------------------|---|--|---------------|
| 8       | Post-operative assessment of jaw deformities. You will learn about the post-operative assessment.  | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 9       | Evaluation of the masticatory function. You will learn about the Evaluation of the masticatory function.                                       | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 10      | Psychological evaluation of patients with jaw deformities. You will learn about the psychological evaluation of patients with jaw deformities. | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 11      | Respiratory function of patients with jaw deformities. You will learn about the relationship between respiratory function and jaw deformities. | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine (Jaw Deformity)

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |          |         |   |

| Lecture | Contents   | Methods               | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|-----------------------|---|--|---------------|
| 12      | Articulation function of patients with jaw deformities. You will learn about the relationship between articulation function and jaw deformities. | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 13      | Digestive function of patients with jaw deformities. You will learn about the relationship between digestive function and jaw deformities        | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 14      | Three-dimensional evaluation of jaw deformities. You will learn about three-dimensional evaluation of jaw deformities.                           | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 15      | Genetic features of patients with jaw deformities. You will learn about genetic features of patients with jaw deformities.                       | Lectures and Seminars | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |        |                    |            |              |          |        |
|------------------------|---|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |                    |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |                    |            |              |          |        |

## Course Description

Learn medical cooperation through practical training.

## Attainment Objectives

Understand medical cooperation and team medical care with people in related occupations, including doctors in other departments.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                   | Author  | Publisher                |
|-------------------------|---|--------------------------|
| Oral Surgery (Japanese) | Kanemitsu Shirasuna, Kogo Mikihiko ed                         | Ishiyaku Publishers, Inc |
| Oral Medicine           | Genyuki Yamane, Miki o Kusama, Hideaki Kubota, Seiji Nakamura | Nagasue shoten           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Presentation    | 60%   |
| Report          | 40%   |

## Etc

contact: From Monday to Friday : 17:00 ~ Ohtani T.

# Oral Medicine

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
|         |  |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |
| 1,2,3,4 | Hospital and hospital cooperation<br>You will learn the hospital and hospital cooperation. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 5,6     | Medical Consultation<br>You will learn about the consultation.                             | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 7,.8    | Medical and dental cooperation<br>You will learn the medical and dental cooperation.       | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |            |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 9,10    | Multidisciplinary collaboration<br>You will learn the collaboration with doctors.                 | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 11,12   | Multidisciplinary collaboration<br>You will learn the collaboration with nurses.                  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 13,14   | Multidisciplinary collaboration<br>You will learn the collaboration with registered dietitians.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 15,16   | Multidisciplinary collaboration<br>You will learn about the collaboration with dental hygienists. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 17,18   | Multidisciplinary collaboration<br>You will learn about the collaboration with medical social workers.                                     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 19,20   | Multidisciplinary collaboration<br>You will learn the collaboration with personal care workers.  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 21,22   | Multidisciplinary collaboration<br>You will learn the collaboration with medical assistants.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 23,24   | Perioperative oral management of cancer patients<br>You will learn the oral management of the patient with cancer undergoing chemotherapy. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |         |                    |              |          |         |   |
|------------------------|---|---------|--------------------|--------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry  |         | Grades             | 1 ~ 4 grades | Semester | Winter  |   |
| Subject                | Choice  | Methods | Lesson and seminar | Total time   | 30       | Credits | 2 |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |              |          |         |   |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |              |          |         |   |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 25,26   | Perioperative oral management of cancer patients 2You will learn the oral management of patient with cancer undergoing radiation therapy.                     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 27,28   | Oral management of patient taking Anti-resorptive agents.You will learn the oral management of patient taking Anti-resorptive agents.                         | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 29,30   | The treatment of Anti-resorptive agents-related Osteonecrosis of the Jaw.You will learn treatment of Anti-resorptive agents-related Osteonecrosis of the Jaw. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
|         |   |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |

# Oral Medicine

|                        |   |        |                    |            |              |          |        |
|------------------------|---|--------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |        |                    |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |        |                    |            |              |          |        |

## Course Description

Learn medical cooperation through practical training.

## Attainment Objectives

Understand medical cooperation and team medical care with people in related occupations, including doctors in other departments.

## Textbooks

| Title                | Author | Publisher |
|----------------------|--------|-----------|
| handout distribution |        |           |

## Reference Books

| Title                   | Author  | Publisher                |
|-------------------------|---|--------------------------|
| Oral Surgery (Japanese) | Kanemitsu Shirasuna, Kogo Mikihiko ed                         | Ishiyaku Publishers, Inc |
| Oral Medicine           | Genyuki Yamane, Miki o Kusama, Hideaki Kubota, Seiji Nakamura | Nagasue shoten           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Presentation    | 60%   |
| Report          | 40%   |

## Etc

contact: From Monday to Friday : 17:00 ~ YOSHIOKA.I

# Oral Medicine

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |            |          |        |

## Study Method

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
|         |  |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |
| 1,2,3,4 | Hospital and hospital cooperation<br>You will learn the hospital and hospital cooperation. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 5,6     | Medical Consultation<br>You will learn about the consultation.                             | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 7,.8    | Medical and dental cooperation<br>You will learn the medical and dental cooperation.       | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 9,10    | Multidisciplinary collaboration<br>You will learn the collaboration with doctors.                 | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 11,12   | Multidisciplinary collaboration<br>You will learn the collaboration with nurses.                  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 13,14   | Multidisciplinary collaboration<br>You will learn the collaboration with registered dietitians.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 15,16   | Multidisciplinary collaboration<br>You will learn about the collaboration with dental hygienists. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |         |                    |            |            |          |        |
|------------------------|---|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |            |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |            |          |        |

| Lecture | Contents   | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|--|----------|---|--|---------------|
| 17,18   | Multidisciplinary collaboration<br>You will learn about the collaboration with medical social workers.                                     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 19,20   | Multidisciplinary collaboration<br>You will learn the collaboration with personal care workers.  | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 21,22   | Multidisciplinary collaboration<br>You will learn the collaboration with medical assistants.   | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 23,24   | Perioperative oral management of cancer patients<br>You will learn the oral management of the patient with cancer undergoing chemotherapy. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |

# Oral Medicine

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHIOKA IZUMI  |         |                    |            |              |          |        |
| Instructor(s)          | YOSHIOKA IZUMI, YOSHIGA DAIGO, OTANI TAISHI, TSURUSHIMA HIROKI, SAKAGUCHI OSAMU, HAYAKAWA MANA, NISHIMUTA FUMIKA, MIZUTA KANA |         |                    |            |              |          |        |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le                    | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 25,26   | Perioperative oral management of cancer patients 2You will learn the oral management of patient with cancer undergoing radiation therapy.                     | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 27,28   | Oral management of patient taking Anti-resorptive agents.You will learn the oral management of patient taking Anti-resorptive agents.                         | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
| 29,30   | The treatment of Anti-resorptive agents-related Osteonecrosis of the Jaw.You will learn treatment of Anti-resorptive agents-related Osteonecrosis of the Jaw. | Practice | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA | Pre reading of literature and textbook |               |
|         |   |          | YOSHIOKA IZUMI<br>YOSHIGA DAIGO<br>OTANI TAISHI<br>TSURUSHIMA HIROKI<br>SAKAGUCHI OSAMU<br>NISHIMUTA FUMIKA<br>HAYAKAWA MANA<br>MIZUTA KANA |  |               |

# Dental Anesthesiology Basic course

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                       | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |         |                    |            |              |          |        |
| Instructor(s)          | SAGO TEPPEI, SHIIBA SHUNJI, SHIGEYAMA YUKIYO |         |                    |            |              |          |        |

## Course Description

Anesthesia in clinical dentistry includes general anesthesia, intravenous sedation, inhalation sedation, and regional anesthesia, and is essential for safe dental care. This course is designed to provide students with an understanding of the basic anatomy, physiology, diagnostic imaging, and other theories necessary to safely and reliably administer each type of anesthesia, and to acquire the knowledge necessary for preoperative patient evaluation and anesthesia planning. Students will also simulate and provide feedback on presented cases, from anesthesia planning to perioperative management, to enhance their clinical competence in dental anesthesia.

## Attainment Objectives

1. Understanding information gathering techniques.
2. Understanding good cooperation between medical institutions.
3. Understanding the different types of anesthesia.
4. Understanding the mechanism of abnormal vital signs.
5. Understanding diseases that require attention in anesthesia management.
6. Learning how to respond to abnormal situations during surgery.
7. Understanding the basics of secondary emergency procedures.

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Oral examination | 100%  |

## Study Method

| Lecture | Contents | Methods | Instructor                                       | before-and-after Le | Lecture rooms |
|---------|----------|---------|--|---------------------|---------------|
| 1       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 2       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 3       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 4       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 5       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |

# Dental Anesthesiology Basic course

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                       | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |         |                    |            |              |          |        |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |         |                    |            |              |          |        |

| Lecture | Contents | Methods | Instructor                                       | before-and-after Le | Lecture rooms |
|---------|----------|---------|--|---------------------|---------------|
| 6       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 7       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 8       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 9       |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 10      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 11      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 12      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 13      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 14      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 15      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 16      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 17      |          | Lecture | SAGO TEPPEI<br>SHIGEYAMA YUKIYO<br>SHIIBA SHUNJI |                     |               |
| 18      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 19      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 20      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |

2025年度

subject code:212141

# Dental Anesthesiology Basic course

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                       | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |         |                    |            |              |          |        |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |         |                    |            |              |          |        |

| Lecture | Contents | Methods | Instructor                                       | before-and-after Le | Lecture rooms |
|---------|----------|---------|--|---------------------|---------------|
| 21      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 22      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 23      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 24      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 25      |          |         | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 26      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 27      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 28      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 29      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 30      |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |

# Dental Anesthesiology (Advanced course )

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                       | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | SHIIBA SHUNJI                                |        |          |            |            |          |        |
| Instructor(s)          | SHIIBA SHUNJI, SAGO TEPPEI, SHIGEYAMA YUKIYO |        |          |            |            |          |        |

## Course Description

Lecture will be provided to understanding the basic respiratory and cardia monitoring and the practice related to the content of lecture will be carried out at the end of course.

## Attainment Objectives

Understanding the background and the basic knowledge in the textbook and getting the basic skill of the physiologic monitoring, respiratory and cardiac care.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Visual Manual of Clinical Basic Techniques(Injection and collecting of blood, Tracheal intubation) |        | Yodosha   |
| Perioperative monitoring   |        | Yodosha   |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|--|-------|
| Evaluation of the technique of mask ventilation, tracheal intubation and insertion of iv cath. | 35%   |
| Evaluation of the preparation for the ECG, NIBP, SpO <sub>2</sub> monitoring.                  | 35%   |
| Evaluation of the anesthesia records   | 30%   |

## Etc

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.

# Dental Anesthesiology (Advanced course )

|                        |  |        |          |            |              |          |        |
|------------------------|--|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                       | Mehods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | SHIIBA SHUNJI                                |        |          |            |              |          |        |
| Instructor(s)          | SHIIBA SHUNJI, SAGO TEPPEI, SHIGEYAMA YUKIYO |        |          |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods                    | Instructor | before-and-after Le                                    | Lecture rooms |
|---------|---|----------------------------|------------|--|---------------|
| 1,2     | Lecture and practice<br>1. Respiratory monitoring<br>2. Cardiac monitoring<br>3. Other physiologic monitoring<br>4. Mask ventilation<br>5. Tracheal intubation<br>6. IV line<br>7. Clinical evaluation for respiratory and cardiac function | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 3,4     | Understanding of the monitoring for the hemodynamics.   | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 5,6     | Understanding of the monitoring for the biological activity.  | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 7,8     | Understanding of the monitoring for the mask ventilation.   | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 9,10    | Understanding of the technique for the tracheal intubation.   | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 11,12   | Understanding of the technique for the iv cath insertion.   | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 13,14   | Evaluation and understanding of the respiration.  | Short lecture and Practice |            | Reading and understanding for the topics of task area. |               |
| 15      | Examination   | Examination                |            | Reading and understanding for the topics of all task.  |               |

# Dental Anesthesiology (Advanced course )

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                       | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |        |          |            |            |          |        |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |        |          |            |            |          |        |

## Course Description

Lecture will be provided to understanding the basic respiratory and cardia monitoring and the practice related to the content of lecture will be carried out at the end of course.

## Attainment Objectives

Understanding the background and the basic knowledge in the textbook and getting the basic skill of the physiologic monitoring, respiratory and cardiac care.

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
|                 | 100%  |

## Study Method

| Lecture | Contents  | Methods                    | Instructor                                       | before-and-after Le                                    | Lecture rooms |
|---------|---|----------------------------|--|--|---------------|
| 1~5     | Lecture and practice<br>1. Respiratory monitoring<br>2. Cardiac monitoring<br>3. Other physiologic monitoring<br>4. Mask ventilation<br>5. Tracheal intubation<br>6. IV line<br>7. Clinical evaluation for respiratory and cardiac function | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |
| 6~10    | Understanding of the monitoring for the hemodynamics.   | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |
| 11~15   | Understanding of the monitoring for the biological activity.  | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |
| 16~20   | Understanding of the monitoring for the mask ventilation.   | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |
| 21~25   | Understanding of the technique for the tracheal intubation.   | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |

# Dental Anesthesiology (Advanced course )

|                        |  |        |          |            |              |          |        |
|------------------------|--|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                       | Mehods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |        |          |            |              |          |        |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |        |          |            |              |          |        |

| Lecture | Contents  | Methods                    | Instructor                                       | before-and-after Le                                    | Lecture rooms |
|---------|---|----------------------------|--|--|---------------|
| 26~30   | Understanding of the technique for the iv cath insertion. | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |
| 31~35   | Evaluation and understanding of the respiration.          | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of task area. |               |
| 36~45   | Practice of intravenous sedation                          | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of all task.  |               |
| 46~59   | Practice for general anesthesia                           | Short lecture and Practice | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of all task.  |               |
| 60      | Oral examination  | examination                | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Reading and understanding for the topics of all task.  |               |

# Dental Anesthesiology (Advanced course )

|                        |  |        |          |            |            |          |        |
|------------------------|--|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |        |          | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                       | Mehods | Practice | Total time | 60         | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |        |          |            |            |          |        |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |        |          |            |            |          |        |

## Course Description

Anesthesia in clinical dentistry includes general anesthesia, intravenous sedation, inhalation sedation, and regional anesthesia, and is essential for safe dental care. This course is designed to provide students with an understanding of the basic anatomy, physiology, diagnostic imaging, and other theories necessary to safely and reliably administer each type of anesthesia, and to acquire the knowledge necessary for preoperative patient evaluation and anesthesia planning. Students will also simulate and provide feedback on presented cases, from anesthesia planning to perioperative management, to enhance their clinical competence in dental anesthesia.

## Attainment Objectives

To acquire knowledge and skills to be able to perform safe perioperative management for patients with systemic diseases and difficult perioperative management.

## Textbooks

| Title | Author | Publisher |
|-------|--------|-----------|
|       |        | 医歯薬出版     |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
|                 | 100%  |
|                 | 0%    |

## Study Method

| Lecture | Contents | Methods | Instructor                                       | before-and-after Le | Lecture rooms |
|---------|----------|---------|--|---------------------|---------------|
| 1~5     |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 6~10    |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 11~15   |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 16, 17  |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 18~30   |          | Lecture | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |

# Dental Anesthesiology (Advanced course )

|                        |  |        |          |            |              |          |        |
|------------------------|--|--------|----------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |        |          | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                       | Mehods | Practice | Total time | 60           | Credits  | 2      |
| Responsible Instructor | SAGO TEPPEI                                  |        |          |            |              |          |        |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |        |          |            |              |          |        |

| Lecture    | Contents         | Methods     | Instructor                                       | before-and-after Le | Lecture rooms |
|------------|------------------|-------------|--|---------------------|---------------|
| 31~<br>40  |                  | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 41~<br>45  |                  | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 45~<br>50  |                  | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 51 ,<br>52 |                  | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 53~<br>56  |                  | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 57         | Case report      | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 58         | Case report      | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 59         | Case report      | Lecture     | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |
| 60         | Oral examination | examination | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO |                     |               |

# Dental Anesthesiology (systemic control)

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                       | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | SHIIBA SHUNJI                                |         |                    |            |            |          |        |
| Instructor(s)          | SHIIBA SHUNJI, SAGO TEPPEI, SHIGEYAMA YUKIYO |         |                    |            |            |          |        |

## Course Description

Dental treatment is a noxious stimulus to the living body. For some reason, this stimulus can cause hyperalgesia or hypersensitivity to touch. In addition, dental treatment can also cause complications such as facial paralysis, trigeminal neuralgia, and temporomandibular joint disorders. Dental pain can also cause depression. Patients with these diseases are often difficult to treat with standard dental care. This course will teach the causes, mechanisms, and treatments of these dental nerve disorders of the jaw and face (acute and chronic pain and paralysis).

## Attainment Objectives

1. Able to understand information gathering techniques which will build a good patient-dentist relationship.
2. Able to establish good hospital-clinic cooperation.
3. Able to explain the types of maxillofacial pain.
4. Able to explain the mechanism of maxillofacial pain.
5. Able to explain and implement maxillofacial pain control mechanisms.
6. Able to explain the types of maxillofacial paralysis, the mechanism of occurrence, and how to deal with it.
7. Acquire the basics of first aid.

## Textbooks

| Title  | Author   | Publisher   |
|--|--|---|
| Guidebook for the diagnosis and treatment of oral and facial pain, 2nd edition | Compiled by the Japanese Society of Orofacial Pain | Medical, Dental and Pharmaceutical Publishing Co., Ltd. |

## Reference Books

| Title                      | Author | Publisher |
|----------------------------|--------|-----------|
| Reading group presentation |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item            | Ratio |
|----------------------------|-------|
| Reading group presentation | 100%  |

## Study Method

| Lecture | Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|----------|---------|------------|---------------------|---------------|
| 1       |          |         |            |                     | 病院棟3Fセミナー室    |
| 2       |          |         |            |                     | 病院棟3Fセミナー室    |

# Dental Anesthesiology (systemic control)

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                     |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                       | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | SHIIBA SHUNJI                                |         |                    |            |            |          |        |
| Instructor(s)          | SHIIBA SHUNJI, SAGO TEPPEI, SHIGEYAMA YUKIYO |         |                    |            |            |          |        |

| Lecture | Contents | Methods | Instructor | before-and-after Le | Lecture rooms  |
|---------|----------|---------|------------|---------------------|----------------|
| 3       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 4       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 5       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 6       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 7       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 8       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 9       |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 10      |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 11      |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 12      |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 13      |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 14      |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |
| 15      |          |         |            |                     | 病院棟3Fセ<br>ミナー室 |

# Dental Anesthesiology (journal club)

|                        |  |        |         |            |              |          |        |  |
|------------------------|--|--------|---------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                     |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                                       | Mehods | Seminar | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | SAGO TEPPEI                                  |        |         |            |              |          |        |  |
| Instructor(s)          | SAGO TEPPEI ,SHIIBA SHUNJI ,SHIGEYAMA YUKIYO |        |         |            |              |          |        |  |

## Course Description

The topic pickup from the article written in English related to Anesthesiology, and you present the summary of the article using your created abstract to the audience in the journal club.

## Reference Books

| Title                          | Author                | Publisher       |
|--------------------------------|-----------------------|-----------------|
| Anestghesiology                | Evan D. Kharasch      | LWW Journals    |
| Anesthesia & Analgesia         | Jean-Franco is Pittet | Wloters Kluwer  |
| British Journal of Anaesthesia | Ravi P. Mahajan       | Oxford Journals |

## Grading Criteria and Method of Evaluation

| Evaluation item                                  | Ratio |
|--|-------|
| Evaluation of oral presentations and discussions | 100%  |

## Study Method

| Lecture | Contents  | Methods                     | Instructor                                       | before-and-after Le  | Lecture rooms |
|---------|---|-----------------------------|--|--|---------------|
| 1-13    | Understanding the background and the newest knowledge in the worldwide articles (Anesthesiology, Anesthesia & Analgesia, British Journal of Anesthesia, et al). You will present and discuss the core of the article in our journal club. | Presentation and discussion | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Read and think about the topics in the articles related to Anesthesiology. |               |
| 14-15   | Review  | Lecture and Practice        | SAGO TEPPEI<br>SHIIBA SHUNJI<br>SHIGEYAMA YUKIYO | Review of lecture  |               |

# Oral Care and Rehabilitation (Basic)

|                        |   |         |                     |            |          |         |   |
|------------------------|---|---------|---------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                  |         | Grades              | 1~2 grades | Semester | Winter  |   |
| Subject                | Choice                                    | Methods | Lesson and practice | Total time | 120      | Credits | 4 |
| Responsible Instructor | KUBOTA JUNPEI                             |         |                     |            |          |         |   |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |                     |            |          |         |   |

## Course Description

【Language】 English and Japanese You will carry out examinations for dysphagia, and learn procedures and effects of rehabilitation and diagnosis for rehabilitation prescription including precise functional exercise.

## Attainment Objectives

You should achieve following assignments;1.Understanding the dysphagia type2.Practicing rehabilitation for dysphagia3.Choice of modified diet for dysphagic persons4.Correspondence for functional prosthesis dental treatment for dysphagia

## Textbooks

| Title  | Author          | Publisher           |
|--|-----------------|---------------------|
| Dysphagia Rehabilitation for Dental Students | Yoshiharu Mukai | Ishiyaku Publishers |

## Reference Books

| Title                   | Author           | Publisher           |
|-------------------------|------------------|---------------------|
| Taberu kinou no shougai | Yoshihiro Kaneko | Ishiyaku Publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Evaluate by rubric. | 100%  |

## Etc

Questions and comments will be accepted before and after the lecture or by e-mail.

## Study Method

| Lecture | Contents   | Methods  | Instructor    | before-and-after Le                            | Lecture rooms |
|---------|--|----------|---------------|--|---------------|
| 1,2     | Normal development mechanism of eating and swallowing(developmental disability, elderly) | Lecture  | KUBOTA JUNPEI | development mechanism of eating and swallowing |               |
| 3,4     | Oral care for dysphagic persons  | Practice | KUBOTA JUNPEI | Training for oral function                     |               |
| 5,6     | Functional assessment of eating and swallowing; Inquiry, Interviews of medical history   | Lecture  | KUBOTA JUNPEI | Functional assessment of eating and swallowing |               |

# Oral Care and Rehabilitation (Basic)

|                        |   |         |                     |            |          |         |   |
|------------------------|---|---------|---------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                  |         | Grades              | 1~2 grades | Semester | Winter  |   |
| Subject                | Choice                                    | Methods | Lesson and practice | Total time | 120      | Credits | 4 |
| Responsible Instructor | KUBOTA JUNPEI                             |         |                     |            |          |         |   |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |                     |            |          |         |   |

| Lecture | Contents  | Methods          | Instructor     | before-and-after Le   | Lecture rooms |
|---------|---|------------------|----------------|---|---------------|
| 7,8     | Functional assessment of eating and swallowing; Screening   | Practice         | KUBOTA JUNPEI  | RSST, MWST, coughing test, FT   |               |
| 9,10    | Examination1  | Oral examination | KUBOTA JUNPEI  | Feedback  |               |
| 11,12   | Breathing and Coughing exercise   | Practice         | KUBOTA JUNPEI  | Breathing and Coughing exercise   |               |
| 13,14   | Open and close mouth exercises; Exercise for trismus; Exercise for closed failure   | Practice         | KUBOTA JUNPEI  | Open and close mouth exercises  |               |
| 15,16   | Exercise for perioral muscle and tongue muscle 1; Lip closure exercise, the method of vangede                             | Practice         | KUBOTA JUNPEI  | Lip closure exercise  |               |
| 17,18   | Exercise for perioral muscle and tongue muscle 2; Buccal exercise, the method of vangede, tongue exercise                 | Practice         | KUBOTA JUNPEI  | Buccal exercise   |               |
| 19,20   | Exercise for perioral muscle and tongue muscle 3; Soft palate elevation exercise  | Practice         | KUBOTA JUNPEI  | Soft palate elevation exercise  |               |
| 21,22   | Exercise for perioral muscle and tongue muscle 4; Tongue exercise, elevation exercise of tongue dorsum and apex of tongue | Practice         | KUBOTA JUNPEI  | Tongue exercise, elevation exercise of tongue dorsum and apex of tongue |               |
| 23,24   | Chewing and infeed exercise   | Practice         | KUBOTA JUNPEI  | Chewing and infeed exercise   |               |
| 25,26   | Exercises of swallowing; Thermal tactile stimulation  | Practice         | KUBOTA JUNPEI  | Thermal tactile stimulation   |               |
| 27,28   | Exercises of swallowing; Tongue recession exercise, Tongue holding maneuver   | Practice         | KARAKI JUNICHI | Tongue recession exercise, Tongue holding maneuver                      |               |
| 29,30   | Exercises of swallowing; Shaker exercises   | Practice         | KARAKI JUNICHI | Shaker exercises  |               |

# Oral Care and Rehabilitation (Basic)

|                        |   |         |                     |            |          |         |   |
|------------------------|---|---------|---------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                  |         | Grades              | 1~2 grades | Semester | Winter  |   |
| Subject                | Choice                                    | Methods | Lesson and practice | Total time | 120      | Credits | 4 |
| Responsible Instructor | KUBOTA JUNPEI                             |         |                     |            |          |         |   |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |                     |            |          |         |   |

| Lecture | Contents   | Methods          | Instructor     | before-and-after Le   | Lecture rooms |
|---------|--|------------------|----------------|---|---------------|
| 31,32   | Neck relaxation; Neck range of motion expanding exercise, stretch of larynx muscles          | Practice         | KARAKI JUNICHI | Neck range of motion expanding exercise                             |               |
| 33,34   | Acquisition of the swallowing procedure; Mendelson maneuver<br>Use of Biofeedback            | Practice         | KARAKI JUNICHI | Mendelson maneuver  |               |
| 35,36   | Compensatory swallowing neck rotation swallowing, multiple swallowing, alternate swallowing  | Practice         | KARAKI JUNICHI | neck rotation swallowing, multiple swallowing, alternate swallowing |               |
| 37,38   | Examination2   | Oral examination | KARAKI JUNICHI | Feedback  |               |
| 39,40   | Operation of naso pharyngo laryngoscope  | Practice         | KUBOTA JUNPEI  | Naso pharyngo laryngoscope  |               |
| 41,42   | Exploration of dysphagia by naso pharyngo laryngoscope                                       | Practice         | KUBOTA JUNPEI  | diagnose of naso pharyngo laryngoscope                              |               |
| 43,44   | Procedure of videofluoroscopic examination of swallowing                                     | Lecture          | KUBOTA JUNPEI  | Videofluoroscopic examination of swallowing                         |               |
| 45,46   | Modification of imitation foods for videofluoroscopic examination of swallowing              | Practice         | KUBOTA JUNPEI  | barium allergy  |               |
| 47,48   | Manufacture of palatal augmentation prosthesis(PAP)1; Impression , manufacture of wire clasp | Practice         | TADA YOUKO     | wire clasp  |               |
| 49,50   | Manufacture of PAP2; Adjustment of tongue contact surface form                               | Practice         | TADA YOUKO     | Palatal Augmentation Prosthesis (PAP)                               |               |
| 51,52   | Adjustment of PAP; Set and adjustment  | Practice         | TADA YOUKO     | Adjustment of PAP   |               |

2025年度

subject code:212161

# Oral Care and Rehabilitation (Basic)

|                        |   |        |                     |            |            |          |        |
|------------------------|---|--------|---------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |        |                     | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                                    | Mehods | Lesson and practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | KUBOTA JUNPEI                             |        |                     |            |            |          |        |
| Instructor(s)          | KUBOTA JUNPEI ,TADA YOUKO ,KARAKI JUNICHI |        |                     |            |            |          |        |

| Lecture | Contents  | Methods     | Instructor    | before-and-after Le                     | Lecture rooms |
|---------|---|-------------|---------------|---|---------------|
| 53,54   | Manufacture of palatal Lift prosthesis (PLP)1 ;Impression , manufacture of wire clasp | Practice    | TADA YOUKO    | Impression for manufacture of PLP       |               |
| 55,56   | Manufacture of PLP 2 ;  | Practice    | TADA YOUKO    | important points for manufacture of PLP |               |
| 57,58   | Adjustment of PLP;Set and adjustment  | Practice    | TADA YOUKO    | Adjustment of PLP                       |               |
| 59,60   | Review, Examination3,unit certification test  | Examination | KUBOTA JUNPEI | Feedback                                |               |

# Oral Care and Rehabilitation (Advanced)

|                        |   |        |          |            |            |          |        |  |
|------------------------|---|--------|----------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                  |        |          | Grades     | 1~3 grades | Semester | Winter |  |
| Subject                | Choice                                    | Mehods | Practice | Total time | 120        | Credits  | 4      |  |
| Responsible Instructor | KUBOTA JUNPEI                             |        |          |            |            |          |        |  |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |        |          |            |            |          |        |  |

## Course Description

【Language】 English and Japanese You will learn dental treatment, oral care, and guidance in consideration of systemic disorders of elderly. You will learn to repair and adjust denture in consideration of dysphagic persons. You will learn how to examination and guidance with understanding Chinese medicine.

## Attainment Objectives

You should achieve following assignments:1.Evaluation of systemic condition of elderly, evaluation of intraoral and perioral condition2.Oral care and oral functional exercise in consideration of systemic disorders of elderly3.Dental treatment with Chinese medicine in consideration of systemic disorders of elderly4.Health guidance by basic skill of tongue diagnosis5.Homebound treatment for bedridden elderly6. To repair and adjust denture in consideration of dysphagic persons.

## Textbooks

| Title                                       | Author | Publisher |
|---|--------|-----------|
| Materials will be presented and distributed |        |           |

## Reference Books

| Title                                      | Author           | Publisher      |
|--|------------------|----------------|
| Traditional Chinese medicine for dentistry | Yasuaki Kakinoki | Nagasue shoten |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Evaluate by rubric. | 100%  |

## Etc

Questions and comments will be accepted before and after the lecture or by e-mail.

## Study Method

| Lecture | Contents  | Methods  | Instructor    | before-and-after Le | Lecture rooms |
|---------|---|----------|---------------|---------------------|---------------|
| 1,2     | Evaluation of QOL (Quality Of Life) and ADL (Activities Of Daily Living)Evaluation of vital signs | Practice | KUBOTA JUNPEI | QOL and ADL         |               |
| 3,4     | Mental test and depression test   | Practice | KUBOTA JUNPEI | depression          |               |

# Oral Care and Rehabilitation (Advanced)

|                        |   |         |          |            |            |          |        |
|------------------------|---|---------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |         |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                                    | Methods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | KUBOTA JUNPEI                             |         |          |            |            |          |        |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |          |            |            |          |        |

| Lecture | Contents  | Methods          | Instructor     | before-and-after Le                     | Lecture rooms |
|---------|---|------------------|----------------|---|---------------|
| 5,6     | Evaluation of perioral muscle; Muscle related occlusion, mimic, and facial muscle                               | Practice         | KUBOTA JUNPEI  | How to use Muscle hardness meter        |               |
| 7,8     | Evaluation of muscle related oral function; Neck and shoulder   | Practice         | KUBOTA JUNPEI  | anatomy of muscle related oral function |               |
| 9,10    | Taste test  | Practice         | KUBOTA JUNPEI  | Taste test                              |               |
| 11,12   | Evaluation of sense of intraoral and face   | Practice         | KARAKI JUNICHI | sensory receptor                        |               |
| 13,14   | Saliva secretion test; Evaluation of resting saliva<br>Spitting method  | Practice         | KARAKI JUNICHI | Watte method<br>Sialometer method       |               |
| 15,16   | Saliva secretion test; Evaluation of Saxon test and gum test  | Practice         | KARAKI JUNICHI | Saxon test Gum test                     |               |
| 17,18   | Saliva secretion and distribution test; Evaluation by saliva wetness tester                                     | Practice         | KARAKI JUNICHI | Saliva wetness tester                   |               |
| 19,20   | Physical inspection of saliva: Viscometer (ultrasonic type and rotation type) Spinnability measuring instrument | Practice         | KARAKI JUNICHI | Spinnability measuring instrument       |               |
| 21,22   | Halitosis measurement and evaluation by oral chroma   | Practice         | KARAKI JUNICHI | How to use Oral chroma                  |               |
| 23,24   | Examination 1   | Oral examination | KUBOTA JUNPEI  | Feedback                                |               |
| 25,26   | Improvement of oral function: Structural oral care and functional oral care                                     | Practice         | KUBOTA JUNPEI  | Basic oral care skill                   |               |
| 27,28   | Improvement of oral function: Oral care using liquid and gel type oral moisturizer                              | Practice         | KUBOTA JUNPEI  | Oral moisturizers                       |               |

# Oral Care and Rehabilitation (Advanced)

|                        |   |         |          |            |              |          |        |  |
|------------------------|---|---------|----------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                  |         |          | Grades     | 1 ~ 3 grades | Semester | Winter |  |
| Subject                | Choice                                    | Methods | Practice | Total time | 120          | Credits  | 4      |  |
| Responsible Instructor | KUBOTA JUNPEI                             |         |          |            |              |          |        |  |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |          |            |              |          |        |  |

| Lecture | Contents   | Methods          | Instructor    | before-and-after Le                                 | Lecture rooms |
|---------|--|------------------|---------------|---|---------------|
| 29,30   | Basic oral care skill for bedridden elderly  | Practice         | KUBOTA JUNPEI | mouth cleaning for elderly                          |               |
| 31,32   | Evaluation of oral mucosal disease<br>Recode by intraoral camera                                     | Practice         | KUBOTA JUNPEI | Basic skill of intraoral camera                     |               |
| 33,34   | Evaluation of oral mucosa and tongue mucosa:<br>Western and Chinese medical evaluation and diagnosis | Practice         | KUBOTA JUNPEI | Evaluation of oral mucosa                           |               |
| 35,36   | Basic skill of tongue diagnosis  | Practice         | KUBOTA JUNPEI | Basic skill of tongue diagnosis                     |               |
| 37,38   | Choice of Chinese medicine by tongue diagnosis(1)  | Practice         | KUBOTA JUNPEI | Chinese medicine for drymouth                       |               |
| 39,40   | Choice of Chinese medicine by tongue diagnosis(2)  | Practice         | KUBOTA JUNPEI | Chinese medicine for burning mouth syndrome         |               |
| 41,42   | Choice of Chinese medicine by tongue diagnosis(3)  | Practice         | KUBOTA JUNPEI | Chinese medicine for tooth ache                     |               |
| 43,44   | Guidance of health, life, and dietary by tongue diagnosis  | Practice         | KUBOTA JUNPEI | Guidance of health by tongue diagnosis              |               |
| 45,46   | Examination2   | Oral Examination | KUBOTA JUNPEI | Feedback  |               |
| 47,48   | Preparation of homebound treatment   | Practice         | TADA YOUKO    | Understanding of instrument                         |               |
| 49,50   | Choice of homebound treatment instrument   | Practice         | TADA YOUKO    | Understanding of instrument for homebound treatment |               |
| 51,52   | Basic skill of homebound treatment with water(assistant)   | Practice         | TADA YOUKO    | Vacuum Syringe                                      |               |
| 53,54   | Basic skill of homebound treatment with water(surgeon)   | Practice         | TADA YOUKO    | Engine Turbine                                      |               |

2025年度

subject code:212162

# Oral Care and Rehabilitation (Advanced)

|                        |   |        |          |            |            |          |        |
|------------------------|---|--------|----------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |        |          | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice                                    | Mehods | Practice | Total time | 120        | Credits  | 4      |
| Responsible Instructor | KUBOTA JUNPEI                             |        |          |            |            |          |        |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |        |          |            |            |          |        |

| Lecture | Contents                                      | Methods     | Instructor    | before-and-after Le | Lecture rooms |
|---------|---|-------------|---------------|---------------------|---------------|
| 55,56   | Denture repair for bedridden elderly          | Practice    | TADA YOUKO    | Denture adjustment  |               |
| 57,58   | Denture adjustment for bedridden elderly      | Practice    | TADA YOUKO    | PLP adjustment      |               |
| 59,60   | Review, Examination3, Unit certification test | Examination | KUBOTA JUNPEI | Feedback            |               |

# Geriatric Dentistry

|                        |   |         |        |            |            |          |        |
|------------------------|---|---------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |         |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                    | Methods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KUBOTA JUNPEI                             |         |        |            |            |          |        |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |        |            |            |          |        |

## Course Description

【Language】English and Japanese You will understand the research about geriatric dentistry and dysphagia rehabilitation. You will learn method of assessment, treatment, and exercise.

## Attainment Objectives

You should achieve following assignments and increase the ability of understanding the research. 1. Understanding the basic geriatric dentistry 2. Understanding the basic dysphagia rehabilitation 3. Increasing the ability of evaluate the research of clinical and basic

## Textbooks

| Title                                       | Author | Publisher |
|---|--------|-----------|
| Materials will be presented and distributed |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Evaluate by rubric. | 100%  |

## Etc

Questions and comments will be accepted before and after the lecture or by e-mail.

## Study Method

| Lecture | Contents   | Methods                                    | Instructor                                    | before-and-after Le                   | Lecture rooms |
|---------|--|--|---|---------------------------------------|---------------|
| 1~15    | You will understand future prospect by searching and evaluating the literature related geriatric dentistry and oral care and rehabilitation. | Clinical lectures, Seminar, Reading papers | KUBOTA JUNPEI<br>TADA YOUKO<br>KARAKI JUNICHI | Searching and perusal relevant papers |               |

# Geriatric Dentistry

|                        |   |        |                    |            |            |          |        |
|------------------------|---|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                    | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KUBOTA JUNPEI                             |        |                    |            |            |          |        |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |        |                    |            |            |          |        |

## Course Description

【English and Japanese】 You will understand basic integrative medicine related study of dental treatment for elderly and geriatric dentistry. You will learn method of assessment, treatment, and exercise. You will learn action of Chinese medicine, and mechanism of action. You will learn method to apply for dental clinical of tongue diagnosis. You will understand Chinese medicine and western medicine for dental treatment of elderly and learn knowledge to practice integrative medicine. You will learn the research of clinical and basic related integrative medicine.

## Attainment Objectives

You should achieve following assignments and increases the ability of understanding the research.;1.Understanding the basic integrative medicine 2.Understanding the basic Chinese medicine and western medicine3.Understanding the basic complementary and alternative medicine, and applying clinical 4. Increasing the ability of evaluate the research of clinical and basic

## Textbooks

| Title                                       | Author | Publisher |
|---|--------|-----------|
| Materials will be presented and distributed |        |           |

## Reference Books

| Title                                      | Author           | Publisher      |
|--|------------------|----------------|
| Traditional Chinese medicine for dentistry | Yasuaki Kakinoki | Nagasue shoten |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Evaluate by rubric. | 100%  |

## Etc

Questions and comments will be accepted before and after the lecture or by e-mail.

## Study Method

| Lecture | Contents   | Methods                              | Instructor                                    | before-and-after Le                   | Lecture rooms |
|---------|--|--------------------------------------|---|---------------------------------------|---------------|
| 1~15    | You will understand future prospect by searching and evaluating the literature related integrative medicine and Chinese medicine and western medicine. | Clinical lectures, Exercises, Semina | KUBOTA JUNPEI<br>TADA YOUKO<br>KARAKI JUNICHI | Searching and perusal relevant papers |               |

# Geriatric and Special Needs Dentistry (Advanced)

|                        |   |        |                    |            |            |          |        |
|------------------------|---|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |        |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                                    | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KUBOTA JUNPEI                             |        |                    |            |            |          |        |
| Instructor(s)          | KUBOTA JUNPEI ,TADA YOUKO ,KARAKI JUNICHI |        |                    |            |            |          |        |

## Course Description

【English and Japanese】 You will understand particularity of dental treatment and oral care for elderly and special needs. You will learn method of assessment, treatment, and oral care. Especially, you should learn knowledge to practice homebound treatment and rehabilitation for bedridden elderly. You will learn knowledge to practice dental treatment and rehabilitation for special needs, and dental treatment for patients who complain of psychogenic.

## Attainment Objectives

You should achieve following assignments and increase the ability of understanding the research.;1.Understanding the geriatric dentistry 2.Understanding the clinical states and systemic disease of elderly and disability3.Understanding the dental treatment of patients who complain of psychogenic general malaise 4. Increasing the ability of evaluate the research of clinical and basic about geriatric and special needs dentistry, and psychosomatic medicine.

## Textbooks

| Title                                       | Author | Publisher |
|---|--------|-----------|
| Materials will be presented and distributed |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Evaluate by rubric. | 70%   |

## Etc

Questions and comments will be accepted before and after the lecture or by e-mail.

2025年度

subject code:212165

# Geriatric and Special Needs Dentistry (Advanced)

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                    | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KUBOTA JUNPEI                             |         |                    |            |              |          |        |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |                    |            |              |          |        |

## Study Method

| Lecture | Contents  | Methods                               | Instructor                                    | before-and-after Le                   | Lecture rooms |
|---------|---|---------------------------------------|---|---------------------------------------|---------------|
| 1 ~ 15  | You will understand future prospect, by searching and evaluating the literature. You will search latest knowledge and study: homebound treatment and oral care for elderly, dental treatment and rehabilitation for disability, and psychosomatic medicine. | Clinical lectures, Exercises, Seminar | KUBOTA JUNPEI<br>TADA YOUKO<br>KARAKI JUNICHI | Searching and perusal relevant papers |               |

# Dysphagia diagnosis and management

|                        |   |         |                    |            |          |         |   |
|------------------------|---|---------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                  |         | Grades             | 1~4 grades | Semester | Winter  |   |
| Subject                | Choice                                    | Methods | Lesson and seminar | Total time | 30       | Credits | 2 |
| Responsible Instructor | KUBOTA JUNPEI                             |         |                    |            |          |         |   |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |                    |            |          |         |   |

## Course Description

Students will learn the basics of feeding and swallowing rehabilitation through lectures and exercises, including the techniques for actual examination and diagnosis.

## Attainment Objectives

1) To be able to explain the mechanism of feeding and swallowing. 2) To be able to explain the causes of dysphagia. 3) Explain the diagnosis and examination of feeding and swallowing disorders. 4) Explain the diagnosis and examination of dysphagia. 5) Perform endoscopic examination. (5) To be able to perform endoscopic examination.

## Textbooks

| Title  | Author          | Publisher           |
|--|-----------------|---------------------|
| Dysphagia Rehabilitation for Dental Students | Yoshiharu Mukai | Ishiyaku Publishers |

## Reference Books

| Title                   | Author           | Publisher           |
|-------------------------|------------------|---------------------|
| Taberu kinou no shougai | Yoshihiro Kaneko | Ishiyaku Publishers |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Evaluate by rubric. | 100%  |

## Etc

Questions and comments will be accepted before and after the lecture or by e-mail.

## Study Method

| Lecture | Contents                                      | Methods | Instructor    | before-and-after Le                                       | Lecture rooms |
|---------|---|---------|---------------|---|---------------|
| 1.2     | Fundamentals of Swallowing                    | Lecture | KUBOTA JUNPEI | Five-phase model of feeding and swallowing, process model |               |
| 3.4     | Development of eating and swallowing function | Lecture | TADA YOUKO    | Developmental process of feeding and swallowing           |               |

# Dysphagia diagnosis and management

|                        |   |         |                    |            |              |          |        |
|------------------------|---|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                  |         |                    | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                                    | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KUBOTA JUNPEI                             |         |                    |            |              |          |        |
| Instructor(s)          | KUBOTA JUNPEI, TADA YOUKO, KARAKI JUNICHI |         |                    |            |              |          |        |

| Lecture | Contents                                    | Methods  | Instructor                                    | before-and-after Le                              | Lecture rooms |
|---------|---|----------|---|--|---------------|
| 5.6     | Causes of dysphagia                         | Lecture  | KARAKI JUNICHI                                | Causes of dysphagia                              |               |
| 7.8     | Diagnosis of dysphagia                      | Lecture  | KUBOTA JUNPEI                                 | Screening Tests, VF, VE                          |               |
| 9       | Treatment of dysphagia 1                    | Lecture  | TADA YOUKO                                    | Training using/not using food                    |               |
| 10.11   | Treatment of dysphagia 2                    | Practice | KUBOTA JUNPEI<br>TADA YOUKO<br>KARAKI JUNICHI | Training not using food                          |               |
| 12.13   | Treatment of dysphagia 3                    | Practice | KUBOTA JUNPEI<br>TADA YOUKO<br>KARAKI JUNICHI | Training using food                              |               |
| 14.15   | Videofluoroscopic examination of swallowing | Practice | KUBOTA JUNPEI<br>TADA YOUKO<br>KARAKI JUNICHI | Structure of the pharynx, Handling of endoscopes |               |

# Advanced Lecture

|                        |                          |         |        |            |              |          |        |
|------------------------|--------------------------|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KOKABU SYOUITIROU        |         |        |            |              |          |        |
| Instructor(s)          | KOKABU SYOUITIROU        |         |        |            |              |          |        |

## Course Description

【Language】 English and Japanese We invite researchers who are at the forefront, and they give the graduate school students current topics.

## Attainment Objectives

1. You can obtain the knowledge the current topics of the specialized area of each speaker.
2. You can understand the background of the study, motivation for the research, the results and discussion of the research.
3. You can consider and respond to the development of the future research.
4. You can use the content of lectures in your own research project.
5. Participate in academic conferences and conferences and have a question and answer session

## Grading Criteria and Method of Evaluation

| Evaluation item       | Ratio |
|-----------------------|-------|
| attendance and report | 100%  |

## Study Method

| Lecture | Contents  | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|---|---------|------------|---------------------|---------------|
|         | Test of normality of population distribution and that of equal variance of two populations                    |         |            |                     |               |
|         | How has orthognathic surgery changed in 35 years?   |         |            |                     |               |
|         | Identification of Oral Disease Genes<br>Development of Regenerative Medicine Techniques Using Deciduous Teeth |         |            |                     |               |
|         | The Role of Dental Hygienists in Oral Health Management and Future Perspectives                               |         |            |                     |               |

# Advanced Lecture

|                        |                          |         |        |            |            |          |        |  |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | KOKABU SYOUITIROU        |         |        |            |            |          |        |  |
| Instructor(s)          | KOKABU SYOUITIROU        |         |        |            |            |          |        |  |

| Lecture | Contents   | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|--|---------|------------|---------------------|---------------|
|         | New research strategy in bone quality around dental implants                                     |         |            |                     |               |
|         | New treatment strategies for oral infections   |         |            |                     |               |
|         | Fundamental knowledge about tongue, breathing, and MFT   |         |            |                     |               |
|         | Understanding metabolic regulation by hypoxia response and its application to disease treatment. |         |            |                     |               |
|         | Current status and issues of dental epidemiological study  |         |            |                     |               |
|         | Periodontitis & Peri-implantitis Treatment and Prevention of these disease                       |         |            |                     |               |
|         | Alpha-ketoglutarate ameliorates age-related osteoporosis via regulating histone methylations     |         |            |                     |               |
|         | What is entrepreneurship?  |         |            |                     |               |
|         | Dental health care professionals and Thanatology   |         |            |                     |               |
|         | State-of-the-art of digital technologies for dental materials and devices                        |         |            |                     |               |

2025年度

subject code:213001

# Advanced Lecture

|                        |                          |        |        |            |              |          |        |  |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | KOKABU SYOUITIROU        |        |        |            |              |          |        |  |
| Instructor(s)          | KOKABU SYOUITIROU        |        |        |            |              |          |        |  |

| Lecture | Contents   | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|--|---------|------------|---------------------|---------------|
|         | The department that makes the most use of metal biomaterials is dentistry. Metal allergy is an important disease in dental care. Epidemiological investigations of metal allergies and the latest findings on the pathogenesis of metal allergies will be added to the lectures. |         |            |                     |               |

# Molecular Biological Morphology

|                        |   |         |         |            |            |          |        |
|------------------------|---|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                                  |         |         | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice  | Methods | Seminar | Total time | 16         | Credits  | 1      |
| Responsible Instructor | SETA YUUJI  |         |         |            |            |          |        |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |         |            |            |          |        |

## Course Description

【Language】 English and Japanese This course deals with the basis of fundamental morphological analysis. It also enhances the development of students' skill in carrying out a morphological experiment.

## Attainment Objectives

The goals of this course are to (1) be able to understand morphological analysis, (2) be able to prepare tissue section (3) be able to carry out immunohistochemistry (4) be able to carry out in situ hybridization

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| Usual performance score in the lab  | 10%   |
| Experimental performance in the lab | 90%   |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods             | Instructor  | before-and-after Le | Lecture rooms |
|---------|---|---------------------|---|---------------------|---------------|
| 1       | Introduction<br>What is morphological analysis            | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 2       | Preparing method of tissue section (1): Fixation          | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 3       | Preparing method of tissue section (2): Embedding tissue  | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |
| 4       | Preparing method of tissue section (3): Sectioning tissue | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture   |               |

# Molecular Biological Morphology

|                        |   |         |         |            |            |          |        |  |
|------------------------|---|---------|---------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry                                  |         |         | Grades     | 1~2 grades | Semester | Winter |  |
| Subject                | Choice  | Methods | Seminar | Total time | 16         | Credits  | 1      |  |
| Responsible Instructor | SETA YUUJI  |         |         |            |            |          |        |  |
| Instructor(s)          | SETA YUUJI, TOYONO TAKASHI, KATAOKA SHINJI, MATSUYAMA KAE |         |         |            |            |          |        |  |

| Lecture | Contents   | Methods             | Instructor  | before-and-after Lecture | Lecture rooms |
|---------|--|---------------------|---|--------------------------|---------------|
| 5       | Immunohistochemistry (1):<br>Apply first antibody  | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 6       | Immunohistochemistry (2):<br>Apply second antibody   | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 7       | in situ hybridization (1):<br>Probe preparation  | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |
| 8       | in situ hybridization (2):<br>Pre-treatment of section and<br>antibody visualization of<br>digoxigenin | Lecture<br>Practice | SETA YUUJI<br>TOYONO TAKASHI<br>KATAOKA SHINJI<br>MATSUYAMA KAE | Review of lecture        |               |

# Molecular Biology Training Program

|                        |  |        |                    |            |          |         |   |
|------------------------|--|--------|--------------------|------------|----------|---------|---|
| Course Affiliation     | the Faculty of Dentistry                             |        | Grades             | 1~3 grades | Semester | Winter  |   |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 20       | Credits | 1 |
| Responsible Instructor | MATSUBARA TAKUMA                                     |        |                    |            |          |         |   |
| Instructor(s)          | MATSUBARA TAKUMA, KOKABU SYOUITIROU, Addison William |        |                    |            |          |         |   |

## Course Description

Molecular biology pertains to the study of living systems at the molecular level, especially DNA and RNA, and provides a background for further work in the rapidly expanding areas of genomics, cell biology, biotechnology, microbiology, diagnostics, and therapeutics. Molecular biology methods are used extensively in modern day drug discovery, research and development, and diagnostics. This course is intended for personnel who are seeking basic-level molecular biology training. This course will focus on selected aspects of molecular biology that provides principles for understanding the structure and functional relationships of molecular biology techniques including RNA isolation, cDNA synthesis (RT-PCR) and the preparation of whole cell lysates from cell and Western blotting.

## Attainment Objectives

1. Graduates of this program will be able to explain and discuss how processes are integrated at the molecular level to create a functional eukaryotic cell.
2. Graduates of this program will be able to prepare RNA and protein from cells.
3. Graduates of this program will have experience in and be able to perform RT-PCR and Western blotting.

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| A-1-1-2         | 分子の成り立ちと生体構成分子に関する化学的性質を理解している。  |
| A-1-2-1         | アミノ酸とタンパク質の構造、機能及び代謝を理解している。   |
| A-1-3-1         | メンデルの法則や遺伝子型と表現型の関係を理解している。  |
| A-1-3-2         | 核酸、遺伝子及び染色体の構造と機能を理解している。  |
| A-1-3-3         | デオキシリボ核酸(DNA)複製と修復、DNAからリボ核酸(RNA)への転写、タンパク質合成に至る翻訳を含む遺伝情報の発現及び調節を理解している。 |
| A-1-3-4         | 遺伝性疾患の発生機序を理解している。   |
| A-1-3-5         | 遺伝子解析や遺伝子工学技術を理解している。  |
| A-1-3-6         | 染色体分析とDNA配列決定を含むゲノム解析技術を理解している。  |

## Textbooks

| Title   | Author | Publisher |
|---|--------|-----------|
| What is necessary is to use the experimental protocols in our laboratory. |        |           |

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| What is necessary is to use the experimental protocols in our laboratory. |        |           |

# Molecular Biology Training Program

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                             |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 20         | Credits  | 1      |
| Responsible Instructor | MATSUBARA TAKUMA                                     |         |                    |            |            |          |        |
| Instructor(s)          | MATSUBARA TAKUMA, KOKABU SYOUITIROU, Addison William |         |                    |            |            |          |        |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| oral examination | 100%  |

## Etc

We accept your visit at any time at our office in the 10th floor of main building.

## Study Method

| Lecture | Contents  | Methods              | Instructor        | before-and-after Le  | Lecture rooms |
|---------|---|----------------------|-------------------|--|---------------|
| 1, 2    | Western blotting #1<br>Osteoblasts were treated with BMP and then prepared whole cell lysates.  | Lecture and Practice | MATSUBARA TAKUMA  | Prepare for the protocol of preparation of whole cell lysates. | その他           |
| 3, 4    | Western blotting #2<br>SDS-PAGE, Transfer, Blocking, and Incubation with primary antibody.  | Lecture and Practice | MATSUBARA TAKUMA  | Prepare for the principal of Western blotting                  | その他           |
| 5, 6    | Western blotting #3<br>Incubation with secondary antibody and Detection.<br>RT-PCR #1<br>Osteoblasts were treated with BMP and then prepared total RNA. | Lecture and Practice | MATSUBARA TAKUMA  | Prepare for the protocol of preparation of Total RNA.          | その他           |
| 7, 8    | RT-PCR #2<br>cDNA synthesis and perform PCR   | Lecture and Practice | KOKABU SYOUITIROU | Prepare for the principal of RT-PCR                            | その他           |
| 9, 10   | RT-PCR #3<br>Agarose gel electrophoresis  | Lecture and Practice | Addison William   | Review what was learned  | その他           |

# Molecular Biology Training Program

|                        |  |        |                    |            |            |          |        |
|------------------------|--|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                             |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 20         | Credits  | 1      |
| Responsible Instructor | MATSUBARA TAKUMA                                     |        |                    |            |            |          |        |
| Instructor(s)          | MATSUBARA TAKUMA, KOKABU SYOUITIROU, Addison William |        |                    |            |            |          |        |

## Course Description

Molecular biology pertains to the study of living systems at the molecular level, especially DNA and RNA, and provides a background for further work in the rapidly expanding areas of genomics, cell biology, biotechnology, microbiology, diagnostics, and therapeutics. Molecular biology methods are used extensively in modern day drug discovery, research and development, and diagnostics. This course is intended for personnel who are seeking middle-level molecular biology training. This course will focus on selected aspects of molecular biology that provides principles for understanding the structure and functional relationships of molecular biology techniques including gene transfection, detection method of tagged-protein and luciferase assay.

## Attainment Objectives

1. Graduates of this program will be able to explain the principal of (reporter) gene transfection and how to detect of expression transfected genes in the cells.
2. Graduates of this program will have experience in and be able to detect tagged-protein.
3. Graduates of this program will have experience in and be able to perform luciferase assay.

## Core Curriculum Item

| Core Curriculum | Contents   |
|-----------------|--|
| A-1-1-2         | 分子の成り立ちと生体構成分子に関する化学的性質を理解している。  |
| A-1-2-1         | アミノ酸とタンパク質の構造、機能及び代謝を理解している。   |
| A-1-2-5         | 酵素の機能と調節、主な代謝異常を理解している。  |
| A-1-3-2         | 核酸、遺伝子及び染色体の構造と機能を理解している。  |
| A-1-3-3         | デオキシリボ核酸(DNA)複製と修復、DNAからリボ核酸(RNA)への転写、タンパク質合成に至る翻訳を含む遺伝情報の発現及び調節を理解している。 |
| A-1-3-4         | 遺伝性疾患の発生機序を理解している。   |
| A-1-3-5         | 遺伝子解析や遺伝子工学技術を理解している。  |
| A-1-3-6         | 染色体分析とDNA配列決定を含むゲノム解析技術を理解している。  |

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Please select any book of reference if you want. |        |           |

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Please select any book of reference if you want. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| oral examination | 0%    |

# Molecular Biology Training Program

|                        |  |        |                    |            |            |          |        |
|------------------------|--|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                             |        |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Mehods | Lesson and seminar | Total time | 20         | Credits  | 1      |
| Responsible Instructor | MATSUBARA TAKUMA                                     |        |                    |            |            |          |        |
| Instructor(s)          | MATSUBARA TAKUMA, KOKABU SYOUITIROU, Addison William |        |                    |            |            |          |        |

## Etc

We accept your visit at any time at our office in the 10th floor of main building.

## Study Method

| Lecture | Contents  | Methods              | Instructor        | before-and-after Le                | Lecture rooms |
|---------|---|----------------------|-------------------|------------------------------------|---------------|
| 1, 2    | 1. Lecture about gene transfection, including principals, fusion-protein and detection.<br>2. Transfection of FLAG or V5-tagged genes into cells. | Lecture and Practice | KOKABU SYOUITIROU | The principal of gene transfection | その他           |
| 3, 4    | Perform Luciferase assay.   | Lecture and Practice | Addison William   | The principal of Luciferase assay  | その他           |
| 5, 6    | Detection of tagged-protein by Western blotting.  | Lecture and Practice | MATSUBARA TAKUMA  | The protocol of Western blotting   | その他           |
| 7, 8    | Transfection of GFP-fused protein into cells.   | Lecture and Practice | MATSUBARA TAKUMA  | The principal of GFP-fused protein | その他           |
| 9, 10   | Observation of GFP-expressing protein using fluorescence microscope   | Lecture and Practice | MATSUBARA TAKUMA  | Review what was learned            | その他           |

# Neurophysiological Techniques

|                        |                                |        |         |            |            |          |        |
|------------------------|--------------------------------|--------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |        |         | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                         | Mehods | Seminar | Total time | 16         | Credits  | 1      |
| Responsible Instructor | ONO KENTAROU                   |        |         |            |            |          |        |
| Instructor(s)          | ONO KENTAROU, NAKATOMI CHIHIRO |        |         |            |            |          |        |

## Course Description

【Language】 English and Japanese In this course, you will practice basic skills about makings of cell and tissue preparations, patch-clamp recording and evaluations of pain inductions in animal experiments.

## Attainment Objectives

1. To develop techniques of cell and tissue preparations
2. To understand how to record electrical signals from neurons
3. To understand how to evaluate pain in experimental animals

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| report          | 100%  |

## Etc

Question Time: Anytime

## Study Method

| Lecture | Contents  | Methods  | Instructor | before-and-after Le | Lecture rooms |
|---------|---|----------|------------|---------------------|---------------|
| 1~8     | Making of cell and tissue preparations. Patch-clamp recording<br>Measurements of pain-related behaviors | Practice |            | Review of practices |               |

# Imaging technique and its analysis

|                        |  |        |         |            |            |          |        |  |
|------------------------|--|--------|---------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry   |        |         | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice   | Mehods | Seminar | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | MORIMOTO YASUHIRO  |        |         |            |            |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |        |         |            |            |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASAFUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |        |         |            |            |          |        |  |

## Course Description

You can learn the imaging techniques and analytical methods of CT, dental CBCT, MRI, and ultrasonography.

## Attainment Objectives

To comprehend the imaging techniques and analytical methods of CT, dental CBCT, MRI, and ultrasonography.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Instruction manuals of CT, CBCT, MRI, and US |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item   | Ratio |
|-------------------|-------|
| Report            | 60%   |
| Oral presentation | 40%   |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents  | Methods  | Instructor   | before-and-after Le               | Lecture rooms |
|---------|---|----------|--|-----------------------------------|---------------|
| 1~3     | Imaging techniques and analytical methods of CT | Practice | MORIMOTO YASUHIRO<br>ODA MASAFUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Imaging technique and its analysis

|                        |   |        |         |            |            |          |        |  |
|------------------------|---|--------|---------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry  |        |         | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice  | Mehods | Seminar | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | MORIMOTO YASUHIRO   |        |         |            |            |          |        |  |
| Instructor(s)          | MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU   |        |         |            |            |          |        |  |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO, ODA MASA FUMI, WAKASUGI NAO, NISHIMURA SHUN, MATSUMOTO SHINOBU |        |         |            |            |          |        |  |

| Lecture | Contents  | Methods  | Instructor  | before-and-after Le               | Lecture rooms |
|---------|---|----------|---|-----------------------------------|---------------|
| 4, 5    | Imaging techniques and analytical methods of dental CBCT  | Practice | ODA MASA FUMI<br>MORIMOTO YASUHIRO<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 6, 7    | Imaging techniques and analytical methods of basic MRI  | Practice | WAKASUGI NAO<br>MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>MATSUMOTO SHINOBU<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |
| 8~12    | Imaging techniques and analytical methods of newest MRI such as Dynamic MR and functional MRI                     | Practice | NISHIMURA SHUN<br>MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>MATSUMOTO SHINOBU | Pre- and post-reading of textbook |               |
| 13~15   | Imaging techniques and analytical methods of basic and newest US such as Color Doppler technique and elastography | Practice | MATSUMOTO SHINOBU<br>MORIMOTO YASUHIRO<br>ODA MASA FUMI<br>WAKASUGI NAO<br>NISHIMURA SHUN | Pre- and post-reading of textbook |               |

# Brain Science for Eating Behavior

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | YOSHINO KENICHI          |        |        |            |              |          |        |
| Instructor(s)          | YOSHINO KENICHI          |        |        |            |              |          |        |

## Course Description

The purpose of this course is to lecture on the role of main area in brain involved in the higher human brain function.

## Attainment Objectives

The ability to describe:(1) the difference of feeding behavior between human and animal based on neural science;(2) the higher brain function regarding the eating behavior;(3) the effects of oral function on general physical function by the nervous system;

## Reference Books

| Title                                       | Author  | Publisher |
|---|---|-----------|
| Principles of Neural Science, Fifth Edition | Aut. Kandel ER, Schwartz JH, Jessell TM Siegelbaum SA, Hudspeth AJ. |           |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| after-action report | 100%  |
|                     | 0%    |

## Etc

Dr. Yoshino: weekday 9:00-17:00

## Study Method

| Lecture | Contents                              | Methods    | Instructor      | before-and-after Le | Lecture rooms |
|---------|---------------------------------------|------------|-----------------|---------------------|---------------|
|         |                                       |            | YOSHINO KENICHI |                     | Moodle        |
| 1       | Feeding behavior in human             | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 2       | Cognitive stage: input of information | e-learning | YOSHINO KENICHI | after-action report | Moodle        |

# Brain Science for Eating Behavior

|                        |                          |        |        |            |              |          |        |  |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | YOSHINO KENICHI          |        |        |            |              |          |        |  |
| Instructor(s)          | YOSHINO KENICHI          |        |        |            |              |          |        |  |

| Lecture | Contents  | Methods    | Instructor      | before-and-after Le | Lecture rooms |
|---------|---|------------|-----------------|---------------------|---------------|
| 3       | Cognitive stage: processing of information          | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 4       | Cognitive stage: integration of information         | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 5       | Cognitive stage: cognitive function for target      | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 6       | Cognitive stage: selection of action                | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 7       | Cognitive stage: preparatory for movement           | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 8       | Cognitive stage: initiation and control of movement | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 9       | Preparatory stage: initiation of jaw-movement       | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 10      | Preparatory stage: control of jaw-movement          | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 11      | Preparatory stage: processing of information        | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 12      | Preparatory stage: integration of information       | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 13      | Lingual stage                                       | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 14      | Pharyngeal stage                                    | e-learning | YOSHINO KENICHI | after-action report | Moodle        |
| 15      | Esophageal stage                                    | e-learning | YOSHINO KENICHI | after-action report | Moodle        |

# Practice of Appropriate Dental Treatment in Health

|                        |                          |         |         |            |            |          |        |
|------------------------|--------------------------|---------|---------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |         |         |            |            |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |         |         |            |            |          |        |

## Course Description

You confirm the various rules of dental treatment in health care insurance system and master skills to apply to clinical cases.

## Attainment Objectives

1. You can explain the outline of dental treatment in health care insurance system.
2. You can practice the calculation rules of dental treatment in health care insurance system.

## Textbooks

| Title                               | Author | Publisher                  |
|-------------------------------------|--------|----------------------------|
| Interpretation of Dental Fee Points |        | Social Insurance Institute |

## Reference Books

| Title                                | Author | Publisher |
|--------------------------------------|--------|-----------|
| You practice in your patient's case. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item      | Ratio |
|----------------------|-------|
| Understanding degree | 50%   |
| Applicability        | 50%   |

## Etc

We accept your visit at any time at our office in 3rd floor of main building.

## Study Method

| Lecture | Contents  | Methods  | Instructor       | before-and-after Le               | Lecture rooms |
|---------|---|----------|------------------|-----------------------------------|---------------|
|         |   |          | FUKUIZUMI TAKAKI |                                   |               |
| 1       | You confirm the various rules of dental treatment in health care insurance system and master skills to apply to clinical cases. | Practice | FUKUIZUMI TAKAKI | Pre- and post-reading of textbook |               |

2025年度

subject code:213062

# Practice of Appropriate Dental Treatment in Health

|                        |                          |         |         |            |              |          |        |
|------------------------|--------------------------|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | FUKUIZUMI TAKAKI         |         |         |            |              |          |        |
| Instructor(s)          | FUKUIZUMI TAKAKI         |         |         |            |              |          |        |

| Lecture | Contents   | Methods                      | Instructor       | before-and-after Learning   | Lecture rooms |
|---------|--|------------------------------|------------------|---|---------------|
| 2 ~ 15  | Graduate students will learn how to properly provide insurance treatment through exercises based on specific cases experienced in actual clinical practice. Through these exercises, students will acquire the skills to calculate reimbursement appropriately and efficiently, as well as the ability to apply these skills to similar cases. | Case studies and discussions | FUKUIZUMI TAKAKI | Read in detail the "Interpretation of Dental Fee Points" in the section related to each case. |               |

# Theory of Statistical Analysis

|                        |                          |         |        |            |              |          |        |  |
|------------------------|--------------------------|---------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | FUKAI YASUNARI           |         |        |            |              |          |        |  |
| Instructor(s)          | FUKAI YASUNARI           |         |        |            |              |          |        |  |

## Course Description

You will understand the theory of statistical analysis through examples.

## Attainment Objectives

You can use statistical methods.

You can understand the theory of statistical analysis.

## Core Curriculum Item

| Core Curriculum | Contents                             |
|-----------------|--------------------------------------|
| C-6-2-1         | 確率変数とその分布、統計的推測(推定と検定)の原理と方法を理解している。 |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 100%  |

## Etc

You bring a calculator that is able to calculate square roots.

## Study Method

| Lecture | Contents  | Methods | Instructor     | before-and-after Le | Lecture rooms |
|---------|---|---------|----------------|---------------------|---------------|
| 1       | Probability theory (1)                            | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 2       | Probability theory (2)                            | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 3       | Probability theory (3)                            | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 4       | Probability theory (4)                            | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 5       | Probability theory (5)                            | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 6       | Statistical terminology                           | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 7       | Statistical estimation                            | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 8       | Testing of statistical hypothesis (1) terminology | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |

# Theory of Statistical Analysis

|                        |                          |        |        |            |              |          |        |  |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | FUKAI YASUNARI           |        |        |            |              |          |        |  |
| Instructor(s)          | FUKAI YASUNARI           |        |        |            |              |          |        |  |

| Lecture | Contents  | Methods | Instructor     | before-and-after Le | Lecture rooms |
|---------|---|---------|----------------|---------------------|---------------|
| 9       | Testing of statistical hypothesis (2)<br>Hypothesis test for the population mean                    | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 10      | Testing of statistical hypothesis (3)<br>Test of proportion   | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 11      | Testing of statistical hypothesis (4)<br>Sign test  | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 12      | Testing of statistical hypothesis (5)<br>Rank sum test  | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 13      | Testing of statistical hypothesis (6)<br>Test of goodness of fit,<br>test of independence           | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 14      | Testing of statistical hypothesis (7)<br>Fisher' s exact test                                       | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |
| 15      | Testing of statistical hypothesis (8)<br>Hypothesis test for the population correlation coefficient | Lecture | FUKAI YASUNARI | Review of lecture   | 3 1 2 講義室     |

# Academic English for Research Purposes

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KAIHOU YASUOMI           |        |         |            |              |          |        |
| Instructor(s)          | KAIHOU YASUOMI           |        |         |            |              |          |        |

## Course Description

This course mainly focuses on developing reading and writing skills required at postgraduate level. The course also places an emphasis on increasing students' vocabulary.

## Attainment Objectives

- By the end of the course, students should:
- learn to read texts on dentistry efficiently and effectively
  - learn to write a well-organized paragraph
  - learn to write a well-structured essay
  - learn to write an abstract of an article
  - learn 1,000 new words
  - cultivate the habit of using English

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| The information about the materials used in this course will be provided in the first session. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item     | Ratio |
|---------------------|-------|
| Reading assignments | 50%   |
| Essays              | 50%   |

## Study Method

| Lecture | Contents                                | Methods | Instructor | before-and-after Le         | Lecture rooms |
|---------|---|---------|------------|-----------------------------|---------------|
| 1       | Orientation Vocabulary Size Test        | Seminar |            | Self-Introduction           |               |
| 2       | Freewriting Organization of a Paragraph | Seminar |            | Organization of a Paragraph |               |

# Academic English for Research Purposes

|                        |                          |         |         |            |              |          |        |
|------------------------|--------------------------|---------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KAIHOU YASUOMI           |         |         |            |              |          |        |
| Instructor(s)          | KAIHOU YASUOMI           |         |         |            |              |          |        |

| Lecture | Contents                                   | Methods | Instructor | before-and-after Learning   | Lecture rooms |
|---------|--|---------|------------|---|---------------|
| 3       | How to Write a Paragraph (Theme 1) Reading | Seminar |            | Vocabulary Learning<br>How to Write a Paragraph (Theme 1)         |               |
| 4       | How to Write a Paragraph (Theme 1) Reading | Seminar |            | Vocabulary Learning<br>How to Write a Paragraph (Theme 1)         |               |
| 5       | How to Write a Paragraph (Theme 2) Reading | Seminar |            | Vocabulary Learning<br>How to Write a Paragraph (Theme 2) Reading |               |
| 6       | How to Write a Paragraph (Theme 2) Reading | Seminar |            | Vocabulary Learning<br>How to Write a Paragraph (Theme 2) Reading |               |
| 7       | How to Write an Essay (Theme 1) Reading    | Seminar |            | Vocabulary Learning<br>How to Write an Essay (Theme 1)            |               |
| 8       | How to Write an Essay (Theme 1) Reading    | Seminar |            | Vocabulary Learning<br>How to Write an Essay (Theme 1)            |               |
| 9       | How to Write an Essay (Theme 2) Reading    | Seminar |            | Vocabulary Learning<br>How to Write an Essay (Theme 2)            |               |
| 10      | How to Write an Essay (Theme 2) Reading    | Seminar |            | Vocabulary Learning<br>How to Write an Essay (Theme 2)            |               |

2025年度

subject code:213066

# Academic English for Research Purposes

|                        |                          |        |         |            |              |          |        |
|------------------------|--------------------------|--------|---------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |         | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KAIHOU YASUOMI           |        |         |            |              |          |        |
| Instructor(s)          | KAIHOU YASUOMI           |        |         |            |              |          |        |

| Lecture | Contents  | Methods | Instructor | before-and-after Le   | Lecture rooms |
|---------|---|---------|------------|---|---------------|
| 11      | How to Write an Essay (Theme 3) Reading         | Seminar |            | Vocabulary Learning<br>How to Write an Essay (Theme 3)        |               |
| 12      | How to Write an Essay (Theme 3) Reading         | Seminar |            | Vocabulary Learning<br>How to Write an Essay (Theme 3)        |               |
| 13      | How to Write an Abstract of an Article, Reading | Seminar |            | Vocabulary Learning<br>How to Write an Abstract of an Article |               |
| 14      | How to Write an Abstract of an Article, Reading | Seminar |            | Vocabulary Learning<br>How to Write an Abstract of an Article |               |
| 15      | How to Write an Abstract of an Article          | Seminar |            | Vocabulary Learning   |               |
|         |   |         |            |   |               |

# Advanced Bioanalytical chemistry

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | SATOU SHINOBU            |        |        |            |            |          |        |
| Instructor(s)          | SATOU SHINOBU            |        |        |            |            |          |        |

## Course Description

【Language】 English and Japanese The aim of this course is to help students acquire an understanding of Chemical Biology from interaction analysis methods between small molecules and Nucleic Acid, or small molecules and Protein.

## Attainment Objectives

Upon completion of this course, students will be able to do the following:1. Learn about proteins, nucleic acids and enzymes2. Understand the principle of UV-Vis spectroscopy analysis, isothermal titration calorimetry, quartz crystal microbalance, surface plasmon resonance, circular polarization dichroism analysis, electrochemical measurement, atomic force microscope which are representative analytical methods3. How to handle data, and statistical analysis method.

## Reference Books

| Title   | Author | Publisher  |
|---|--------|------------|
| Understanding Bioanalytical Chemistry-Principle and Applications-(2009) |        | Pub. Wiley |

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| 10 Contents × 10 points= 100 points. | 100%  |

## Study Method

| Lecture | Contents  | Methods | Instructor | before-and-after Le            | Lecture rooms |
|---------|---|---------|------------|--------------------------------|---------------|
| 1       | Introduction to Biomolecules                      | Lecture |            | Homework of previously lecture |               |
| 2       | Property of Protein, Nucleic Acid, and Enzyme     | Lecture |            | Homework of previously lecture |               |
| 3       | Applications of spectroscopy-1 (Binding analysis) | Lecture |            | Homework of previously lecture |               |
| 4       | Applications of spectroscopy-2 (Kinetic analysis) | Lecture |            | Homework of previously lecture |               |

2025年度

subject code:214012

# Advanced Bioanalytical chemistry

|                        |                          |         |        |            |            |          |        |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | SATOU SHINOBU            |         |        |            |            |          |        |
| Instructor(s)          | SATOU SHINOBU            |         |        |            |            |          |        |

| Lecture | Contents  | Methods | Instructor | before-and-after Le            | Lecture rooms |
|---------|---|---------|------------|--------------------------------|---------------|
| 5       | Applications of spectroscopy-3 (Thermodynamic analysis) | Lecture |            | Homework of previously lecture |               |
| 6       | Isothermal Titration Calorimetry                        | Lecture |            | Homework of previously lecture |               |
| 7       | Quartz Crystal Microbalance                             | Lecture |            | Homework of previously lecture |               |
| 8       | Surface Plasmon Resonance                               | Lecture |            | Homework of previously lecture |               |
| 9       | Circular Dichroism Spectroscopy analysis                | Lecture |            | Homework of previously lecture |               |
| 10      | Electrochemical measurement (Diffusion process)         | Lecture |            | Homework of previously lecture |               |
| 11      | Electrochemical measurement (Adsorption process)-1      | Lecture |            | Homework of previously lecture |               |
| 12      | Electrochemical measurement (Adsorption process)-2      | Lecture |            | Homework of previously lecture |               |
| 13      | Atomic Force Microscope                                 | Lecture |            | Homework of previously lecture |               |
| 14      | Statistical analysis                                    | Lecture |            | Homework of previously lecture |               |
| 15      | Summary   | Lecture |            | Homework of previously lecture |               |

# Advanced Intelligent System

|                        |                          |        |        |            |         |          |        |
|------------------------|--------------------------|--------|--------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 grade | Semester | Spring |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | KAMIYA                   |        |        |            |         |          |        |
| Instructor(s)          | KAMIYA                   |        |        |            |         |          |        |

## Course Description

To develop the advanced information processing instruments, it is necessary to understand hardware and software system. In this course, basic concepts of data structures and algorithms which is concerned image systems are lectured.

## Attainment Objectives

Upon completion of this course, students will be able to do the following:1) Demonstrate a familiarity with major algorithms and data structures2) Algorithmic design paradigms and its analysis3) Analyze the performance of algorithms.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Before starting this class, teacher posts or notices the text book with reference one. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
|                 | 60%   |

## Etc

Participants should review topics after lecture every times using the related text books and/or references.

## Study Method

| Lecture | Contents                                  | Methods | Instructor | before-and-after Le            | Lecture rooms |
|---------|---|---------|------------|--------------------------------|---------------|
| 1       | Introduction                              | Lecture |            | Homework of previously lecture |               |
| 2       | What are the advanced intelligent systems | Lecture |            | Homework of previously lecture |               |
| 3       | Medical engineering system                | Lecture |            | Homework of previously lecture |               |

# Advanced Intelligent System

|                        |                          |        |        |            |         |          |        |
|------------------------|--------------------------|--------|--------|------------|---------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 grade | Semester | Spring |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30      | Credits  | 2      |
| Responsible Instructor | KAMIYA                   |        |        |            |         |          |        |
| Instructor(s)          | KAMIYA                   |        |        |            |         |          |        |

| Lecture | Contents                          | Methods | Instructor | before-and-after Le            | Lecture rooms |
|---------|-----------------------------------|---------|------------|--------------------------------|---------------|
| 4       | Medical imaging system            | Lecture |            | Homework of previously lecture |               |
| 5       | Basic algorithms                  | Lecture |            | Homework of previously lecture |               |
| 6       | Design and analysis of algorithms | Lecture |            | Homework of previously lecture |               |
| 7       | Data structures                   | Lecture |            | Homework of previously lecture |               |
| 8       | Basic data structures             | Lecture |            | Homework of previously lecture |               |
| 9       | Lists                             | Lecture |            | Homework of previously lecture |               |
| 10      | Stacks, Queues                    | Lecture |            | Homework of previously lecture |               |
| 11      | Trees                             | Lecture |            | Homework of previously lecture |               |
| 12      | Search                            | Lecture |            | Homework of previously lecture |               |
| 13      | Binary search and AVL trees       | Lecture |            | Homework of previously lecture |               |
| 14      | Graph                             | Lecture |            | Homework of previously lecture |               |
| 15      | Summary                           | Lecture |            | Homework of previously lecture |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |        |        |            |            |          |        |
|------------------------|---|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |        |        | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice  | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO   |        |        |            |            |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO   |        |        |            |            |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO |        |        |            |            |          |        |

## Course Description

Firstly, you can sufficiently review the oral anatomy and the oral pathology. After then, you can learn the basic imaging diagnosis, the basic radiobiology, and the basic radiological physics. As the form of the present subject, you will present the respective content in front of our professors after the respective tutotrial study, and the professor in charge of the respective content will precisely explain it

## Attainment Objectives

To perfectly comprehend the basic oral anatomy and oral pathology. To understand the basic imaging principles, technique of many kinds of imaging modalities, imaging diagnostic interpretation, and the basic radiobiology.

## Reference Books

| Title   | Author | Publisher |
|---|--------|-----------|
| Head and Neck Imaging<br>3rd edition  |        |           |
| MRI in head and neck,<br>Handbook of diagnostic<br>imaging in head and neck |        |           |
| Contemporary Oral and<br>Maxillofacial Pathology                            |        |           |
| Basic radiology   |        |           |
| Oral Anatomy  |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item    | Ratio |
|--------------------|-------|
| Oral presentations | 50%   |
| Oral examinations  | 50%   |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |        |            |              |          |        |
|------------------------|---|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO |         |        |            |              |          |        |

## Etc

**【Office Hours】** Before and after lectures or by e-mail. Questions may be asked at any time in the clinic room of the Department of Dental Radiology on the 3rd floor of the hospital and in the laboratory of the Department of Dental Radiology on the 11th floor of the hospital.

## Study Method

| Lecture | Contents   | Methods              | Instructor        | before-and-after Learning         | Lecture rooms |
|---------|--|----------------------|-------------------|-----------------------------------|---------------|
| 1       | History of Radiology, Physics of radiation   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 2       | Radiation chemistry  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 3       | Basic radiobiology   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 4       | Basic radiation measurement methods I  |                      | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 5       | Basic radiation measurement methods II   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 6       | Radiation-related laws and ordinances  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 7       | Medical image engineering  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 8       | Image storage translation, reproduction, and transfer  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 9       | Reviews of basic radiology from 1 to 8.  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 10      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Dental and Panoramic radiographs) | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |        |            |              |          |        |
|------------------------|---|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO |         |        |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor        | before-and-after Le               | Lecture rooms |
|---------|---|----------------------|-------------------|-----------------------------------|---------------|
| 11      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly X-ray CT scans)                  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 12      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly MRI)                             | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 13      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Ultrasonography)                 | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 14      | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Scintigraphy)                    | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 15      | Reviews of imaging techniques from 10 to 14.  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 16      | Diagnosis for many kinds of diseases in oral and maxillofacial regions I (Mainly maxillary sinus-related diseases)        | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 17      | Diagnosis for many kinds of diseases in oral and maxillofacial regions II (Mainly TMJ-related diseases)                   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 18      | Diagnosis for many kinds of diseases in oral and maxillofacial regions III (Mainly Maxilla and mandible-related diseases) | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |        |            |              |          |        |
|------------------------|---|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO |         |        |            |              |          |        |

| Lecture | Contents   | Methods              | Instructor        | before-and-after Le               | Lecture rooms |
|---------|--|----------------------|-------------------|-----------------------------------|---------------|
| 19      | Diagnosis for many kinds of diseases in oral and maxillofacial regions IV (Mainly Parapharyngeal, Masticator, and Carotid space-related diseases)                      | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 20      | Diagnosis for many kinds of diseases in oral and maxillofacial regions V (Mainly Retropharyngeal, Perivertebral, Sublingual, and Submandibular space-related diseases) | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 21      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VI (Mainly Oropharynx-related diseases)   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 22      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VII (Mainly Epipharynx, Hypopharynx, Larynx-related diseases)                                   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 23      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VII (Mainly Lymph nodes-related diseases)   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 24      | Diagnosis for many kinds of diseases in oral and maxillofacial regions VIII (Mainly Cystic masses)   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 25      | Diagnosis for many kinds of diseases in oral and maxillofacial regions IX (Mainly Salivary glands-related diseases)  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |

# Outline of Oral and Maxillofacial Radiology

|                        |   |         |        |            |              |          |        |
|------------------------|---|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry  |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice  | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
| Instructor(s)          | MORIMOTO YASUHIRO   |         |        |            |              |          |        |
|                        | (Advisor of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Specialist of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO (Certified Dentists of Oral and Maxillofacial Radiology) MORIMOTO YASUHIRO |         |        |            |              |          |        |

| Lecture | Contents  | Methods              | Instructor        | before-and-after Le               | Lecture rooms |
|---------|---|----------------------|-------------------|-----------------------------------|---------------|
| 26      | Diagnosis for many kinds of diseases in oral and maxillofacial regions IX (Mainly Thyroid and Parathyroid glands-related diseases)  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 27      | Diagnosis for many kinds of diseases in oral and maxillofacial regions X (Mainly Base of skull and Temporary bone-related diseases) | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 28      | Review of diagnosis for many kinds of diseases in oral and maxillofacial regions from 16 to 27                                      | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 29      | Interventional Radiology for many kinds of diseases in maxillofacial regions  | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |
| 30      | Radiotherapy for oral cancers   | Lecture and Practice | MORIMOTO YASUHIRO | Pre- and post-reading of textbook |               |

# Oral and Maxillofacial Surgery

|                        |                          |        |        |            |              |          |        |
|------------------------|--------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | HABU MANABU              |        |        |            |              |          |        |
| Instructor(s)          | HABU MANABU              |        |        |            |              |          |        |

## Course Description

To acquire basic knowledge of Oral and Maxillofacial Surgery and the latest improvement of diagnosis and management of various lesions in this area. To learn the role of engineering skill and knowledge in regenerative medicine, innovative drug development , novel cancer therapy and so on.

## Attainment Objectives

To recognize the medical needs on diagnosis and treatment of Oral and Maxillofacial diseases.

## Grading Criteria and Method of Evaluation

| Evaluation item                    | Ratio |
|------------------------------------|-------|
| reports of the individual lectures | 100%  |

## Etc

Student consultation at anytime

## Study Method

| Lecture | Contents  | Methods | Instructor  | before-and-after Le                | Lecture rooms |
|---------|---|---------|-------------|------------------------------------|---------------|
| 1       | Embliology and anatomy of oral and maxillofacial region | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 2       | Congenital disorders                                    | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 3       | Developmental disorders                                 | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 4       | Jaw deformities   | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 5       | Traumatology  | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 6       | Infectious diseases                                     | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 7       | Benign tumors   | Lecture | HABU MANABU | Reports of the individual lectures |               |

2025年度

subject code:214115

# Oral and Maxillofacial Surgery

|                        |                          |         |        |            |              |          |        |
|------------------------|--------------------------|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | HABU MANABU              |         |        |            |              |          |        |
| Instructor(s)          | HABU MANABU              |         |        |            |              |          |        |

| Lecture | Contents                    | Methods | Instructor  | before-and-after Le                | Lecture rooms |
|---------|-----------------------------|---------|-------------|------------------------------------|---------------|
| 8       | Malignant tumors (2)        | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 9       | Temporomandibular disorders | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 10      | Temporomandibular disorders | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 11      | Mucous diseases             | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 12      | Dental implantology         | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 13      | Orofacial prosthesis        | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 14      | Disinfection                | Lecture | HABU MANABU | Reports of the individual lectures |               |
| 15      | Summary                     | Lecture | HABU MANABU | -                                  |               |

# Molecular Biology of Bone and Skeletal Muscle

|                        |                          |         |        |            |              |          |        |  |
|------------------------|--------------------------|---------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | KOKABU SYOUITIROU        |         |        |            |              |          |        |  |
| Instructor(s)          | KOKABU SYOUITIROU        |         |        |            |              |          |        |  |

## Course Description

Sarcopenia and osteoporosis are characterized by decreased muscle protein or bone mass respectively that contributes to. In our aging society, the motor disability by sarcopenia and/or osteoporosis is social problem. So, we have to develop the novel methods to increase the bone and muscle mass. In this lecture, you will obtain the background and basic molecular experimental knowledge for regenerative medicine of bone and skeletal muscle.

## Attainment Objectives

You can explain the basic physiology and pathology of bone and skeletal muscle with the basic of bone and skeletal muscle experiments.

## Reference Books

| Title  | Author | Publisher |
|--|--------|-----------|
| Please select any book of reference if you want. |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item  | Ratio |
|------------------|-------|
| Report           | 80%   |
| Oral examination | 20%   |

## Etc

You can visit us at any time.

## Study Method

| Lecture | Contents  | Methods                      | Instructor        | before-and-after Le                         | Lecture rooms |
|---------|---|------------------------------|-------------------|---|---------------|
| 1       | Handling of cultured cells and the proliferation of skeletal muscle cells | Lecture(Web or Face to Face) | KOKABU SYOUITIROU | Prepare for the principal of cultured cells |               |
| 2       | Evaluation of the proliferation of skeletal muscle cells                  | Lecture(Web or Face to Face) | Addison William   | Prepare for the cell proliferation          |               |
| 3       | Differentiation of skeletal muscle cells                                  | Lecture(Web or Face to Face) | Addison William   | Prepare for the cell differentiation        |               |

# Molecular Biology of Bone and Skeletal Muscle

|                        |                          |         |        |            |            |          |        |  |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~4 grades | Semester | Winter |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | KOKABU SYOUITIROU        |         |        |            |            |          |        |  |
| Instructor(s)          | KOKABU SYOUITIROU        |         |        |            |            |          |        |  |

| Lecture | Contents   | Methods                      | Instructor        | before-and-after Le                                 | Lecture rooms |
|---------|--|------------------------------|-------------------|---|---------------|
| 4       | Evaluation of the differentiation of skeletal muscle cells | Lecture(Web or Face to Face) | Addison William   | Prepare for skeletal muscle stem cells              |               |
| 5       | Skeletal muscle atrophy                                    | Lecture(Web or Face to Face) | KOKABU SYOUITIROU | Prepare for skeletal muscle atrophy                 |               |
| 6       | Evaluation of the atrophy of skeletal muscle atrophy       | Lecture(Web or Face to Face) | KOKABU SYOUITIROU | Prepare for sarcopenia                              |               |
| 7       | Harvest and culture of primary skeletal muscle stem cells  | Lecture(Web or Face to Face) | Addison William   | Prepare for primary cultured cells                  |               |
| 8       | Differentiation of osteoblasts                             | Lecture(Web or Face to Face) | MATSUBARA TAKUMA  | Prepare for osteoblasts                             |               |
| 9       | Evaluation of the differentiation of osteoblasts I         | Lecture(Web or Face to Face) | MATSUBARA TAKUMA  | Prepare for osteoblast differentiation              |               |
| 10      | Evaluation of the differentiation of osteoblasts II        | Lecture(Web or Face to Face) | MATSUBARA TAKUMA  | Prepare for osteoblast differentiation              |               |
| 11      | Harvest and culture of primary osteoblasts                 | Lecture(Web or Face to Face) | KOKABU SYOUITIROU | Prepare for primary osteoblasts from calvarial bone |               |
| 12      | Harvest and culture of primary bone marrow stromal cells   | Lecture(Web or Face to Face) | KOKABU SYOUITIROU | Prepare for primary bone marrow stromal cells       |               |
| 13      | Osteoclast differentiation                                 | Lecture(Web or Face to Face) | MATSUBARA TAKUMA  | Prepare for osteoclast                              |               |
| 14      | Evaluation of the differentiation of osteoclast I          | Lecture(Web or Face to Face) | MATSUBARA TAKUMA  | Prepare for osteoclast differentiation              |               |
| 15      | Evaluation of the differentiation of osteoclast II         | Lecture(Web or Face to Face) | MATSUBARA TAKUMA  | Prepare for osteoclast differentiation              |               |

# Molecular Biology for Infectious Diseases

|                        |                                  |        |        |            |              |          |        |
|------------------------|----------------------------------|--------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry         |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                           | Mehods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                  |        |        |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA |        |        |            |              |          |        |

## Course Description

You can obtain novel information and knowledge concerning life sciences for infection and immunity in molecular cell biology. This program also aims to introduce some of the currently developed medical-dental-engineering collaborative research on infectious diseases, and to develop human resources with a multifaceted viewpoint who will be responsible for the creation of health and medical technology seeds based on new mechanisms.

## Attainment Objectives

To obtain novel information and knowledge for

- Virulence factors responsible for infection
- Biofilm and quorum sensing system
- Oral infectious diseases
- Recognition and elimination of pathogens in immune system
- Cytokines and inflammatory mediators
- Pattern recognition receptors
- Role of immune cells in inflammatory response
- Host defense in oral lesion
- Diagnosis, prevention and treatment of infectious diseases
- Inflammasome
- Bone remodeling
- Interaction between bone metabolisms and immune system

## Textbooks

| Title   | Author | Publisher |
|---------|--------|-----------|
| Handout |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Reports         | 100%  |

## Etc

You can ask your study-counsel before or after the lectures. Email is available at any time.

# Molecular Biology for Infectious Diseases

|                        |                                  |        |        |            |              |          |        |  |
|------------------------|----------------------------------|--------|--------|------------|--------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry         |        |        | Grades     | 1 ~ 4 grades | Semester | Winter |  |
| Subject                | Choice                           | Mehods | Lesson | Total time | 30           | Credits  | 2      |  |
| Responsible Instructor | ARIYOSHI WATARU                  |        |        |            |              |          |        |  |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA |        |        |            |              |          |        |  |

## Study Method

| Lecture | Contents   | Methods | Instructor                         | before-and-after Le                       | Lecture rooms                |
|---------|--|---------|------------------------------------|---|------------------------------|
| 1       | Molecular biology for pathogenic microbes :<br>Fundamental knowledge of molecular biology and microbiology for studying infectious diseases            | Lecture | YAMASAKI RYOUTA<br>ARIYOSHI WATARU | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 2       | Molecular biology for pathogenic microbes :<br>Adhesion molecules and endotoxin of pathogenic bacteria   | Lecture | YAMASAKI RYOUTA<br>ARIYOSHI WATARU | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 3       | Molecular biology for pathogenic microbes :<br>Structure and functions of biofilm  | Lecture | YAMASAKI RYOUTA<br>ARIYOSHI WATARU | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 4       | Molecular biology for pathogenic microbes :<br>Virulence factors of oral bacteria  | Lecture | YAMASAKI RYOUTA<br>ARIYOSHI WATARU | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 5       | Molecular biology for pathogenic microbes :<br>Structure and functions of human microbiom  | Lecture | YAMASAKI RYOUTA<br>ARIYOSHI WATARU | Pre-reading of handout<br>Creating report | Moodle<br>Microsoft<br>Teams |
| 6       | Molecular biology for host defense against infection :<br>Fundamental knowledge of molecular biology for studying immunology                           | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 7       | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in antigen recognition and elimination by innate immune system | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |

# Molecular Biology for Infectious Diseases

|                        |                                  |         |        |            |              |          |        |
|------------------------|----------------------------------|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry         |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                           | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                  |         |        |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA |         |        |            |              |          |        |

| Lecture | Contents  | Methods | Instructor                         | before-and-after Le                       | Lecture rooms                |
|---------|---|---------|------------------------------------|---|------------------------------|
| 8       | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in antigen recognition and elimination by humoral immune system       | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 9       | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in antigen recognition and elimination by cell-mediated immune system | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 10      | Molecular biology for host defense against infection :<br>Host defense by saliva and immune system in oral lesion   | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 11      | Molecular biology for host defense against infection :<br>Approach for diagnosis, prevention and treatment of infectious diseases                             | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 12      | Molecular biology for host defense against infection :<br>Molecular mechanisms involved in activation of inflammasome in inflammatory response                | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout<br>Creating report | Moodle<br>Microsoft<br>Teams |
| 13      | Inflammatory bone resorption :<br>Molecular mechanisms involved in regulation of bone remodeling  | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |
| 14      | Inflammatory bone resorption :<br>Regulation of immunomodulatory molecules in bone metabolisms  | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of handout                    | Moodle<br>Microsoft<br>Teams |

2025年度

subject code:214117



# Molecular Biology for Infectious Diseases

|                        |                                  |         |        |            |              |          |        |
|------------------------|----------------------------------|---------|--------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry         |         |        | Grades     | 1 ~ 4 grades | Semester | Winter |
| Subject                | Choice                           | Methods | Lesson | Total time | 30           | Credits  | 2      |
| Responsible Instructor | ARIYOSHI WATARU                  |         |        |            |              |          |        |
| Instructor(s)          | ARIYOSHI WATARU, YAMASAKI RYOUTA |         |        |            |              |          |        |

| Lecture | Contents   | Methods | Instructor                         | before-and-after Le                              | Lecture rooms                |
|---------|--|---------|------------------------------------|--|------------------------------|
| 15      | Inflammatory bone resorption<br>:<br>Osteoimmunological approach<br>for treatment of inflammatory<br>bone resorption | Lecture | ARIYOSHI WATARU<br>YAMASAKI RYOUTA | Pre-reading of<br>handout<br><br>Creating report | Moodle<br>Microsoft<br>Teams |

# Clinical Research Design

|                        |                                 |         |                    |            |            |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 1~4 grades | Semester | Spring |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAKU DATE NAOKI                 |         |                    |            |            |          |        |
| Instructor(s)          | KAKU DATE NAOKI, KARAKI JUNICHI |         |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this lecture, you will learn basic aspects of clinical research design. In addition, to develop practical skills in Evidence-Based Dentistry (EBD), you will conduct a literature search based on a question you derive from your own dental practice, and make a presentation after critical appraisal of the selected papers.

## Attainment Objectives

At the completion of this course, you will be able to: 1. Formulate questions arising in clinical practice into research questions. 2. Understand the outlines of clinical study design. 3. Select appropriate clinical study designs. 4. Critically appraise clinical research papers and structured abstracts. 5. Practice Evidence-based Dentistry.

## Textbooks

| Title                                    | Author | Publisher     |
|--|--------|---------------|
| Introduction to Evidence-Based Dentistry |        | Nagasueshoten |

## Reference Books

| Title   | Author           | Publisher                     |
|---|------------------|-------------------------------|
| Designing Clinical Research                             | Stephen B Hulley | Lippincott Williams & Wilkins |
| Guide to Practice-Based Research and Scientific Writing |                  | Ishiyaku Publishers           |

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 60%   |
| presentation                        | 40%   |

## Etc

Prior to submitting the registration form, please contact the instructor (Kakudate N) and consult the course schedule. 【Office hour】 Before and after every class, or email at any time.

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Le | Lecture rooms |
|------------------|---------|------------|---------------------|---------------|
|                  |         |            |                     |               |

# Clinical Research Design

|                        |                                |         |                    |            |              |          |        |
|------------------------|--------------------------------|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |                    | Grades     | 1 ~ 4 grades | Semester | Spring |
| Subject                | Choice                         | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KAKULATE NAOKI                 |         |                    |            |              |          |        |
| Instructor(s)          | KAKULATE NAOKI, KARAKI JUNICHI |         |                    |            |              |          |        |

| Lecture | Contents   | Methods              | Instructor     | before-and-after Le  | Lecture rooms |
|---------|--|----------------------|----------------|--|---------------|
| 1       | Introduction to clinical research and EBD: You will learn about the definition of clinical research and EBD.                               | Lecture              | KAKULATE NAOKI | Definition of EBD/Level of evidence  | 3 1 2 講義室     |
| 2       | Study design: You will learn about clinical research designs.  | Lecture              | KAKULATE NAOKI | Clinical Research design/<br>Cross-sectional study,<br>Case-control study, RCT,<br>Meta-analysis | 3 1 2 講義室     |
| 3       | Concept of bias: You will learn about three major biases.  | Lecture              | KAKULATE NAOKI | Concept of bias/Selection bias, information bias, confounding bias                               | 3 1 2 講義室     |
| 4       | Observational study: You will learn about critical appraisal of reports of observational studies.  | Lecture and practice | KAKULATE NAOKI | Critical appraisal/<br>Screening test  | 3 1 2 講義室     |
| 5       | Randomized Controlled Trials: You will learn about critical appraisal of reports of RCT  | Lecture and practice | KAKULATE NAOKI | Critical appraisal of research articles of RCT   | 3 1 2 講義室     |
| 6       | Research articles: You will learn about the structure of research articles and abstracts on clinical research                              | Lecture              | KAKULATE NAOKI | Structure of the research articles and abstracts   | 3 1 2 講義室     |
| 7       | Systematic reviews, Meta-analyses and Clinical guidelines: You will learn about systematic reviews, meta-analyses and clinical guidelines. | Lecture              | KAKULATE NAOKI | Systematic review / Meta-analysis / Clinical guidelines  | 3 1 2 講義室     |
| 8       | Systematic reviews and meta-analyses: You will critically appraise research reports of meta-analyses.                                      | Lecture and Practice | KAKULATE NAOKI | Critical appraisal of research papers of systematic reviews and meta-analysis                    | 3 1 2 講義室     |

# Clinical Research Design

|                        |                                 |        |                    |            |            |          |        |
|------------------------|---------------------------------|--------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |        |                    | Grades     | 1~4 grades | Semester | Spring |
| Subject                | Choice                          | Mehods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAKU DATE NAOKI                 |        |                    |            |            |          |        |
| Instructor(s)          | KAKU DATE NAOKI, KARAKI JUNICHI |        |                    |            |            |          |        |

| Lecture | Contents  | Methods              | Instructor                        | before-and-after Le                       | Lecture rooms |
|---------|---|----------------------|-----------------------------------|---|---------------|
| 9       | Formulating a research question: You will learn how to formulate an answerable question using PICO.                 | Lecture and Practice | KAKU DATE NAOKI                   | P I C O: Formulate an answerable question | 3 1 2 講義室     |
| 10      | Literature search : You will learn how to search the literature using PubMed.                                       | Lecture and Practice | KAKU DATE NAOKI                   | Literature search using PubMed            | コンピュータ演習室     |
| 11      | Literature search : You will learn how to search the literature using the Cochrane library and Minds.               | Lecture and Practice | KAKU DATE NAOKI                   | Literature search/Cochrane review, Minds  | コンピュータ演習室     |
| 12      | Literature search : You will search the literature based on your own research question using PubMed.                | Practice             | KAKU DATE NAOKI                   | Literature search using PubMed            | コンピュータ演習室     |
| 13      | Presentation Preparation: You will perform critical appraisal of the literature based on your own research question | Presentation         | KAKU DATE NAOKI                   | Preparing PowerPoint presentations        | 3 1 2 講義室     |
| 14      | Final presentation-Part 1-  | Presentation         | KAKU DATE NAOKI<br>KARAKI JUNICHI | Preparing PowerPoint presentations        | 3 1 2 講義室     |
| 15      | Final presentation-Part 2-  | Presentation         | KAKU DATE NAOKI<br>KARAKI JUNICHI | Preparing PowerPoint presentations        | 3 1 2 講義室     |

# Clinical Research Design

|                        |                                |         |                    |            |            |          |        |
|------------------------|--------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry       |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                         | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAKULATE NAOKI                 |         |                    |            |            |          |        |
| Instructor(s)          | KAKULATE NAOKI, KARAKI JUNICHI |         |                    |            |            |          |        |

## Course Description

【Language】 English and Japanese In this lecture, you will obtain specialized knowledge on clinical research design and applied skills in the conduct of clinical research. In addition, you will develop the ability to create a study protocol based on a clinical question you derive from your own dental practice. Finally, you will make a presentation of the study protocol.

## Attainment Objectives

At the completion of this course, you will be able to:1. Understand the process flow from the planning of clinical epidemiology research up to implementation.2. Formulate a research question derived from your own dental practice.3. Develop a research design.4. Understand the basics of statistical analysis methods.5. Create a research protocol.

## Textbooks

| Title                                    | Author | Publisher     |
|--|--------|---------------|
| Introduction to Evidence-Based Dentistry |        | Nagasueshoten |

## Reference Books

| Title   | Author           | Publisher                     |
|---|------------------|-------------------------------|
| Designing Clinical Research                             | Stephen B Hulley | Lippincott Williams & Wilkins |
| Guide to Practice-Based Research and Scientific Writing |                  | Ishiyaku Publishers.          |

## Grading Criteria and Method of Evaluation

| Evaluation item                     | Ratio |
|-------------------------------------|-------|
| deliverables during your coursework | 60%   |
| presentation                        | 40%   |

## Etc

Prior to submitting the registration form, please contact the instructor (Kakulate N) and consult the course schedule. 【Office hour】 Before and after every class, or email at any time.

## Study Method

| Lecture Contents | Methods | Instructor | before-and-after Lecture | Lecture rooms |
|------------------|---------|------------|--------------------------|---------------|
|                  |         |            |                          |               |

# Clinical Research Design

|                        |                                 |         |                    |            |            |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAKU DATE NAOKI                 |         |                    |            |            |          |        |
| Instructor(s)          | KAKU DATE NAOKI, KARAKI JUNICHI |         |                    |            |            |          |        |

| Lecture | Contents   | Methods              | Instructor      | before-and-after Le  | Lecture rooms          |
|---------|--|----------------------|-----------------|--|------------------------|
| 1       | Introduction to clinical research: You will learn how to formulate an answerable question.   | Lecture              | KAKU DATE NAOKI | PICO/Finer ' s check   | 3 1 2 講義室              |
| 2       | Controlling bias part 1: You will learn how to control information bias and selection bias.  | Lecture and Practice | KAKU DATE NAOKI | Study design/Information and selection bias                                  | 3 1 2 講義室              |
| 3       | Controlling bias part 2: You will learn how to control confounding bias.   | Lecture and Practice | KAKU DATE NAOKI | Confounding bias   | 3 1 2 講義室              |
| 4       | Hypothetical conceptual model: You will learn how to build a hypothetical conceptual model.  | Lecture and Practice | KAKU DATE NAOKI | Hypothetical conceptual model  | 3 1 2 講義室              |
| 5       | Selecting study design part 1: You will learn how to select an appropriate epidemiological study design.   | Practice             | KAKU DATE NAOKI | Epidemiological study design   | 3 1 2 講義室              |
| 6       | Selecting study design part 2: You will learn how to plan and conduct epidemiological studies.   | Practice             | KAKU DATE NAOKI | Epidemiological study design   | 3 1 2 講義室              |
| 7       | Finding the Evidence Part 1: You will search the literature based on your PICO framework.  | Practice             | KAKU DATE NAOKI | Literature search  | 3 1 2 講義室<br>コンピュータ演習室 |
| 8       | Finding the Evidence Part 2: You will search the literature based on your PICO framework.  | Practice             | KAKU DATE NAOKI | Literature search  | 3 1 2 講義室<br>コンピュータ演習室 |
| 9       | Questionnaire survey and research protocol: You will learn how to produce questionnaires and research protocol for an Institutional Review Board | Lecture and Practice | KAKU DATE NAOKI | Questionnaire survey and Research protocol for an Institutional Review Board | 3 1 2 講義室              |

# Clinical Research Design

|                        |                                 |         |                    |            |            |          |        |
|------------------------|---------------------------------|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry        |         |                    | Grades     | 1~4 grades | Semester | Winter |
| Subject                | Choice                          | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KAKU DATE NAOKI                 |         |                    |            |            |          |        |
| Instructor(s)          | KAKU DATE NAOKI, KARAKI JUNICHI |         |                    |            |            |          |        |

| Lecture | Contents  | Methods              | Instructor                        | before-and-after Le   | Lecture rooms |
|---------|---|----------------------|-----------------------------------|---|---------------|
| 10      | Statistical analysis part 1:<br>You will learn the types of data and correlation.   | Lecture              | KAKU DATE NAOKI                   | Correlation coefficient   | 3 1 2 講義室     |
| 11      | Statistical analysis part 2:<br>You will learn hypothesis testing, chi-square test and the t-test.  | Lecture and Practice | KAKU DATE NAOKI                   | Hypothesis testing/<br>Chi-square test and t-test   | 3 1 2 講義室     |
| 12      | Statistical analysis part 3:<br>You will learn various kinds of statistical analysis methods including multivariate analysis and survival analysis. | Lecture              | KAKU DATE NAOKI                   | Various kinds of statistical analysis including multivariate analysis and survival analysis | 3 1 2 講義室     |
| 13      | Presentation Preparation  | Presentation         | KAKU DATE NAOKI                   | Preparing PowerPoint presentations  | 3 1 2 講義室     |
| 14      | Final presentation-Part -   | Presentation         | KAKU DATE NAOKI<br>KARAKI JUNICHI | Preparing PowerPoint presentations  | 3 1 2 講義室     |
| 15      | Final presentation-Part -   | Presentation         | KAKU DATE NAOKI<br>KARAKI JUNICHI | Preparing PowerPoint presentations  | 3 1 2 講義室     |

# Geriatric Dentistry

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                               |         |                    | Grades     | 1~3 grades | Semester | Spring |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KARAKI JUNICHI   |         |                    |            |            |          |        |
| Instructor(s)          | KARAKI JUNICHI, KUBOTA JUNPEI, TADA YOUKO, ISOBE AYAKA |         |                    |            |            |          |        |

## Course Description

Understand the physical, social and mental characteristics of the elderly and gain an understanding of the medical and care systems currently surrounding the elderly. In addition, after understanding the characteristics of dental diseases in old age, knowledge of support for the elderly will be developed from the perspective of health promotion through improvement of the oral environment.

## Attainment Objectives

1. understand the physical changes and ageing of the oral region in the elderly.
2. understand the social situation surrounding the elderly and the medical and care system.
3. understand the dental diseases common in old age.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Lecture and exercise handouts are distributed. |        |           |

## Reference Books

| Title                             | Author                  | Publisher        |
|-----------------------------------|-------------------------|------------------|
| Invitation to geriatrics          | Shigenobu Nakamura      | Nanzando         |
| Dental Guidebook for the Elderly. | Hiroshi Uematsu et. al. | Ishiyakushu ppan |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| report          | 100%  |

## Etc

Study consultations are available as needed.

As students from several universities are likely to take the course, either face-to-face lectures or distance lectures (zoom, teams, on-demand) will be given depending on the situation.

## Study Method

| Lecture | Contents   | Methods | Instructor   | before-and-after Le                                | Lecture rooms |
|---------|--|---------|--|--|---------------|
| 1       | The current situation surrounding healthcare for the elderly | lecture | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Low birthrate and ageing population and challenges |               |

# Geriatric Dentistry

|                        |  |         |                    |            |              |          |        |
|------------------------|--|---------|--------------------|------------|--------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                               |         |                    | Grades     | 1 ~ 3 grades | Semester | Spring |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30           | Credits  | 2      |
| Responsible Instructor | KARAKI JUNICHI   |         |                    |            |              |          |        |
| Instructor(s)          | KARAKI JUNICHI, KUBOTA JUNPEI, TADA YOUKO, ISOBE AYAKA |         |                    |            |              |          |        |

| Lecture | Contents   | Methods | Instructor   | before-and-after Le  | Lecture rooms |
|---------|--|---------|--|--|---------------|
| 2       | The current situation surrounding healthcare for the elderly | lecture | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | elderly healthcare system  |               |
| 3       | The current situation surrounding healthcare for the elderly | lecture | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | terminal care  |               |
| 4       | Characteristics of common oral diseases in the elderly.      | lecture | KARAKI JUNICHI<br>TADA YOUKO<br>ISOBE AYAKA<br>KUBOTA JUNPEI | biofilm  |               |
| 5       | Characteristics of common oral diseases in the elderly.      | lecture | KARAKI JUNICHI<br>TADA YOUKO<br>ISOBE AYAKA<br>KUBOTA JUNPEI | Xerostomia   |               |
| 6       | Characteristics of common oral diseases in the elderly.      | lecture | KARAKI JUNICHI<br>TADA YOUKO<br>ISOBE AYAKA<br>KUBOTA JUNPEI | Functional oral care   |               |
| 7       | Oral hygiene and infectious diseases                         | lecture | TADA YOUKO<br>ISOBE AYAKA<br>KUBOTA JUNPEI<br>KARAKI JUNICHI | oral function  |               |
| 8       | Oral hygiene and infectious diseases                         | lecture | KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA<br>KARAKI JUNICHI | oral function  |               |
| 9       | Oral hygiene and infectious diseases                         | lecture | KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA<br>KARAKI JUNICHI | periodontal disease  |               |
| 10      | House Call Dentistry   | lecture | TADA YOUKO<br>ISOBE AYAKA<br>KARAKI JUNICHI<br>KUBOTA JUNPEI | nursing level (between 1 and 5 based on assessment of care requirements) |               |
| 11      | House Call Dentistry   | lecture | TADA YOUKO<br>ISOBE AYAKA<br>KARAKI JUNICHI<br>KUBOTA JUNPEI | Nursing homes for the elderly  |               |
| 12      | House Call Dentistry   | lecture | TADA YOUKO<br>ISOBE AYAKA<br>KARAKI JUNICHI<br>KUBOTA JUNPEI | Nutritional intake   |               |

2025年度

subject code:215013

# Geriatric Dentistry

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                               |         |                    | Grades     | 1~3 grades | Semester | Spring |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KARAKI JUNICHI   |         |                    |            |            |          |        |
| Instructor(s)          | KARAKI JUNICHI, KUBOTA JUNPEI, TADA YOUKO, ISOBE AYAKA |         |                    |            |            |          |        |

| Lecture | Contents  | Methods            | Instructor   | before-and-after Le  | Lecture rooms |
|---------|---|--------------------|--|----------------------|---------------|
| 1 3     | Basic knowledge of the oral environment and oral care | Lectures/exercises | KARAKI JUNICHI<br>ISOBE AYAKA<br>TADA YOUKO<br>KUBOTA JUNPEI | dental caries        |               |
| 1 4     | Basic knowledge of the oral environment and oral care | Lectures/exercises | KARAKI JUNICHI<br>ISOBE AYAKA<br>TADA YOUKO<br>KUBOTA JUNPEI | aspiration pneumonia |               |
| 1 5     | Approaches to healthcare for the elderly              | Lectures/exercises | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | QOL(Quality of Life) |               |

# Geriatric Dentistry

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                               |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KARAKI JUNICHI   |         |                    |            |            |          |        |
| Instructor(s)          | KARAKI JUNICHI, KUBOTA JUNPEI, TADA YOUKO, ISOBE AYAKA |         |                    |            |            |          |        |

## Course Description

The objective is to understand the characteristics of dental disease in old age and its relationship to systemic conditions, and to develop knowledge of support for older people from a health promotion perspective by learning about the adjacent field of dentistry for older people and patient-reported outcomes.

## Attainment Objectives

1. understand the oral-related diseases that are common in old age.
2. understand the importance of patient-reported outcomes and quality of life in the field of geriatric dentistry.
3. gain knowledge of adjacent areas of geriatric dentistry.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Lecture and exercise handouts are distributed. |        |           |

## Reference Books

| Title                             | Author             | Publisher |
|-----------------------------------|--------------------|-----------|
| Dental Guidebook for the Elderly. | Shigenobu Nakamura | Nanzando  |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 100%  |

## Etc

Study consultations are available as needed.

As students from several universities are likely to take the course, either face-to-face lectures or distance lectures (zoom, teams, on-demand) will be given depending on the situation.

## Study Method

| Lecture | Contents   | Methods | Instructor   | before-and-after Le           | Lecture rooms |
|---------|--|---------|--|-------------------------------|---------------|
| 1       | Insurance schemes relating to healthcare for the elderly | lecture | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | nursing-care insurance system | その他           |
| 2       | Insurance schemes relating to healthcare for the elderly | lecture | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | health insurance system       | その他           |

# Geriatric Dentistry

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                               |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KARAKI JUNICHI   |         |                    |            |            |          |        |
| Instructor(s)          | KARAKI JUNICHI, KUBOTA JUNPEI, TADA YOUKO, ISOBE AYAKA |         |                    |            |            |          |        |

| Lecture | Contents  | Methods            | Instructor   | before-and-after Le                               | Lecture rooms |
|---------|---|--------------------|--|---|---------------|
| 3       | QOL(Quality of life) and PRO(Patient-reported outcomes) | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Health-related quality of life                    | その他           |
| 4       | QOL(Quality of life) and PRO(Patient-reported outcomes) | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Patient-reported outcomes                         | その他           |
| 5       | Dementia  | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | core symptom of dementia                          | その他           |
| 6       | Dementia  | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | behavioral and psychological symptoms of dementia | その他           |
| 7       | Disasters and dentistry                                 | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Disaster Medical Assistance Team                  | その他           |
| 8       | Disasters and dentistry                                 | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Base hospital for disasters                       | その他           |
| 9       | Disasters and dentistry                                 | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Emergency medical information system              | その他           |
| 10      | Dysphagia and aspiration pneumonia                      | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Screening for feeding and swallowing disorders.   | その他           |
| 11      | Dysphagia and aspiration pneumonia                      | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Indirect therapy                                  | その他           |
| 12      | Dysphagia and aspiration pneumonia                      | lecture            | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Direct therapy                                    | その他           |
| 13      | Clinical assessment of older people.                    | Lectures/exercises | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | clinical assessment                               | その他           |

2025年度

subject code:215014

# Geriatric Dentistry

|                        |  |         |                    |            |            |          |        |
|------------------------|--|---------|--------------------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry                               |         |                    | Grades     | 1~3 grades | Semester | Winter |
| Subject                | Choice   | Methods | Lesson and seminar | Total time | 30         | Credits  | 2      |
| Responsible Instructor | KARAKI JUNICHI   |         |                    |            |            |          |        |
| Instructor(s)          | KARAKI JUNICHI, KUBOTA JUNPEI, TADA YOUKO, ISOBE AYAKA |         |                    |            |            |          |        |

| Lecture | Contents                                 | Methods            | Instructor   | before-and-after Le                  | Lecture rooms |
|---------|--|--------------------|--|--------------------------------------|---------------|
| 1 4     | Clinical assessment of older people.     | Lectures/exercises | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | clinical assessment                  | その他           |
| 1 5     | Approaches to healthcare for the elderly | Lectures/exercises | KARAKI JUNICHI<br>KUBOTA JUNPEI<br>TADA YOUKO<br>ISOBE AYAKA | Issues in healthcare for the elderly | その他           |

# Introduction to Polymer Physics

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MOCHIDUKI SHINICHI       |        |        |            |            |          |        |
| Instructor(s)          | MOCHIDUKI SHINICHI       |        |        |            |            |          |        |
|                        |                          |        |        |            |            |          |        |

## Course Description

【Language】 Official language; Japanese To conduct research on biopolymers and environmental materials, understanding physical properties of polymers is extremely important. This lecture explains physical properties of polymers.

## Attainment Objectives

Studying the several basic knowledge required in industrial field such as molecular distribution, crystallization, scattering, and rheology.

## Textbooks

| Title  | Author | Publisher |
|--|--------|-----------|
| Basic Polymer Science(The Society of Polymer Science) ISBN-10:4807906356 |        |           |

## Grading Criteria and Method of Evaluation

| Evaluation item | Ratio |
|-----------------|-------|
| Report          | 100%  |

## Study Method

| Lecture | Contents                   | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|----------------------------|---------|------------|---------------------|---------------|
| 1       | What is the Polymer        | Lecture |            |                     |               |
| 2       | Single Chain Conformations | Lecture |            |                     |               |
| 3       | Configurations of Polymers | Lecture |            |                     |               |
| 4       | Conformations of Polymers  | Lecture |            |                     |               |
| 5       | Crystalline State          | Lecture |            |                     |               |
| 6       | Primary Crystallization    | Lecture |            |                     |               |
| 7       | Secondary Crystallization  | Lecture |            |                     |               |
| 8       | Rubber Elasticity          | Lecture |            |                     |               |
| 9       | Viscoelasticity            | Lecture |            |                     |               |

2025年度

subject code:215021

# Introduction to Polymer Physics

|                        |                          |        |        |            |            |          |        |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | MOCHIDUKI SHINICHI       |        |        |            |            |          |        |
| Instructor(s)          | MOCHIDUKI SHINICHI       |        |        |            |            |          |        |

| Lecture | Contents  | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|---|---------|------------|---------------------|---------------|
| 10      | Dielectric Property                                 | Lecture |            |                     |               |
| 11      | Interfacial Property                                | Lecture |            |                     |               |
| 12      | Polymer and Scattering I 【Colloid】                  | Lecture |            |                     |               |
| 13      | Polymer and Scattering II 【Light scattering method】 | Lecture |            |                     |               |
| 14      | Polymer and Scattering III 【Molecular weight】       | Lecture |            |                     |               |
| 15      | Summary   | Lecture |            |                     |               |

# Biomaterials

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Spring |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | NAKAZAWA KOUJI           |        |        |            |            |          |        |  |
| Instructor(s)          | NAKAZAWA KOUJI           |        |        |            |            |          |        |  |

## Course Description

【Language】 Official language; Japanese  
 Biomaterial is any substance (other than drugs) or combination of substances synthetic and natural in origin, which can be used for any period of time, as a whole or as a system which treats, augments, or replaces any tissue, organ, or function of the body. In this lecture, we discuss the biomaterials.

## Attainment Objectives

1. You can understand the properties and requirements of biomaterials.2. You can understand the reactions between the living body and biomaterials.3. You can acquire the knowledge for development of biomaterials.4. You can learn the trend of current biomaterial development.5. You can propose the direction and idea for biomaterial development.

## Grading Criteria and Method of Evaluation

| Evaluation item                   | Ratio |
|-----------------------------------|-------|
| Active participation to the class | 30%   |
| Report                            | 70%   |

## Study Method

| Lecture | Contents                              | Methods | Instructor | before-and-after Le | Lecture rooms |
|---------|---------------------------------------|---------|------------|---------------------|---------------|
| 1       | What are biomaterials ?               | Lecture |            |                     |               |
| 2       | Necessary conditions of biomaterials  | Lecture |            |                     |               |
| 3       | Biocompatibility                      | Lecture |            |                     |               |
| 4       | Foreign matter reactions              | Lecture |            |                     |               |
| 5       | Biomaterials and biological reactions | Lecture |            |                     |               |
| 6       | Surface design of biomaterials        | Lecture |            |                     |               |
| 7       | Safety testing                        | Lecture |            |                     |               |
| 8       | Metals                                | Lecture |            |                     |               |
| 9       | Ceramics                              | Lecture |            |                     |               |
| 10      | Polymers                              | Lecture |            |                     |               |
| 11      | Composites                            | Lecture |            |                     |               |

2025年度

subject code:215022

# Biomaterials

|                        |                          |         |        |            |            |          |        |  |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~2 grades | Semester | Spring |  |
| Subject                | Choice                   | Methods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | NAKAZAWA KOUJI           |         |        |            |            |          |        |  |
| Instructor(s)          | NAKAZAWA KOUJI           |         |        |            |            |          |        |  |

| Lecture | Contents                      | Methods      | Instructor | before-and-after Le | Lecture rooms |
|---------|-------------------------------|--------------|------------|---------------------|---------------|
| 12      | Presentation and Discussion 1 | Presentation |            |                     |               |
| 13      | Presentation and Discussion 2 | Presentation |            |                     |               |
| 14      | Discussion                    | Lecture      |            |                     |               |
| 15      | Summary                       | Lecture      |            |                     |               |

# Biomechanics

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Spring |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 32         | Credits  | 2      |  |
| Responsible Instructor | YAMADA HIROSHI           |        |        |            |            |          |        |  |
| Instructor(s)          | YAMADA HIROSHI           |        |        |            |            |          |        |  |

## Course Description

【Language】 Japanese A human body is subjected to external and internal forces, and some functions and behaviors of body components can be dealt as mechanical phenomena. By revealing the correlations between biological phenomena and mechanical factors, one can enhance healthy conditions and protect the body from disorders and diseases with an aid of engineering. This class introduces the methods in solid biomechanics to evaluate or analyze the structures, functions and responses of human body components to learn the mechanical characteristics of musculoskeletal and cardiovascular systems, etc. It also introduces some approaches to the body components with engineering discipline.

## Textbooks

| Title  | Author    | Publisher |
|--|-----------|-----------|
| Fundamentals of mechanics and biomechanics, in Japanese (ISBN 978-4-339-07230-3) | H. Yamada |           |

## Grading Criteria and Method of Evaluation

| Evaluation item                             | Ratio |
|---|-------|
| short reports in each class                 | 40%   |
| presentations and reports of investigations | 60%   |

## Study Method

| Lecture | Contents | Methods | Instructor     | before-and-after Le                                    | Lecture rooms |
|---------|----------|---------|----------------|--|---------------|
| 1       |          | Lecture | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 2       |          | Lecture | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 3       |          | Lecture | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |

# Biomechanics

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Spring |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 32         | Credits  | 2      |  |
| Responsible Instructor | YAMADA HIROSHI           |        |        |            |            |          |        |  |
| Instructor(s)          | YAMADA HIROSHI           |        |        |            |            |          |        |  |

| Lecture | Contents | Methods  | Instructor     | before-and-after Le                                    | Lecture rooms |
|---------|----------|----------|----------------|--|---------------|
| 4       |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 5       |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 6       |          | Practice | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 7       |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 8       |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 9       |          | Practice | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 10      |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 11      |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 12      |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 13      |          | Lecture  | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 14      |          | Practice | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |

2025年度

subject code:215032

# Biomechanics

|                        |                          |         |        |            |            |          |        |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~2 grades | Semester | Spring |
| Subject                | Choice                   | Methods | Lesson | Total time | 32         | Credits  | 2      |
| Responsible Instructor | YAMADA HIROSHI           |         |        |            |            |          |        |
| Instructor(s)          | YAMADA HIROSHI           |         |        |            |            |          |        |

| Lecture | Contents | Methods  | Instructor     | before-and-after Le                                    | Lecture rooms |
|---------|----------|----------|----------------|--|---------------|
| 15      |          | Practice | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |
| 16      |          | Practice | YAMADA HIROSHI | preparation and review for the lectures and exercises. |               |

# Advanced Bioanalytical chemistry

|                        |                          |        |        |            |            |          |        |  |
|------------------------|--------------------------|--------|--------|------------|------------|----------|--------|--|
| Course Affiliation     | the Faculty of Dentistry |        |        | Grades     | 1~2 grades | Semester | Winter |  |
| Subject                | Choice                   | Mehods | Lesson | Total time | 30         | Credits  | 2      |  |
| Responsible Instructor | SATOU SHINOBU            |        |        |            |            |          |        |  |
| Instructor(s)          | SATOU SHINOBU            |        |        |            |            |          |        |  |

## Course Description

【Language】 English and Japanese The aim of this course is to help students acquire an understanding of Chemical Biology from interaction analysis methods between small molecules and Nucleic Acid, or small molecules and Protein.

## Attainment Objectives

Upon completion of this course, students will be able to do the following:1. Learn about proteins, nucleic acids and enzymes2. Understand the principle of UV-Vis spectroscopy analysis, isothermal titration calorimetry, quartz crystal microbalance, surface plasmon resonance, circular polarization dichroism analysis, electrochemical measurement, atomic force microscope which are representative analytical methods3. How to handle data, and statistical analysis method.

## Reference Books

| Title   | Author | Publisher  |
|---|--------|------------|
| Understanding Bioanalytical Chemistry-Principle and Applications-(2009) |        | Pub. Wiley |

## Grading Criteria and Method of Evaluation

| Evaluation item                      | Ratio |
|--------------------------------------|-------|
| 10 Contents × 10 points= 100 points. | 100%  |

## Study Method

| Lecture | Contents  | Methods | Instructor | before-and-after Le            | Lecture rooms |
|---------|---|---------|------------|--------------------------------|---------------|
| 1       | Introduction to Biomolecules                      | Lecture |            | Homework of previously lecture |               |
| 2       | Property of Protein, Nucleic Acid, and Enzyme     | Lecture |            | Homework of previously lecture |               |
| 3       | Applications of spectroscopy-1 (Binding analysis) | Lecture |            | Homework of previously lecture |               |
| 4       | Applications of spectroscopy-2 (Kinetic analysis) | Lecture |            | Homework of previously lecture |               |

# Advanced Bioanalytical chemistry

|                        |                          |         |        |            |            |          |        |
|------------------------|--------------------------|---------|--------|------------|------------|----------|--------|
| Course Affiliation     | the Faculty of Dentistry |         |        | Grades     | 1~2 grades | Semester | Winter |
| Subject                | Choice                   | Methods | Lesson | Total time | 30         | Credits  | 2      |
| Responsible Instructor | SATOU SHINOBU            |         |        |            |            |          |        |
| Instructor(s)          | SATOU SHINOBU            |         |        |            |            |          |        |

| Lecture | Contents  | Methods | Instructor | before-and-after Le            | Lecture rooms |
|---------|---|---------|------------|--------------------------------|---------------|
| 5       | Applications of spectroscopy-3 (Thermodynamic analysis) | Lecture |            | Homework of previously lecture |               |
| 6       | Isothermal Titration Calorimetry                        | Lecture |            | Homework of previously lecture |               |
| 7       | Quartz Crystal Microbalance                             | Lecture |            | Homework of previously lecture |               |
| 8       | Surface Plasmon Resonance                               | Lecture |            | Homework of previously lecture |               |
| 9       | Circular Dichroism Spectroscopy analysis                | Lecture |            | Homework of previously lecture |               |
| 10      | Electrochemical measurement (Diffusion process)         | Lecture |            | Homework of previously lecture |               |
| 11      | Electrochemical measurement (Adsorption process)-1      | Lecture |            | Homework of previously lecture |               |
| 12      | Electrochemical measurement (Adsorption process)-2      | Lecture |            | Homework of previously lecture |               |
| 13      | Atomic Force Microscope                                 | Lecture |            | Homework of previously lecture |               |
| 14      | Statistical analysis                                    | Lecture |            | Homework of previously lecture |               |
| 15      | Summary   | Lecture |            | Homework of previously lecture |               |