2026

Graduate School of Life Dentistry at Tokyo

Doctoral Course

Syllabus

The Nippon Dental University

Contents

Foreword

This syllabus provides comprehensive guidelines for students enrolled in the Graduate School of Life Dentistry at Tokyo, The Nippon Dental University. Our program is designed to foster academic excellence and research proficiency in the field of dentistry.

1. **Graduate Education Structure**: Graduate education encompasses lectures on major subjects, associate subjects, other related topics, and detailed research directions for dissertation preparation.
2. **Program Duration**: The doctoral program typically spans four years, with a maximum allowable period of eight years. Exceptionally performing third-year students who have completed 30 credits and demonstrated outstanding research achievements may be eligible to complete the program in less than four years.
3. **Course and Credit Selection**: Students must select their courses and credits under the guidance of the director of the major-subject program, accumulating at least 30 credits during the registration period.
4. **Notification of Course Selection**: Upon approval from the director of the major-subject program, students must inform the Director of the Graduate School of Life Dentistry at Tokyo of their chosen lecture subjects.
5. **Research Guidance**: Students can receive necessary research guidance under the direction of the major-subject program director, including opportunities to conduct research at other universities and research institutes.
6. **Completion Requirements**: To complete the doctoral program, students must adhere to all guidelines, pass a dissertation examination, and succeed in a final examination.
7. **Credit Requirement for Dissertation Submission**: Students must earn a total of 30 credits in their appointed major subject to be eligible to submit their dissertation to the committee.
8. **Final Examination**: The final examination tests the dissertation and related major subjects through oral or written assessments.
9. **Degree Awarding**: In accordance with the regulations of The Nippon Dental University, successful candidates who meet all guidelines will be awarded a PhD by the Nippon Dental University School of Life Dentistry.

Major Subject Programs / Director

Courses	Major Subject Programs	Directors
Basic Dental Subjects	Anatomy	Masataka Sunohara
	Histology	Kenichiro Kikuchi
	Physiology	Chikako Saiki
	Biochemistry	Keitarou Saiki
	Pathology	Yuuichi Soeno
	Microbiology	Yukihiro Takahashi
	Pharmacology	Takeo Tsutsui
	Oral Health	Tomoko Tanaka Katsuo Oshima
	Dental Materials Science	Akikazu Shinya
	Tissue Engineering & Regenerative Medicine	Taka Nakahara
	Forensic Dentistry	Kaori Iwahara
Clinical Dental Subjects	Endodontics	Takashi Okiji
	Removable Prosthodontics	Yuka Sumita
	Crown & Bridge Prosthodontics	Harunori Gomi
	Oral and Maxillofacial Surgery	Takafumi Satomi
	Orthodontics and Dentofacial Orthopedics	Kazuhito Arai
	Oral and Maxillofacial Radiology	Taisuke Kawai
	Pediatric Dentistry	Hiroyuki Karibe
	Dental Anesthesiology	Katsuhisa Sunada
	Periodontology	Yukihiro Numabe
	Adhesive Dentistry	-
	Clinical Oral Rehabilitation	-
	Systemic-Health Related Preventive Medicine	Shigemasa Tani
	Tumor Science	Kenichi Sakurai

N.B. Currently, applications for Clinical Oral Rehabilitation are not accepted.

Major Subject Programs and Main Themes of the Study

Major Subject Programs (Director)	Main Themes of the Study
Anatomy (Masataka Sunohara)	1. Meso-scale anatomical analysis of vascular network patterning in the maxillofacial region 2. Analysis of molecular mechanisms in the vessel formation and angiogenesis process during tooth germ development 3. Analysis of structural changes in three-dimensional micromorphology during growth and development of the maxillary and mandibular bone
Histology (Kenichiro Kikuchi)	1. Histochemistry research on embryology, differentiation and aging of the salivary gland 2. Molecular biological study on injury and recovery of the salivary gland 3. Analysis of mechanisms of Epithelial-mesenchymal Interactions in Oral tissue
Physiology (Chikako Saiki)	1. Effect of oral and maxillofacial perception and/or motor activity on body functions 2. Taste sensation and the cognitive processing in human subjects 3. Research on physiological homeostasis : influence of environmental factors on respiration, circulation and metabolism
Biochemistry (Keitarou Saiki)	1. Analysis of signal transduction and gene transcription mechanisms in cancer tissue 2. Molecular biological analysis of keratinocyte differentiation and dedifferentiation mechanisms 3. Analysis of mechanisms related to the development and progression of non-neoplastic diseases 4. Molecular biological analysis of the causative agents of chronic periodontitis
Pathology (Yuuichi Soeno)	1. Multifaceted structural/functional analysis of oral cancer and mucosal lesions 2. Comparative pathological analysis of oral diseases in animal models 3. Molecular network analysis of maxillofacial development and the pathogenesis of congenital anomalies
Microbiology (Yukihiro Takahashi)	1. Research on the pathogenicity of oral streptococci in infectious endocarditis 2. Molecular biological analysis on the pathogenetic factors of the causative agents of chronic periodontitis 3. Molecular biological analysis on the pathogenetic factors of the causative agents of aggressive periodontitis
Pharmacology (Takeo Tsutsui)	1. Functional analysis of stem cells 2. Development of tooth and dental pulp regeneration techniques 3. Investigation for the safety and efficacy of medicines
Oral Health (Tomoko Tanaka) (Katsuo Oshima)	1. Liver, heart, and pancreas regeneration by dental pulp stem cells and volatile sulfur compounds 2. Research on dental health activities at each life stage 3. Research on socioeconomic approaches for preventive dentistry

Major Subject Programs and Main Themes of the Study

Major Subject Programs (Director)	Main Themes of the Study
Dental Materials Science (Akikazu Shinya)	1. Clinical application of intraoral scanner and it's precision 2. Applications of novel resin composites and resin adhesive cement 3. Research on the mechanical properties of novel dental materials, and clinical procedures 4. Clinical application of CAD/CAM technique 5. Basic and clinical applications of Additive Manufacturing
Tissue Engineering & Regenerative Medicine (Taka Nakahara)	1. Isolation, characterization, and differentiation of multipotent stem cells derived from human teeth 2. Engineering of test-tube dental implants for regenerative therapy 3. Cell and molecular biology of tooth/periodontal development and regeneration
Forensic Dentistry (Kaori Iwahara)	1. Recognition, prevention of physical abuse and neglect, and child care support 2. Personal dental identification 3. Disaster dentistry
Endodontics (Takashi Okiji)	1. Development and evaluation of endodontic equipment, instruments, and materials 2. Assessment of NiTi rotary root canal instrumentation and root canal obturation techniques 3. Inflammation and repair processes in the dental pulp 4. Analysis of dental and jawbone morphogenesis and development
Removable Prosthodontics (Yuka Sumita)	1. Relationship between oral health and general health 2. Relationship between prosthodontic treatment and oral function, general health 3. Development of the device to evaluate the oral function 4. Research for prosthodontic materials.
Crown & Bridge Prosthodontics (Harunori Gomi)	1. Clinical application of glass-fiber-reinforced hybrid resin restorative materials 2. Computer-supported examination, diagnosis, and restorative appliance system 3. Adhesion techniques and CAD/CAM esthetic restorations
Oral and Maxillofacial Surgery (Takafumi Satomi)	1. Research of local invasion and metastasis of oral squamous cell carcinoma 2. Tissue regeneration program that uses growth factors and biomaterials 3. Development of a novel bone reconstruction procedure using 3D-printing techniques. 4. Research and development of new tissue regeneration therapies from human dental pulp stem cells
Orthodontics and Dentofacial Orthopedics (Kazuhito Arai)	1. Anthropologic investigation of the causes of malocclusion 2. Research on new diagnostic methods of malocclusion 3. Biomechanical research in orthodontic appliances

Major Subject Programs and Main Themes of the Study

Major Subject Programs (Director)	Main Themes of the Study
Oral and Maxillofacial Radiology (Taisuke Kawai)	1. Research on image diagnosis for maxillofacial region 2. Research related to radiation protection during radiological examinations 3. Research on image quality of the CBCT examination 4. Research on computer aided diagnosis in dentistry 5. Research on ultrasound-guided nerve ganglion block
Pediatric Dentistry (Hiroyuki Karibe)	1. Neural mechanisms underlying emotional responses to dental stimuli 2. Prevention of oral diseases in childhood 3. Dental development in children with systemic diseases
Dental Anesthesiology (Katsuhisa Sunada)	1. Research on the disposition and potency of local anesthetics 2. Application of α_2 receptor agonists in the dental anesthesia field 3. Research on ambulatory anesthesia: Drugs, evaluation, techniques, etc. 4. Collecting basic data and sending messages for clinical application of the tooth cell bank.
Periodontology (Yukihiro Numabe)	1. Research on the relationship between periodontal disease and systemic disease 2. Research on the effects of smoking on periodontal tissue 3. Development on the new examination for periodontal diseases 4. Epidemiological research on periodontal diseases 5. Application of LED and lasers to periodontal treatment 6. Research on the pathological condition improving factor for periodontal disease 7. Development of oral and gut microbiome-targeted therapies for periodontal disease
Adhesive Dentistry ( )	1. Evaluation of the behavior of metal-free adhesive restorations in *in vivo* and *in vitro* environments 2. Development and evaluation of novel restoration methods and materials contributed to the next generation MID esthetic restorations 3. Comprehensive investigation of the innovative digital restoration system 4. Revitalization of bio-adhesion for the affinity of tooth substance
Systemic-Health Related Preventive Medicine (Shigemasa Tani)	1. Preventive medicine approaches aimed at extending a healthy lifespan 2. Association between metabolic syndrome and systemic diseases 3. Research on how lifestyle habits contribute to the onset of diseases 4. Pathophysiology of sleep apnea syndrome 5. Epidemiological research to explore the factors that lead to the development of lifestyle-related diseases
Tumor Science (Kenichi Sakurai)	1. Study on changes in saliva volume and oral bacteria during cancer chemotherapy 2. Research on the relationship between molecular targeted drugs and oral diseases 3. Research on the relationship between check point inhibitors and oral diseases 4. Research on human anti-RANKL antibody and oral environment 5. Research on treatment of bone metastasis from cancer and osteonecrosis of the jaw

Anatomy

Director・Position	Masataka Sunohara, Professor
Teaching Members・Position	Yoshiaki Ide, Associate Professor Kingo Suzuki, Senior Assistant Professor Yuuki Maeda, Senior Assistant Professor
Location of Laboratory	Anatomy building・3rd floor
Extension Phone Number・ E-mail Address	2300・ma-suno@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	First semester : Monday・15:00~17:00 Second semester : Friday・15:00~17:00
Classroom	Anatomy building・3rd floor
Practice Hours	Thursday・13:00~17:00
Practice Room	Anatomy building・2nd floor, 3rd floor
Objective for Lectures	Students will acquire specialized knowledge of morphology from macroscopic to microscopic anatomy and molecular cell biology, which are fundamental subjects in basic medical science, and will understand the molecular mechanisms of normal human structure through the "observation" of anatomical specimens. The aim is to develop talented individuals who are fully aware of the dignity of life and medical ethics.
Contents and Plans for Lectures	1. Students will read English journal articles on macroanatomy, mainly on the skeletal and vascular systems, and on the development and morphogenesis of the head and neck, deepening their understanding of the research field and engaging in discussions to solve problems. 2. Students will learn techniques for stereomicroscopes and optical microscopes. 3. Students will learn immunohistochemical staining and μCT analysis methods. 4. Students will understand the molecular mechanisms and research methods of cell function and morphological changes caused by differentiation and activation, and develop the ability to advance research. 5. The aim is to train researchers and educators through participation in academic conferences, presentations, and instruction in anatomical labs.
Evaluation Method for Grades	1. Analyze a specific topic related to the skeletal, circulatory, respiratory, or digestive systems at the molecular and cellular biological level using humans or experimental animals, and present the results at a conference. 2. Compile the analyzed data into a research paper (doctoral thesis).

Textbooks, Teaching, Materials, References	English journal articles and academic books
Instructions for Course and Qualifications	1. Thesis guidance will be provided by a supervising professor. Students will not be able to obtain more than the required number of credits even if they exceed the required number of hours. 2. As a general rule, students are required to attend both lectures and practical training, and individual efforts are expected to be made toward presenting at academic conferences.

Histology

Director・Position	Kenichiro Kikuchi, Professor
Teaching Members・Position	Rie Ikeda, Senior Assistant Professor Kiyomi Takada, Senior Assistant Professor
Location of Laboratory	Main building・6th floor
Extension Phone Number・ E-mail Address	2348・kikuchi-k@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Wednesday・13:00~15:00
Classroom	Main building・6th floor laboratories Centennial anniversary building・6th floor 5th conference room
Practice Hours	Thursday・13:00~17:00
Practice Room	Main building・6th floor laboratories
Objective for Lectures	Obtain advanced skill and knowledge of Histology.
Contents and Plans for Lectures	Lectures, Discussion, Read treatise, apprenticeship program, Conference presentation
Evaluation Method for Grades	The grade is assessed in a comprehensive manner, based on an examination given at the end of the subject, involvement in classes, including presentations and discussions, reports, and small quizzes as well as the results of a research project.
Textbooks, Teaching, Materials, References	A Textbook of Histology, Ten Cate Oral histology, Oral Histology and Embryology, original paper etc.
Instructions for Course and Qualifications	A goal to reach for Doctor of Philosophy degree.

Physiology

Director・Position	Chikako Saiki, Professor
Teaching Members・Position	Li Xiao, Associate Professor Ryoji Ide, Senior Assistant Professor
Location of Laboratory	Main building・5th floor
Extension Phone Number・ E-mail Address	2327・chikako@tky.ndu.ac.jp(CS) xiaoli@tky.ndu.ac.jp(XL), ryo-ide@tky.ndu.ac.jp(RI)
Teaching Methods	Lectures and laboratory practice
School Hours	Tuesday・10:00~12:00 or 13:00~15:00
Classroom	Main building・5th floor Professor room etc.
Practice Hours	Wednesday・13:00~17:00
Practice Room	Main building・5th floor laboratories & practice room
Objective for Lectures	To understand reasonable and theoretical ways of thinking by referring to physiological studies and enjoy research activities.
Contents and Plans for Lectures	Lectures will cover the fundamental research ethics and the principles of natural, social, and human sciences; basic medicine and clinical applications relevant to oral and systemic physiology. Lectures are mostly composed of active dialogues and discussions among teaching members and students on various scientific themes. Practical training includes basic and advanced physiological research techniques, e.g. how to treat laboratory animals, how to make a hypothesis, how to interpret data and how to write physiological research papers.
Evaluation Method for Grades	Attendance. In addition, we expect good and right attitude, motivation and behavior at lectures and practices.
Textbooks, Teaching, Materials, References	Standard and specialized journals and textbooks will be used as references and teaching materials.
Instructions for Course and Qualifications	Active participation and communication are necessary and continuous efforts to gain better understandings in the lectures and improve skills in practical exercises are required. Students are expected to demonstrate their intellectual curiosity in the laboratory.

Biochemistry

Director・Position	Keitarou Saiki, Professor
Teaching Members・Position	Tadashige Chiba, Associate Professor
Location of Laboratory	Main building・6th floor
Extension Phone Number・ E-mail Address	2352・keisaiki@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Thursday・9:00~11:00
Classroom	Main building・6th floor laboratories
Practice Hours	Thursday・13:00~17:00
Practice Room	Main building・6th floor laboratories
Objective for Lectures	
Contents and Plans for Lectures	
Evaluation Method for Grades	
Textbooks, Teaching, Materials, References	
Instructions for Course and Qualifications	

Pathology

Director・Position	Yuuichi Soeno, Professor
Teaching Members・Position	Yuji Taya, Adjunct Professor
Location of Laboratory	Main building・6th floor
Extension Phone Number・ E-mail Address	2358・patho@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Tuesday・10:00~12:00
Classroom	Main building・6th floor laboratories
Practice Hours	Tuesday・13:00~17:00
Practice Room	Main building・6th floor laboratories
Objective for Lectures	To learn about trends in research currently underway around the world, and to acquire the knowledge and techniques necessary to carry out basic research.
Contents and Plans for Lectures	Our lectures will provide the best opportunity to understand general pathology and to practice reading latest research papers published in scientific journals. In the practical training, you will learn about pathological diagnosis through case studies, basic operations for genetic analysis, tissue observation, and *in vitro* experiments, as well as handling of laboratory animals and computer literacy including taking microscopic images. It will expand to experimental methods to suit your research questions.
Evaluation Method for Grades	Grades will be evaluated comprehensively based on understanding of the course contents, attitude during presentations and discussions, attendance status, and research progress.
Textbooks, Teaching, Materials, References	Scientific journals such as Nature and Science, and books in specialized fields.
Instructions for Course and Qualifications	We expect to have a sincere attitude during all training course and to act proactively to assimilate knowledge and explore the unknown.

Microbiology

Director・Position	Yukihiro Takahashi, Professor
Teaching Members・Position	Yumiko Tashiro, Associate Professor Yuki Yamanaka, Senior Assistant Professor
Location of Laboratory	Main building・5th floor
Extension Phone Number・ E-mail Address	2332・biseibut@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Friday・9:00~11:00
Classroom	Centennial anniversary building・6th floor 5th conference room
Practice Hours	Friday・13:00~17:00
Practice Room	Centennial anniversary building・6th floor 5th conference room
Objective for Lectures	Understanding the interaction between microbial pathogenicity and host defense mechanism to adapt updated microbiological methods to the research
Contents and Plans for Lectures	Lecture: microbiology and immunology, and related subjects such as biochemistry, molecular biology and cell biology Seminar: Discussion for certain microbiological themes to establish basic technique
Evaluation Method for Grades	Comprehensive evaluation considering a record of attendance and submitted work, and brief examinations in case
Textbooks, Teaching, Materials, References	Notified as necessary
Instructions for Course and Qualifications	Submission of the manuscript for the paper to the microbiological journal

Pharmacology

Director・Position	Takeo Tsutusi, Professor
Teaching Members・Position	Daisuke Torii, Senior Assistant Professor Yui Jin, Senior Assistant Professor
Location of Laboratory	Main building・5th floor
Extension Phone Number・ E-mail Address	2336・ryuryu@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Thursday・13:00~16:00
Classroom	Main building・5th floor laboratories
Practice Hours	Thursday・8:30~12:00
Practice Room	Main building・5th floor laboratories & practice room Centennial anniversary building・1st basement floor Multi-purpose research facility
Objective for Lectures	Learning of basic research knowledge for the pharmacological research.
Contents and Plans for Lectures	1） Learning of research ethics and practice for good quality results. 2） Learning of research information, experimental techniques, analysis of research results and presentation skills it through the pharmacological research using cell culture and experimental animals.
Evaluation Method for Grades	Comprehensive evaluation by attendance, willingness, and understanding level.
Textbooks, Teaching, Materials, References	Specialized book, journal and print.
Instructions for Course and Qualifications	Nothing special

Oral Health

Director・Position	Tomoko Tanaka, Professor
Teaching Members・Position	Katsuo Oshima, Professor Tetsuro Horie, Senior Assistant Professor Mamiko Yamashita, Assistant Professor Naoto Hayashida, Assistant Professor
Location of Laboratory	Main building・5th floor
Extension Phone Number・ E-mail Address	2341
Teaching Methods	Lectures and laboratory practice
School Hours	Monday・10:00~12:00
Classroom	Centennial anniversary building・6th floor 5th conference room
Practice Hours	Monday・13:00~17:00
Practice Room	Main building・5th floor laboratories
Objective for Lectures	Students learn critical thinking, medical statistics, and research design as the basis for their research, and then study the theory of social medical applications. The goal is to develop a new life dentistry that integrates public health and natural science.
Contents and Plans for Lectures	The project is carried out by setting up a project at each step. The aim of the lectures is to acquire the concepts of social medicine, critical thinking, statistics and social medicine, and to learn about the current state and history of social medicine. On this basis, the relationship between the concepts of preventive medicine and health promotion and dental clinical and basic medicine is explored. Furthermore, from these investigations, a practical statistics course is conducted as training to formulate the strategy necessary for healthcare in Japan. In addition, the practical training will cover the design and actual implementation of epidemiological and experimental research that will provide evidence for the Strategy
Evaluation Method for Grades	Both lectures and practical training will be evaluated based on the level of understanding of each project, the content and degree of questioning, and attendance. The presentation of the thesis prior to the submission of the dissertation will be especially evaluated.
Textbooks, Teaching, Materials, References	Recommendations for Critical Thinking (ISBN: 978-4-7812-0094-1), Quintessence Publishing Co.
Instructions for Course and Qualifications	Students need an attitude of self-directed learning. In addition, an active attitude toward research, which is very different from that of undergraduates, is desired.

Dental Materials Science

Director・Position	Akikazu Shinya, Professor
Teaching Members・Position	Hidekazu Takahashi, Visiting Professor Yasuhiro Hotta, Associate Professor Yoshiki Ishida, Assistant Professor Daisuke Miura, Assistant Professor
Location of Laboratory	Main building・4th floor
Extension Phone Number・ E-mail Address	2320・akishi@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Friday・10:00~12:00
Classroom	Main building・4th floor practice room
Practice Hours	Friday・13:00~17:00
Practice Room	Main building・4th floor practice room
Objective for Lectures	Understanding the science of dental materials
Contents and Plans for Lectures	Introduction to the science of dental materials 1. Structure of metals 2. Gypsum metarials 3. Impression materials 4. Waxes, separating materials 5. Dental ceramics 6. Dental resin composite materials 7. Denture base acrylic resin 8. Dental abrasive
Evaluation Method for Grades	Oral Examination
Textbooks, Teaching, Materials, References	Phillips' Science of Dental Materials, 13th Edition
Instructions for Course and Qualifications	Four years course for Ph. D degree

Tissue Engineering & Regenerative Medicine

Director・Position	Taka Nakahara, Professor
Teaching Members・Position	Mai Mochizuki, Associate Professor
Location of Laboratory	Centennial anniversary building・6th floor
Extension Phone Number・ E-mail Address	2492・t.nakahara@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Tuesday・10:00~12:00
Classroom	Centennial anniversary building・6th floor laboratories 5th conference room etc.
Practice Hours	Tuesday・13:00~17:00
Practice Room	Centennial anniversary building・6th floor laboratories
Objective for Lectures	Through seminar-style research progress presentations, graduate students will critically evaluate their research methods, assert their opinions, and engage in constructive discussions by considering others' perspectives.
Contents and Plans for Lectures	Research Progress is a seminar where participants present and discuss their own research, as well as select and review relevant papers through peer discussion. The format is free-form and seminar-based, encouraging active participation in discussions. This approach helps both faculty and students develop a strong sense of identity and confidence as scientists in the fields of life dentistry.
Evaluation Method for Grades	Evaluation will be based on a comprehensive assessment of lecture and exercise participation, research practice and completion, and daily research conduct, including attendance.
Textbooks, Teaching, Materials, References	Original articles, review papers, specialized books, and standard texts.
Instructions for Course and Qualifications	There will be no unilateral lectures; graduate students are expected to acquire necessary knowledge independently. Regular participation in research progress seminars and active engagement in discussions are required. Research should be conducted autonomously after discussions with the supervising faculty. This program seeks individuals who are committed and passionate about pursuing research with sincerity, believing in the realization of regenerative medicine as promoted by the university.

Forensic Dentistry

Director・Position	Kaori Iwahara, Professor
Teaching Members・Position	Kaori Iwahara, Professor
Location of Laboratory	Centennial anniversary building・2nd floor
Extension Phone Number・ E-mail Address	2444・kaori-i@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Wednesday・14:00~16:00
Classroom	Centennial anniversary building・ 2nd floor laboratories
Practice Hours	Thursday・13:00~17:00
Practice Room	Centennial anniversary building・ 2nd floor laboratories
Objective for Lectures	Our aim is to contribute to the protection of the fundamental human rights of individuals and the maintenance of social safety and welfare by making scientific and fair medical judgments on legal cases and matters that require medical clarification and advice.
Contents and Plans for Lectures	Lectures will cover medical matters related to legal and death in order to learn and apply knowledge of forensic dentistry. Practical exercises include child abuse and dental identification examinations and evaluations, providing students with clinical forensic dental experience. Through lectures and practical exercises, students are expected to recognize the value of applying knowledge to clinical practice and to acquire the ability to implement the considered strategies and responses.
Evaluation Method for Grades	Grades will be assessed comprehensively based on attendance and understanding of lectures and practical exercises, responses to questions, the quality of the research content.
Textbooks, Teaching, Materials, References	Textbook, Specialized journals
Instructions for Course and Qualifications	Active participation in lectures and practical exercises is required. Students are expected to participate in relevant academic meeting to enhance their expertise.

Endodontics

Director・Position	Takashi Okiji, Professor
Teaching Members・Position	Takashi Okiji, Professor Taro Nishida, Senior Assistant Professor Miki Sekiya, Senior Assistant Professor Keisuke Saigusa, Assistant Professor Fumiyasu Murayama, Assistant Professor
Location of Laboratory	Centennial anniversary building・4th floor
Extension Phone Number・ E-mail Address	
Teaching Methods	Lectures and laboratory practice
School Hours	Thursday・10:00~12:00
Classroom	Centennial anniversary building・4th floor laboratories
Practice Hours	Thursday・13:00~17:00
Practice Room	Centennial anniversary building・4th floor laboratories The Nippon Dental University Hospital・2nd floor
Objective for Lectures	To acquire advanced knowledge, clinical skills, and research competencies in endodontic therapy, complete a dissertation on a selected topic, and develop the clinical expertise required to become an endodontic specialist.
Contents and Plans for Lectures	Students will read past important scientific papers and the latest academic papers on endodontics, and learn various specialized knowledge through discussions. They will also acquire the skills necessary for research and practice various research methods. In addition, students will acquire advanced diagnostic skills, treatment plan formulation, and treatment techniques through a variety of clinical cases.
Evaluation Method for Grades	Grades will be comprehensively based on understanding of lectures, practical training, oral examinations, reports, research status, case reports, and attendance.
Textbooks, Teaching, Materials, References	Pathway of the pulp, Journal of endodontics, International endodontic journal, etc.
Instructions for Course and Qualifications	Active participation in practical and lecture classes and a strong commitment to study are required. Students must have the passion to carry out research and complete a dissertation.

Removable Prosthodontics

Director・Position	Yuka Sumita, Professor
Teaching Members・Position	Hanako Uesugi, Senior Assistant Professor Marie Komino, Senior Assistant Professor Yo Akiyama, Assistant Professor
Location of Laboratory	Centennial anniversary building・4th floor
Extension Phone Number・ E-mail Address	2469
Teaching Methods	Lectures and laboratory practice
School Hours	Friday・9:00~10:00
Classroom	Centennial anniversary building・4th floor laboratories Main building・3rd floor seminar room
Practice Hours	Tuesday・13:00~17:00
Practice Room	Centennial anniversary building・4th floor laboratories The Nippon Dental University Hospital・3rd floor
Objective for Lectures	Ph.D. students will take a course exploring oral function's role in health and prosthodontics' key role. The course will summarize current knowledge and encourage discussion on future research areas. It aims to foster creativity and forward thinking. Clinical practice will provide the specialist knowledge and skills needed to become a prosthodontist.
Contents and Plans for Lectures	The lectures cover cutting-edge research on mastication, swallowing, and speech using current literature and textbooks. Clinical training includes chairside observation, diagnosis, treatment planning, basic cases, specialized techniques, and problem-solving discussions. Ph.D. students will learn to select research themes, formulate plans, and develop methods related to prosthodontics.
Evaluation Method for Grades	Comprehension, discussion, thought processes and creativity are comprehensively assessed.
Textbooks, Teaching, Materials, References	Journal, published paper from the department, textbook about prosthodontics
Instructions for Course and Qualifications	Active participation in lectures and clinical works with an inquisitive mind is a prerequisite.

Crown & Bridge Prosthodontics

Director・Position	Harunori Gomi, Professor
Teaching Members・Position	Minori Hatta, Associate Professor
Location of Laboratory	Centennial anniversary building・4th floor
Extension Phone Number・ E-mail Address	2466・h.gomi@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Wednesday・9:00~11:00
Classroom	Centennial anniversary building・4th floor laboratories
Practice Hours	Thursday・13:00~17:00
Practice Room	Centennial anniversary building・4th floor laboratories
Objective for Lectures	In order to understand the current state of dental prosthetics and prosthetic medicine, students will learn its history and related subjects, and also acquire knowledge and skills that correspond to future developments in the fields of clinical practice, dental materials, and jaw function. Furthermore, students will select a research field based on the latest information, consider an original research topic, and write a dissertation.
Contents and Plans for Lectures	Each class focuses on a few topics on one theme, delving into the history, current situation, and differences between Japan and other countries. Based on these, students will acquire the specialized knowledge necessary to develop research plans, including research topics, experimental methods, materials, data analysis, results, discussion, and conclusions. In addition, students will learn the skills necessary for research in the laboratory. They will also master techniques such as EPMA, SEM, X-ray, FEM, and CT. In clinical training, emphasis is placed on experiences that focus on easy-to-learn techniques, and students will acquire skills that will be useful in daily clinical practice.
Evaluation Method for Grades	The grades will be made based on a comprehensive assessment of the research process, conference presentations, abstracts, and so on.
Textbooks, Teaching, Materials, References	Crown and Bridge Prosthodontics, Articles in journals, Research Articles Book of NDU-Dept. of Crown and Bridge
Instructions for Course and Qualifications	To maintain an insatiable curiosity and inquiring mind in research. To have an international perspective and the spirit of a medical professional dedicated to serving the public.

Oral and Maxillofacial Surgery

Director・Position	Takafumi Satomi, Professor
Teaching Members・Position	Tomonori Matsuno, Professor Takeo Shibui, Professor
Location of Laboratory	Centennial anniversary building・5th floor
Extension Phone Number・ E-mail Address	
Teaching Methods	Lectures and laboratory practice
School Hours	Monday, Thursday・17:00~19:00
Classroom	Centennial anniversary building・5th floor laboratories
Practice Hours	Monday, Thursday・9:00~17:00
Practice Room	The Nippon Dental University Hospital・5th floor etc.
Objective for Lectures	This course aims to support students to have relevant knowledge and practical skills for oral and maxillofacial surgery in order for graduate research and future career.
Contents and Plans for Lectures	To provide lectures in the field of oral and maxillofacial surgery (anatomy, histology, physiology, biochemistry, microbiology, pharmacology, pathology, tissue engineering and regenerative medicine, oral health, radiology, anesthesiology internal medicine, surgery and oral medicine).
Evaluation Method for Grades	Students are evaluated for their grades and credits based on the course hours completed, understanding of each subject and abilities of discussion.
Textbooks, Teaching, Materials, References	No textbooks have been specified but handouts summarizing lecture topics. Face-to-face class. Combination of Japanese and English. Individual instructor introduces references of related topics.
Instructions for Course and Qualifications	Not applicable

Orthodontics and Dentofacial Orthopedics

Director・Position	Kazuhito Arai, Professor
Teaching Members・Position	Akihiro Suzuki, Assistant Professor Keisuke Tochigi, Assistant Professor
Location of Laboratory	Centennial anniversary building・3rd floor
Extension Phone Number・ E-mail Address	2455・drarai@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Monday・10:00~12:00
Classroom	Centennial anniversary building・3rd floor laboratories etc.
Practice Hours	Monday・13:00~17:00
Practice Room	Centennial anniversary building・3rd floor laboratories etc.
Objective for Lectures	To develop orthodontists who are international researchers providing treatment based on high ethical standards and the latest scientific evidence, and who are also active educators respecting traditional clinical philosophies. Another goal of the program is to achieve both the basic training attainment goals and clinical training attainment goals stipulated in the regulations for certified orthodontists by the Japanese Orthodontic Society.
Contents and Plans for Lectures	Lectures will deepen the basic knowledge of orthodontics, broaden the scope of specialized knowledge, and cultivate an inquisitive mind regarding research topics. Students will enhance their understanding of clinical applications through seminars on research and clinical review, as well as in case conferences. They will gather background information, develop research plans, conduct research, and write and present papers at local and international meetings. In clinical training, students will learn diagnostic methods based on traditional philosophies and state-of-the-art treatment techniques, and they will acquire the ability to adapt these methods to future technological advances.
Evaluation Method for Grades	In the first year, a comprehensive examination and an examination to evaluate the level of achievement of the basic training objectives of the Japanese Orthodontic Society will be conducted at the end of the year. In the second year, a presentation of the research plan, a review of the research plan, and a case review are conducted. Finally, in the fourth year, a thesis review and case evaluation are conducted. Participation in academic conferences and academic presentations will also be evaluated, as well as attitudes toward participation in reading sessions and case review seminars.

Textbooks, Teaching, Materials, References	Proffit's Contemporary Orthodontics, and related domestic and international journal articless
Instructions for Course and Qualifications	Students should actively participate in lectures and practical training. In addition, it is desirable to have a broad interest in related academic fields. To broaden their perspectives, students should make efforts to present their papers not only in Japan but also overseas.

Oral and Maxillofacial Radiology

Director・Position	Taisuke Kawai, Professor
Teaching Members・Position	Rieko Asaumi, Associate Professor Hiroshi Iwata, Associate Professor Takashi Kamio, Senior Assistant Professor Munehiro Hayashi, Senior Assistant Professor Madoka Nagaura, Senior Assistant Professor Keisuke Saitoh, Assistant Professor
Location of Laboratory	Centennial anniversary building・3rd floor
Extension Phone Number・ E-mail Address	2452
Teaching Methods	Lectures and laboratory practice
School Hours	Wednesday・9:30~11:30
Classroom	Centennial anniversary building・3rd floor laboratories Main building・3rd floor seminar room The Nippon Dental University Hospital・1st basement floor
Practice Hours	Wednesday・13:00~16:00
Practice Room	Centennial anniversary building・3rd floor laboratories The Nippon Dental University Hospital・1st basement floor
Objective for Lectures	The fundamental objective of lecture is to understand the history of oral and maxillofacial radiology and the principles of imaging modality. Furthermore, learn the clinical application of various imaging modality and develop the ability to consider and design research methods using them.
Contents and Plans for Lectures	In the lectures, to provide students opportunity to study basic principles of oral and maxillofacial radiology and imaging, and image findings of various diseases. Study group will be held regularly to discuss recent scientific articles. In the practical training, to study and practice the principles of each imaging technique and radiation protection. In addition, diagnostic training in clinical images is also provided.
Evaluation Method for Grades	Grading is evaluated comprehensively based on attendance in lectures and practical training, assertiveness and achievement.
Textbooks, Teaching, Materials, References	Textbook: Oral Radiology 8th edition, Elsevier. Scientific journals: Dento-Maxillofacial Radiology, Oral Radiology, Imaging Science in Dentistry
Instructions for Course and Qualifications	Sincere and assertive attitude will be needed for the attendance of the lectures and practical training.

Pediatric Dentistry

Director・Position	Hiroyuki Karibe, Professor
Teaching Members・Position	Tomomi Kawakami, Associate Professor Satoshi Tanaka, Associate Professor Sachie Naoi, Senior Assistant Professor Ayuko Okamoto, Senior Assistant Professor
Location of Laboratory	Centennial anniversary building・3rd floor
Extension Phone Number・ E-mail Address	2457・h-karibe@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Friday・9:00~11:00
Classroom	Main building・3rd floor seminar room
Practice Hours	Friday・13:00~17:00
Practice Room	Centennial anniversary building・3rd floor laboratories The Nippon Dental University Hospital・4th floor
Objective for Lectures	To understand the scientific methods and analysis of oral health and acquire the clinical skills necessary for the development of dental, oral, and craniofacial morphology and function in children.
Contents and Plans for Lectures	Lectures will cover the principles of natural, social, and human sciences; basic medicine and clinical applications relevant to pediatric dentistry; and the social aspects of children's oral health. Students review and abstract scientific articles, formulate hypotheses, design experiments, and summarize research results in scientific papers. Practical training includes basic and advanced pediatric dentistry techniques, clinical practice, and the design and implementation of specific research projects. In addition, students discuss contemporary research topics and present and defend their research findings.
Evaluation Method for Grades	Grades will be comprehensively evaluated based on attendance, attitude during lectures and practical sessions, the quality and timeliness of assignments, comprehension and application of research practice, effective research execution, and the completion and quality of the dissertation.
Textbooks, Teaching, Materials, References	Specialized journals and textbooks will be used as references and teaching materials.
Instructions for Course and Qualifications	Active participation in lectures and practical exercises is required. Students are expected to demonstrate intellectual curiosity and engagement.

Dental Anesthesiology

Director・Position	Katsuhisa Sunada, Professor
Teaching Members・Position	Yoshiki Shionoya, Associate Professor Yukako Tutui, Senior Assistant Professor
Location of Laboratory	Centennial anniversary building・5th floor
Extension Phone Number・ E-mail Address	2478・ksunada@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Monday・17:00~19:00
Classroom	Centennial anniversary building・5th floor laboratories
Practice Hours	Tuesday・9:00~17:00
Practice Room	The Nippon Dental University Hospital・6th floor etc.
Objective for Lectures	Acquire knowledge of the respiratory, cardiovascular, and nervous systems in order to provide safe, quality dental care. In addition, students will acquire knowledge and skills related to local anesthesia, sedation, and general anesthesia.
Contents and Plans for Lectures	Learn about the respiratory, cardiovascular, and nervous systems necessary for anesthesia. Next, students will learn about regional anesthesia, sedation, general anesthesia, BLS, and pain treatment. Students will also gain clinical experience at the affiliated hospitals and related facilities.
Evaluation Method for Grades	Attitude, attendance, and progress of the research will be judged comprehensively.
Textbooks, Teaching, Materials, References	Miller's Anesthesia, Dental Anesthesiology 8th edition
Instructions for Course and Qualifications	The company is seeking students who are actively seeking knowledge. The student must. Highly motivated to learn dental anesthesiology.

Periodontology

Director・Position	Yukihiro Numabe, Professor
Teaching Members・Position	Hiroshi Ito, Associate Professor Satoshi Sekino, Associate Professor Etsuko Murakashi, Senior Assistant Professor Hiroko Igarashi Senior Assistant Professor Ryutaro Kuraji Senior Assistant Professor
Location of Laboratory	Centennial anniversary building・5th floor
Extension Phone Number・ E-mail Address	2473・numabe-y@tky.ndu.ac.jp
Teaching Methods	Lectures and clinical practice
School Hours	Tuesday・9:00~11:30
Classroom	Main building・3rd floor 132 room
Practice Hours	Tuesday・13:00~17:00
Practice Room	Centennial anniversary building・5th floor laboratories The Nippon Dental University Hospital・3rd floor
Objective for Lectures	Understand the history of periodontology as an academic discipline, learn the theories underlying the various concepts that constitute current periodontology, and acquire knowledge of clinical applications. Additionally, cultivate a curiosity for basic and clinical research in periodontology and practice a commitment to exploring new fields.
Contents and Plans for Lectures	In the lectures, students select past important papers from academic journals related to periodontology and engage in presentations and discussions to extract various evidence underlying current concepts. In clinical training, students learn the basics and applications of periodontal treatment through actual patient care, including diagnosis, treatment planning, and hands-on periodontal therapy, acquiring the fundamental skills necessary for specialist. Furthermore, students choose a topic for basic or clinical research and learn how to design a research plan, conduct research, analyze results, and write their thesis.
Evaluation Method for Grades	Both lectures and clinical training are comprehensively evaluated based on the understanding of the content, presentation skills in lectures, participation in discussions, attendance, comprehension during clinical training, progress in research, and the quality of the thesis.
Textbooks, Teaching, Materials, References	Professional academic journals or textbooks about periodontology and periodontics.
Instructions for Course and Qualifications	We expect a sincere attitude towards all lectures and clinical training. Additionally, we encourage proactive behavior in absorbing knowledge and exploring the unknown phenomenon.

Adhesive Dentistry

Director・Position	
Teaching Members・Position	Toshio Maseki, Associate Professor Masahiko Maeno, Senior Assistant Professor
Location of Laboratory	Centennial anniversary building・6th floor
Extension Phone Number・ E-mail Address	2411・maseki@tky.ndu.ac.jp
Teaching Methods	Lectures and laboratory practice
School Hours	Wednesday・9:30~11:30
Classroom	Centennial anniversary building・6th floor laboratories 5th conference room
Practice Hours	Wednesday・13:00~16:00
Practice Room	Centennial anniversary building・6th floor laboratories The Nippon Dental University Hospital Centennial anniversary building・2nd basement floor
Objective for Lectures	Understand the demands of dental hard tissue disease and learn the fundamentals as well as the latest evidence-based restorative techniques. In addition, students will acquire practical clinical skills, including reliable, minimally invasive, and esthetic treatment modalities, to become dentists who can meet the needs and expectations of patients, with the goal of applying for board certification.
Contents and Plans for Lectures	Students will understand the nature of dental hard tissue diseases, methods of treatment and the effectiveness of various equipment. They will learn how to evaluate and examine the next generation of restorative techniques and equipment. In addition, students will master the attitudes and skills required for basic training and clinical training. In clinical training, students will further refine their restoration skills using adhesive techniques.
Evaluation Method for Grades	Both lectures and labs will be comprehensively evaluated based on attendance, effort, level of understanding, performance, and product achievement, etc.
Textbooks, Teaching, Materials, References	Specialized academic journals, textbooks, and handouts will be used.
Instructions for Course and Qualifications	Both lectures and seminars are based on the expectation that students will actively participate as medical professionals, and as a general rule, students are required to notify the school in advance if they will be absent or late for a lecture or seminar.

Systemic-Health Related Preventive Medicine

Director・Position	Shigemasa Tani, Professor
Teaching Members・Position	Minoru Furuhata, Professor
Location of Laboratory	The Nippon Dental University Hospital・3rd floor
Extension Phone Number・ E-mail Address	5599・nduinmed@tky.ndu.ac.jp
Teaching Methods	Lectures
School Hours	Thursday・9:00~11:00
Classroom	The Nippon Dental University Hospital・5th floor seminar room etc.
Practice Hours	Thursday・13:00~15:00
Practice Room	The Nippon Dental University Hospital
Objective for Lectures	This postgraduate course aims to provide knowledge of medical diseases relevant to dental diseases and lay the foundation for research on dental-medical cooperation.
Contents and Plans for Lectures	The lecture content will provide knowledge regarding medical diseases relevant to dental practice; understanding the management of dentistry-associated diseases, such as sleep apnea and metabolic syndrome; and understanding the medical collaboration between dental and medical care.
Evaluation Method for Grades	Grading will be based on a comprehensive evaluation, considering the students' attitude toward attending lectures and their understanding of internal medicine.
Textbooks, Teaching, Materials, References	INTERNAL MEDICINE FOR THE ODOTOLOGY（NAKODO 4th Edition）etc.
Instructions for Course and Qualifications	Graduate students shall conduct research and thesis practice under the guidance of a faculty advisor. However, graduate students will not be awarded more than the prescribed credits despite them attending lectures and practical training for more than the prescribed number of hours.

Tumor Science

Director・Position	Kenichi Sakurai, Professor
Teaching Members・Position	
Location of Laboratory	The Nippon Dental University Hospital
Extension Phone Number・ E-mail Address	4272・sakurai-kenichi@tky.ndu.ac.jp
Teaching Methods	Lectures
School Hours	Wednesday・9:00~11:00
Classroom	The Nippon Dental University Hospital・4th floor
Practice Hours	Wednesday・13:00~17:00
Practice Room	The Nippon Dental University Hospital
Objective for Lectures	
Contents and Plans for Lectures	
Evaluation Method for Grades	
Textbooks, Teaching, Materials, References	
Instructions for Course and Qualifications	