

For entrants in FY 2019

Appended Form 1

Specifications for Major Program

Name of School (Program) [School of Dentistry, Program of Oral Health Sciences]

Program name (Japanese)	口腔工学プログラム
(English)	Program for Oral Engineering
1. Degree to be obtained: Bachelor of Oral Health Sciences	
<p>2. Overview</p> <p>The Program for Oral Health Science provides two courses (Course of Oral Science and Course of Oral Engineering) to educate students to become researchers, educators, or highly advanced medical staff in the area of oral health sciences while liaising with other areas such as medicine, engineering, and nursing in a manner based on scientific evidence. The Course of Oral Engineering aims to enable students to acquire knowledge, skills, and attitudes regarding medicine, dentistry, and engineering, from the basics to the cutting-edge, in order to be able to contribute to the fields of dental medicine and medical care with advanced techniques, knowledge, and rich humanity in line with changes in society and future development in the sciences. The educational program provided in this course educates medical staff in fields of highly advanced oral engineering, researchers in areas of oral health science, dental technicians, and educators.</p>	
<p>3. Diploma policy (policy for awarding degrees and goal of the program)</p> <p>Course of Oral Engineering educates students to be able to integrate knowledge and skills regarding dentistry, medicine, and engineering to work in the positions in oral engineering listed below:</p> <ul style="list-style-type: none"> ▪ Dental medical staff, with the mindset of researchers, and business people, researchers, and educators with a clinical mindset; ▪ Oral engineers who can work in international fields; ▪ Educators and researchers who can pioneer fields of oral engineering and establish, systematize, and develop them to a highly specialized level; or ▪ Medical staff, educators, and researchers with a deep devotion to humanity, ethics, a deep human spirit, and a decisive sense of responsibility. <p>Based on the aims above, this program will award the degree of bachelor of oral health sciences to students who have acquired the capabilities described below and earned the required credits for the educational course.</p> <p>(1) The ability to integrate and exercise knowledge and skills regarding liberal arts subjects,</p>	

dental technology, basic dental medicine, clinical dental medicine, adjacent medicine, and related areas of engineering;

(2) The normative awareness and manner, together with the knowledge, skills, and communication abilities required for medical staff, and a capability for establishing good relationships with patients and staff, and contributing to patient-oriented team dental medicine; and

(3) The ability to take a leading role in research, education, and clinical fields related to oral engineering, based on state-of-the-art knowledge, advanced skills, information gathering skills, problem solving abilities, an inquiring scientific mind, research capabilities, logical thinking skills, and an ability for lifelong study.

4. Curriculum policy (policy for arranging and implementing the curriculum)

To enable students to achieve the targets that are defined for Course of Oral Engineering, the educational courses are organized and implemented according to the following policies:

(1) In the first year, students study liberal arts subjects, together with students in other schools, in order to acquire a wide-ranging intelligence and establish the intellectual foundation required for dental medical staff. In addition to this, through PBL (Problem Based Learning) in the liberal arts seminars, students also acquire the basic attitude, skills, and knowledge required for self-disciplined study. Furthermore, they acquire fundamental knowledge regarding specialized areas in order to establish the foundation for enhancing professional knowledge and skills.

(2) From the second to the fourth year, students study specialized subjects to acquire expertise and specialized skills. The specialized subjects include not only those related to dental technicians but also those regarding basic sciences such as life science, dentistry, and adjacent medicine.

(3) In the third and fourth terms of the third year and in the fourth year, students take the subject "Clinical Practice in Oral Health Engineering" that is provided at the university hospital in order to practice the knowledge and skills that they have acquired up to this time. Students are expected, through this practice, to learn skills and knowledge regarding the tasks of an oral engineer, specialized dental medicine, general dental medicine, and team medicine at a university hospital, and to acquire communication abilities, the normative awareness and manner required for medical staff, social skills, a cooperative mindset, and sound judgment.

(4) In the third and fourth terms of the third year and in the fourth year, students take the subject "Special Study for Graduation" to acquire information gathering skills, problem solving abilities, research capabilities, logical thinking skills, and presentation skills, and to foster an inquiring scientific mind, enthusiasm, flexibility, creativity, and patience.

(5) This course provides a bio-dental education program that aims to educate students to foster their scientific, inquiring mind and acquire advanced scholarship and medical techniques that

make them capable of cooperating with experts in various professions.

Academic achievement is evaluated based on the grade scores for the subjects and the achievement level against the target defined for each educational program.

5. Start time and acceptance conditions

In the first year (when the student enters the university)

In the Program for Oral Health Science, the entrance examination is held for each course. This course is organized only for students who enter the Course of Oral Engineering in the Program for Oral Health Science in the School of Dentistry.

6. Obtainable qualifications

Qualification for the national examination for dental technicians (awarded when the student graduates.)

Students who have earned the credit specified separately are eligible to be awarded the degree in cell culture engineering certified by the Japanese Tissue Culture Association; and to obtain the Basic Grade 2 Certificate for Rehabilitation Make-up from Reiko Kazki Co., Ltd.

7. Class subjects and their contents

* For the class subjects, refer to the subject table in Attached Sheet 1.

* For the details of the class subjects, refer to the syllabus that is published for each academic year.

8. Academic achievement

The evaluation criteria are specified for each evaluation item for academic achievement, and the achievement level against the criteria is designated at the end of each semester.

The evaluation score for each evaluation item is converted to a numerical value (S = 4, A = 3, B = 2, and C = 1) and the evaluation standard for academic achievement, from when the student entered the university to the end of the last semester, is determined using these values while applying weightings. The evaluation standards consist of three levels, i.e. Excellent, Very Good, and Good.

Achievement evaluation	Numerical conversion
S (Excellent: 90 or more points)	4
A (Very good: 80 – 89 points)	3
B (Good: 70 – 79 points)	2
C (Passed: 60 – 69 points)	1

Academic achievement	Evaluation standard
Excellent	3.00 – 4.00
Very Good	2.00 – 2.99
Good	1.00 – 1.99

* Refer to the relationship between evaluation items and evaluation criteria described in Attached Sheet 2.

* Refer to the relationship between evaluation items and class subjects described in Attached Sheet 3.

* Refer to the curriculum map in Attached Sheet 4.

Study achievement in the course (specific knowledge, skills, and attitude that students can obtain)

Knowledge & understanding

1. Knowledge and understanding related to liberal arts such as human and natural sciences
2. Knowledge and understanding related to foreign languages and culture
3. Knowledge and understanding related to the principles of medicine
4. Knowledge and understanding related to the basic attitude required for dental medical staff (dental technicians)
5. Knowledge and understanding related to social dentistry
6. Knowledge and understanding related to life science
7. Knowledge and understanding related to dental materials and biomaterials
8. Knowledge and understanding related to the prevention, medical examination, testing, diagnosis, and treatment of disease in areas of dentistry, and adjacent medicine
9. Knowledge and understanding related to the specialized fields of dental technicians (dental technology)
10. Knowledge and understanding regarding related engineering (information processing, CAD/CAM, ME (medical engineering), system engineering, and management science)

Abilities and skills

1. Communication skills required for dental medical staff (dental technician)
2. Abilities and skills related to life science, material science, and social dentistry
3. Abilities, skills, and attitudes related to prevention, medical examination, testing, diagnosis, and treatment of disease in the regions of the mouth, jaw, and face
4. Abilities, skills, and attitude required to practically apply techniques in the specialized fields of

dental technicians (dental technology) as a member of a dental medical team

5. Abilities and skills required for applying related engineering (information processing, CAD/CAM, ME (medical engineering), system engineering, and management science)

○ Comprehensive capability

1. Comprehensive capability and attitude for autonomously and positively studying for the whole of one's life as a member of dental medical staff (dental technician)

2. Comprehensive capability and attitude related to testing, diagnosis, treatment, and prevention of disease in the regions of the mouth, jaw, and face

3. Comprehensive capability and attitude required to practically apply techniques in the specialized fields of dental technicians (dental technology)

4. Comprehensive capability for gathering, selecting, logically organizing, and presenting information

5. Comprehensive capability required for problem identification, research planning and promotion, results analysis, and presentation of results in a field related to oral engineering

9. Graduation thesis (graduation research) (meaning, student allocation, timing, etc.)

Students are required to prepare their graduation theses.

① Purpose

To enable students to establish a foundation of knowledge and techniques required for research, to allow them to make a smooth start in their research at a higher level when they enter the graduate school.

② Overview

Students are allocated to one of the departments, i.e. Anatomy and Functional Restorations, Medical System Engineering, and Oral Biology and Engineering. The contents of research vary depending on the department. The details of each department are introduced in the class subject "Overview of Basic Dental Sciences." Students join cutting-edge research activities in which the faculty is engaged, or identify a problem regarding oral health sciences by themselves and conduct the research to solve it. They are expected to acquire information gathering skills, problem solving abilities, research capabilities, and logical thinking skills through this process.

③ Student allocation timing and method

Students are allocated to the laboratory in the second semester of the third year. Although the

allocation method is separately defined, a great deal of importance is attached to the wishes of the student.

10. Responsibility

The dental department headquarters council and the faculty council of the School of Dentistry are engaged in the planning and execution of this course. For the processes of evaluation and action for improvement, the dean of the School of Dentistry consults with the dental department headquarters council and the faculty council of the School of Dentistry, and carries out the required actions while taking the results of consultations into consideration.

<Program of Oral Health Sciences, Course of Oral Engineering>

Type	Subject type		Required No. of credits	Class Subject	No. of credits	Type of course registration	Term in which the subject is taken (※1)		
Liberal Arts Education Subjects	Peace Science Courses		2		2	Elective/required	2nd grade 2 term		
	Basic Courses in University Education	Introduction to University Education	2	Introduction to University Education	2	Required	1 term		
		Introductory Seminar for First-Year Students	2	Introductory Seminar for First-Year Students	2	Required	1 term		
	Common Subjects	Area Courses		4	More than 2 subjects and 4 credit from Courses in Arts and Humanities/Social Sciences	1or2	Elective/required	1, 3 term	
				2	General Health and Oral Sciences I	2	Required	2 term	
				2	General Health and Oral Sciences II	2	Required	4 term	
		Foreign Languages	English (※2)	Basic English Usage	2	Basic English Usage I ----- Basic English Usage II	1 1	Required	Intensive lecture ----- Intensive lecture
				Communication I	2	Communication IA ----- Communication IB	1 1	Required	1, 2 term
			Communication II	2	Communication IIA ----- Communication IIB	1 1	Required	3, 4 term	
			Non-English Foreign Languages (Choose 1 language from German, French, Chinese)		4	Foreign Languages: Basic Studies I, II ----- Foreign Languages: Basic Studies III, IV	1 1	Elective/required	1, 2 term ----- 3, 4 term
			Information Courses		2	Elements of Information Literacy ----- Exercise in Information Literacy	2 2	Elective/required (※3)	1 term ----- 3 term
			Health and Sports Courses		2		1又は2	Elective/required	1~4 term
		Foundation Courses		2	Psychology for Medical Care Workers	2	Required (※4)	4 term	
	2			Development of International Collaboration in Medical Science	2	Required	1 term		
	4			Foundation biology for life science (※6)		2	Elective/required (※5)	1 term	
				Cell Science		2		3 term	
				Anatomy for Understanding Human Being I		1		3 term	
				Anatomy for Understanding Human Being II		1	4 term		
				General Chemistry		2	Elective/required (※5)	2 term	
				Foundation physics for life science (※6)		2	Elective/required (※5)	2 term	
	Fundamental Physics I			2	3 term				
2	Basic Calculus or Foundation Mathematics for Life science (※6)			2	Required	1or2 term			
2	Basic Linear Algebra		2	Required	4 term				
2	Statistics		2	Elective/required (※7)	4 term				
	Other Foundation Courses subject		1or2						
Total		42							

※1: If there is no annual statement in the table, you should take it in the first year. If they have failed to earn the credit in the term, it is allowed to take the subject after the term. It is required to confirm the semester in which the subject is provided in the class schedule for liberal arts education subjects that is published every academic year, because some subjects might be provided in a term other than that which is shown in this document.

※2: The credit for "Field Research in the English-speaking World" that is earned through such activities as a short-term study abroad, and that for "Online English Seminar I・II・III" that is earned through a program of self-study, are accepted as the credit for English required for graduation (8 credits). Achievement in a foreign language skill test and language training might be accepted as a credit. For the details, refer to the description regarding English subjects in liberal arts education and the item "Credit based on Achievement in Foreign Language Skill Test" in the Students Handbook.

※3: It is required to take the subject "Elements of Information Literacy" that is provided in the first semester of the first year. Only when failing to earn the credit for "Elements of Information Literacy" is it allowed to take the subject "Exercise in Information Literacy" that is provided in the second semester.

※4: Only when failing to earn the credit for "Psychology for Medical Care Workers" is the credit for the subject "Psychology A" or "Psychology B" accepted as that for the information subjects required for graduation (2 credits).

※5: It is required to choose two groups from the subject groups of biology, chemistry, and physics and to earn credit for one subject for each chosen group.

※6: The subjects for which credit is required to be earned are specified in the School of Dentistry. The credit for any subject that is not specified is not accepted as the credit required for graduation.

※7: It is required to take the subject "Statistics." Only when failing to earn the credit for "Statistics" is it allowed to substitute the credit for another disciplinary subject for it.

Subject type	Class Subject	Minimum No. of credits required	No. of credits in each academic year / semesters								Remarks										
			1st grade		2nd grade		3rd grade		4th grade												
			1	2	3	4	5	6	7	8											
Specialized Education Subjects	Specialized Courses	⊙ Practice in Crown Restoration and Health Engineering	1					1													
		⊙ Practice in Crown Restoration and Health Engineering	1																		1
		⊙ Removable Denture and Health Engineering	2		2																
		⊙ Removable Denture and Health Engineering	2			2															
		⊙ Practice of removable denture and health	2				2														
		⊙ Practice of removable denture and health	2					2													
		⊙ Practice of removable denture and health	1						1												
		⊙ Practice of removable denture and health	1							1											
		⊙ Practice of removable denture and health	1								1										
		⊙ Practice of removable denture and health	1																		1
		⊙ Esthetic Dentistry	1				1														
		⊙ Practice on Medical Design and Engineering	1																		1
		⊙ Practice of Oral Process Engineering	1																		1
		⊙ Clinical Practice in Oral Health Engineering	13								1		6		6						
		⊙ Medical Design Engineering	1								1										
		⊙ Medical Design Engineering	1								1										
		⊙ Disaster Dentistry and Forensic Odontology	1								1										
		⊙ Dysphagia Rehabilitation	1								1										
		⊙ Special Study for Graduation	9									6	2	1							
		Special Course in Rehabilitation Make Up	1								1										
⊙ Research Start-Up	1					1															
⊙ Practice of Biodental English	2								2												
Total		113	4	6	27	17	23	15	9	12	excluding elective subjects										

Subjects marked with ⊙ indicates required subjects

Necessary credits for graduation : 155 credits

Liberal Arts Education Subjects

Peace Science Courses 2credits

Basic Courses in University Educati 4credits

Common subjects

Area Courses 8credits

Foreign Languages

English 6credits

Non-English Foreign Languages 4credits

Information Courses 2credits

Health and Sports Courses 2credits

Foundation Courses 14credits

Specialized Education Subjects

Basic Specialized Courses 24credits

Specialized Courses 89credits

Liberal Arts Education Subjects 42credits

Specialized Education Subjects 113credits

Academic achievements of Course of Oral Engineering

Relationships between the evaluation items and evaluation criteria

Academic achievements		Evaluation criteria		
Evaluation items		Excellent	Very Good	Good
Knowledge and Understanding	(1) Knowledge and understanding of liberal arts such as humanities and natural science	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(2) The knowledge and understanding on foreign languages and culture	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(3) Knowledge and understanding on principles of medicine	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(4) Knowledge and understanding of basic behavior as a dental professional (a dental technician)	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(5) Knowledge and understanding of social dentistry	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(6) Knowledge and understanding of life science	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(7) Knowledge and understanding of dental materials and biomaterials	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(8) Knowledge and understanding of disease prevention, treatment, diagnosis, and medical check-up concerning dentistry and other related studies	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(9) Understanding and knowledge of dental technician (dental technology)	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
	(10) The knowledge and understanding on related engineering (information processing, CAD/CAM, ME(medical engineering), system engineering, management)	Being able to correctly explain all contents of each subject, and develop them deepening the learning.	Being able to correctly explain all contents of each subject.	Being able to explain almost all contents of each subject.
Abilities and Skills	(1) Communication skills as a dental professional (a dental technician)	To attend hands-on training and other exercises with basic knowledge which is learned ahead of time. Also, participate proactively in these activities, intending to further develop studies. In addition, with regard to reports, to be able to consider phenomenon objectively and to have the ability to objectively assess future tasks.	To attend hands-on training with good attitudes. Also, to further develop what students learn in the training based on principles. In addition, to be able to consider phenomena subjectively in reports.	To be able to develop what students learn in hands-on training. Also, to attend these activities with good attitudes. Also, to be able to describe phenomena subjectively.
	(2) Abilities and skills concerning life science, materials technology, and social dentistry	To attend hands-on training and other exercises with basic knowledge which is learned ahead of time. Also, participate proactively in these activities, intending to further develop studies. In addition, with regard to reports, to be able to consider phenomenon objectively and to have the ability to objectively assess future tasks.	To attend hands-on training with good attitudes. Also, to further develop what students learn in the training based on principles. In addition, to be able to consider phenomena subjectively in reports.	To be able to develop what students learn in hands-on training. Also, to attend these activities with good attitudes. Also, to be able to describe phenomena subjectively.
	(3) The ability・skills and attitude related to prevention・examination・diagnosis・treatment of diseases in oral・maxillofacial region	To attend hands-on training and other exercises with basic knowledge which is learned ahead of time. Also, participate proactively in these activities, intending to further develop studies. In addition, with regard to reports, to be able to consider phenomenon objectively and to have the ability to objectively assess future tasks.	To attend hands-on training with good attitudes. Also, to further develop what students learn in the training based on principles. In addition, to be able to consider phenomena subjectively in reports.	To be able to develop what students learn in hands-on training. Also, to attend these activities with good attitudes. Also, to be able to describe phenomena subjectively.
	(4) The capacity and attitude necessary for practicing specialized fields of dental technicians (dental technique) as a dental team	To attend hands-on training and other exercises with basic knowledge which is learned ahead of time. Also, participate proactively in these activities, intending to further develop studies. In addition, with regard to reports, to be able to consider phenomenon objectively and to have the ability to objectively assess future tasks.	To attend hands-on training with good attitudes. Also, to further develop what students learn in the training based on principles. In addition, to be able to consider phenomena subjectively in reports.	To be able to develop what students learn in hands-on training. Also, to attend these activities with good attitudes. Also, to be able to describe phenomena subjectively.
	(5) The ability and skills to apply related engineering (information processing, CAD/CAM, ME(medical engineering), system engineering, management, biotechnology)	To attend hands-on training and other exercises with basic knowledge which is learned ahead of time. Also, participate proactively in these activities, intending to further develop studies. In addition, with regard to reports, to be able to consider phenomenon objectively and to have the ability to objectively assess future tasks.	To attend hands-on training with good attitudes. Also, to further develop what students learn in the training based on principles. In addition, to be able to consider phenomena subjectively in reports.	To be able to develop what students learn in hands-on training. Also, to attend these activities with good attitudes. Also, to be able to describe phenomena subjectively.
Comprehensive Abilities	(1) Comprehensive learning ability and behavior as a dentist, which is to voluntarily learn over a course of life	As a dental technician, to be able to learn independently, proactively, and continuously.	As a dental technician, to be able to learn independently and proactively.	As a dental technician, to be able to learn independently.
	(2) The general ability and attitude in related to investigation, diagnosis, treatment and prevention in oral・maxillofacial region	Being able to generalize knowledge in related to investigation, diagnosis, treatment and prevention in oral・maxillofacial region and make an appropriate action and judgement.	Being able to generalize knowledge in related to investigation, diagnosis, treatment and prevention in oral・maxillofacial region and make an appropriate action and judgement.	Being able to generalize knowledge in related to investigation, diagnosis, treatment and prevention in oral・maxillofacial region.
	(3) The comprehensive capacity and attitude necessary for practicing specialized fields of dental technicians (dental technique) as a dental team	Being able to conduct dental techniques thinking of necessary needs and encouraging appropriately based on understanding each professional roles.	Being able to conduct dental techniques encouraging appropriately based on understanding each professional roles.	Being able to conduct dental techniques acknowledging being a member of a team
	(4) Comprehensive ability to separate necessary and unnecessary information, summarize and output it	To be able to collect, logically summarize and analyze required data. After that process, to be able to extract problems, consider solutions and present them.	After collecting, logically summarizing and analyzing information, to be able to output it with speculation.	To be able to output information which are collected and summarized.
	(5) The general ability necessary to discover the issues on oral engineering and conduct research planning・promotion・result analysis・result presentation	Being able to discover oral engineering issues and plan・promote the research, as well as analyze and present the results.	Being able to discover oral engineering issues and plan・promote the research, as well as present the results.	Being able to plan・present the research on oral engineering issues.

Students are expected to form the academic foundation required for specialized education, study wide range of subjects regarding human and social sciences and foreign languages, acquire knowledge, and foster an intellectual curiosity and the ability to take action. In addition, they are expected to acquire

Curriculum Map of Course of Oral Engineering

Academic achievements		1st grade		2nd grade		3rd grade		4th grade		
Evaluation items		Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	
Knowledge and Understanding	Knowledge and understanding of liberal arts such as humanities and natural science	Basic Courses in University Education (◎)	Area Courses (○)	Peace Science Courses (◎)						
		Area Courses (○)	Health and Sports Courses (○)							
		Health and Sports Courses (○)	Foundation Courses (◎)							
		Foundation Courses (◎)								
	The knowledge and understanding on foreign languages and culture	Foreign Languages (◎)	Foreign Languages (◎)				Practice of Biodental English (◎)			
	Knowledge and understanding on principles of medicine			Medical ethics (◎)						
	Knowledge and understanding of basic behavior as a dental professional (a dental technician)	Overview of Basic Dental Sciences (◎)					Team Care for Oral Health (◎)		Laws and Regulations for Dental technicians (◎)	
	Knowledge and understanding of social dentistry				Social Dentistry (◎)			Disaster Dentistry and Forensic Odontology (◎)		
	Knowledge and understanding of life science	Anatomy (◎)			Microbiology and Oral Microbiology (◎)					
		Physiology and Oral Physiology (◎)		Immunology (△)						
				Basic Biochemistry (◎)						
				Oral Anatomy (◎)						
Knowledge and understanding of dental materials and biomaterials				Histology and Oral Histology (◎)						
				Dental Material (◎)						
				Biomaterials (◎)						
Knowledge and understanding of disease prevention, treatment, diagnosis, and medical check-up concerning dentistry and other related studies				Precision Casting Science (◎)						
				Pharmacology and Dental Pharmacology (◎)	Esthetic Dentistry (◎)	Clinical Medicine (△)				
				Pathology and Oral Pathology (◎)	Oral Health (△)	Dentistry for Persons with Disabilities (◎)				
					Endodontology (◎)	Lifestyle-related Dentistry / Geriatric Dentistry (◎)				
					Periodontology (◎)	Pediatric Dentistry (◎)				
Understanding and knowledge of dental technician (dental technology)						Oral Surgery and Anesthesiology (◎)				
						Oral Surgery and Anesthesiology (△)				
						Dysphagia Rehabilitation (◎)				
The knowledge and understanding on related engineering (information processing, CAD/CAM, ME (medical engineering), system engineering, management)		Crown Restoration and Health Engineering (◎)	Stomatognathic System and Function (◎)	Crown Restoration and Health Engineering (◎)	Orthodontics (◎)					
		Removable Denture and Health Engineering (◎)	Crown Restoration and Health Engineering (◎)		Overview of Oral Engineering (◎)					
			Removable Denture and Health Engineering (◎)							
Communication skills as a dental professional (a dental technician)	Information Courses (○)	Information Courses (○)			Medical Equipment A (◎)	Medical System Engineering (◎)		Curriculum design of dental hygienists and dental		
		CAD/CAMシステム工学 (◎)			Medical Informatics (◎)					
Abilities and skills concerning life science, materials technology, and social dentistry						Practice of Biodental English (◎)				
				Practice on Biomaterial (◎)	Practice on Precision Casting Science (◎)					

Curriculum Map of Course of Oral Engineering

Academic achievements Evaluation items		1st grade		2nd grade		3rd grade		4th grade	
		Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester
Abilities and Skills	The ability・skills and attitude related to prevention・examination・diagnosis・treatment of diseases in oral・maxillofacial region				Research Start-Up (◎)	Oral Health Management B(◎) Special Course in Rehabilitation Make Up(△)			
	The capacity and attitude necessary for practicing specialized fields of dental technicians (dental technique) as a dental team			Practice on Oral AnatomyI(◎)	Practice on Oral AnatomyII(◎)	Practice in Crown Restoration and Health Engineering(◎)	Practice of Pediatric Dentistry (◎)	Clinical Practice in Oral Health Engineering(◎)	Practice on Applied Biomaterial (◎)
				Practice on Stomatognathic System and Function(◎)	Practice in Crown Restoration and Health Engineering(クラウンI)(◎)	Practice in Crown Restoration and Health Engineering(◎)	Practice of removable denture and health(◎)		Clinical Practice in Oral Health Engineering(◎)
				Practice in Crown Restoration and Health Engineering(◎)	Practice in Crown Restoration and Health Engineering(クラウンII)(◎)	Practice in Crown Restoration and Health Engineering(◎)	Clinical Practice in Oral Health Engineering(◎)		Practice in Crown Restoration and Health Engineering(◎)
					Practice of removable denture and health(◎)	Practice in Crown Restoration and Health Engineering(◎)	Practice of Orthodontics(◎)		Practice of removable denture and health (◎)
					Practice of removable denture and health(◎)	Practice in Crown Restoration and Health Engineering(◎)			
					Practice in Crown Restoration and Health Engineering(◎)	Health Science on Sports Dentistry and Temporomandibular(◎)	Practice of Orthodontics(◎)		
			Practice of Information System Engineering(◎)			Practical Training on Digital Dentistry(◎)			
Comprehensive Abilities	Comprehensive learning ability and behavior as a dentist, which is to voluntarily learn over a course of life						Medical Design Engineering(◎) Medical Design Engineering(◎) Special Study for Graduation(◎)	Special Study for Graduation(◎)	Special Study for Graduation(◎)
	The general ability and attitude in related to investigation, diagnosis, treatment and prevention in oral・maxillofacial region						Clinical Practice in Oral Health Engineering(◎)	Clinical Practice in Oral Health Engineering(◎)	Clinical Practice in Oral Health Engineering(◎) Practice on Medical Design and Engineering(◎) Practice of Oral Process Engineering(◎)
	The comprehensive capacity and attitude necessary for practicing specialized fields of dental technicians (dental technique) as a dental team						Clinical Practice in Oral Health Engineering(◎)	Clinical Practice in Oral Health Engineering(◎)	Clinical Practice in Oral Health Engineering(◎) Practice on Medical Design and Engineering(◎) Practice of Oral Process Engineering(◎)
	Comprehensive ability to separate necessary and unnecessary information, summarize and output it						Medical Design Engineering(◎) Medical Design Engineering(◎) Special Study for Graduation(◎)	Special Study for Graduation(◎)	Special Study for Graduation(◎)
	The general ability necessary to discover the issues on oral engineering and conduct research planning・promotion・result analysis・						Special Study for Graduation(◎)	Special Study for Graduation(◎)	Special Study for Graduation(◎)

Liberal Arts
Education Subjects

Basic Specialized
Courses

Specialized Courses

Special Study for
Graduation

(◎) Required

(○) Elective/required

(△) Free elective

Teacher list (Course of Oral Engineering)

Name	Position	Departments	TEL	E-mail
Saiji Shimoe	Associate Professor	Anatomy and Functional Restorations	5526	shimoe@hiroshima-u.ac.jp
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Hisako Sasahara	Associate Professor or Lecturer	Oral Biology & Engineering	3120	his-his-kes@hiroshima-u.ac.jp