

**Handbook for students for the Special Program
for “Engineering Science 21st Century”
Academic year 2023**

March 2023

The Graduate School of Engineering Science, Osaka University

Academic Calendar 2023-2024

Spring/Summer Semester 2023 (From April 1 to September 30)

Spring Term 2023 (From April 1 to June 12)

Summer Term 2023 (From June 13 to September 30)

Month	Day		Events
April	4	Tue	Entrance ceremony (Osaka-Jo Hall)
	11	Tue	Spring Term classes start (until June 12) Spring/Summer Semester classes start (until August 8)
	10(Mon) to 13(Thu) Apr.		Medical Checkup at Health Care Center, Toyonaka Office
	23	Sun	Deadline of the course registration for Spring Term, Spring/Summer Semester (registration starts from April 1 for those who enrolled in April 2023, from March 28 for other students)
May	1, 2	Mon/Tue	All classes are cancelled due to University Festival (Icho Festival)
	29	Mon	Deadline of payment of tuition fees for Spring/Summer Semester
	30	Tue	Course registration for Summer Term starts (until June 19)
June	6	Tue	Spring Term examinations start (until June 12)
	13	Tue	Summer Term classes start (until August 8)
	19	Mon	Deadline of the course registration for Summer Term (from May 30)
July	25	Tue	Spring/Summer Semester examinations start (until August 8)
August	1	Tue	Summer Term examinations start (until August 8)
	8	Tue	Monday's exam are held (due to rescheduling)
	9	Wed	Summer Holidays start (until September 30)

Fall/Winter Semester 2023 (From October 1 to March 31)

Fall Term 2023 (From October 1 to December 3)

Winter Term 2023 (From December 4 to March 31)

Month	Day		Events
October	2	Mon	Fall Term classes start (until December 3) Fall/Winter Semester classes start (until February 8)
	13	Fri (tentative)	Medical Checkup for new students who enrolled in October 2023
	16	Mon	Deadline of the course registration for Fall Term, Fall/Winter Semester (registration starts from September 15)
November	2 (Thu) to 6 (Mon) Nov.		All classes are cancelled due to University Festival (Machikane Festival)
	20	Mon	Course registration for Winter Term starts (until December 8)
	21	Tue	Fall Term examinations start (until December 1, excluding November 24 to 28)
	27	Mon	Deadline of payment of tuition fees for Fall/Winter Semester
	28	Tue	Thursday's exam are held (due to rescheduling)
	29	Wed	Monday's exam are held (due to rescheduling)
December	4	Mon	Winter Term classes start (until February 8)
	8	Fri	Deadline of the course registration for Winter Term (from November 20)
	26	Tue	Winter Holidays start (until January 3)
January	12	Fri	Classes are cancelled due to entrance examinations for the undergraduate course
	25	Thu	Fall/Winter Semester examinations start (until February 8, excluding January 26)
February	1	Thu	Winter Term examinations start (until February 8)
	8	Thu	Friday's exam are held (due to rescheduling)
	9	Fri	Spring Holidays start (until the new semester starts)

Class Time Schedule:

1st period : 8:50~10:20 2nd period : 10:30~12:00
 3rd period : 13:30~15:00 4th period : 15:10~16:40
 5th period : 16:50~18:20 6th period : 18:30~20:00

Lecture Schedule for Spring/Summer Semester 2023

The Graduate School of Engineering Science

April 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 <small>Entrance ceremony</small>	5	6	7	8
9	10	11 ①①	12 ①①	13 ①①	14 ①①	15
16	17 ①①	18 ②②	19 ②②	20 ②②	21 ②②	22
23	24 ②②	25 ③③	26 ③③	27 ③③	28 ③③	29
30 <small>Icho Festival</small>						

July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 ③⑪	4 ④⑫	5 ④⑫	6 ④⑫	7 ④⑫	8
9	10 ④⑫	11 ⑤⑬	12 ⑤⑬	13 ⑤⑬	14 ⑤⑬	15
16	17	18 ⑥⑭	19 ⑥⑭	20 ⑥⑭	21 ⑥⑭	22
23	24 ⑤⑬	25 ⑦⑮	26 ⑦⑮	27 ⑦⑮	28 ⑦⑮	29
30	31 ⑥⑭					

May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 <small>Icho Festival</small>	2	3	4	5	6
7	8 ③③	9 ④④	10 ④④	11 ④④	12 ④④	13
14	15 ④④	16 ⑤⑤	17 ⑤⑤	18 ⑤⑤	19 ⑤⑤	20
21	22 ⑤⑤	23 ⑥⑥	24 ⑥⑥	25 ⑥⑥	26 ⑥⑥	27
28	29 ⑥⑥	30 ⑦⑦	31 ⑦⑦			

August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 ⑧	2 ⑧	3 ⑧	4 ⑧	5
6	7 ⑦⑮	8 ⑧ <small>1*</small>	9	10	11	12
13	← University closed →					
20	21	22	23	24	25	26
27	28	29	30	31		

June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 ⑦⑦	2 ⑦⑦	3
4	5 ⑦⑦	6 ⑧⑧	7 ⑧⑧	8 ⑧⑧	9 ⑧⑧	10
11	12 ⑧⑧	13 ①⑨	14 ①⑨	15 ①⑨	16 ①⑨	17
18	19 ①⑨	20 ②⑩	21 ②⑩	22 ②⑩	23 ②⑩	24
25	26 ②⑩	27 ③⑪	28 ③⑪	29 ③⑪	30 ③⑪	

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Class Time Schedule : 1st period: 8:50~10:20 2nd period: 10:30~12:00 3rd period: 13:30~15:00
4th period: 15:10~16:40 5th period: 16:50~18:20 6th period: 18:30~20:00

Spring Term Classes : April 11 to June 12

Summer Term Classes : June 13 to August 8

Spring/Summer Semester Classes: April 11 to August 8

1* Monday make-up class

○Numbers in black: term classes

●Numbers in white: semester classes

 : Saturday, Sunday, National holidays, other designated holidays and office close

 : Exams during ⑧ for term classes, for semester classes during ⑮ or ⑯

Lecture Schedule for Fall/Winter Semester 2023

The Graduate School of Engineering Science

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 ①●	3 ①●	4 ①●	5 ①●	6 ①●	7
8	9	10 ②●	11 ②●	12 ②●	13 ②●	14
15	16 ②●	17 ③●	18 ③●	19 ③●	20 ③●	21
22	23 ③●	24 ④●	25 ④●	26 ④●	27 ④●	28
29	30 ④●	31 ⑤●				

January 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4 ④●	5 ④●	6
7	8	9 ④●	10 ④●	11 ⑤●	12 Office Closed	13
14	15 ⑤●	16 ⑤●	17 ⑤●	18 ⑥●	19 ⑤●	20
21	22 ⑥●	23 ⑥●	24 ⑥●	25 ⑦●	26 ⑥●	27
28	29 ⑦●	30 ⑦●	31 ⑦●			

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 ⑤●	2 Machikane Festival	3	4
5 Machikane Festival	6	7 ⑥●	8 ⑥●	9 ⑤●	10 ⑤●	11
12	13 ⑤●	14 ⑦●	15 ⑦●	16 ⑥●	17 ⑥●	18
19	20 ⑥●	21 ⑧●	22 ⑧●	23	24 ⑦●	25
26	27 ⑦●	28 ⑦●	29 ⑧●	30 ⑧●		

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 ⑧	2 ⑦●	3
4	5 ⑧	6 ⑧	7 ⑧	8 ⑧	9	10
11	12	13	14	15	16	17
18	19	20	21	22 Office Closed	23	24
25	26	27	28	29		

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 ⑧●	2
3	4 ①●	5 ①●	6 ①●	7 ①●	8 ①●	9
10	11 ②●	12 ②●	13 ②●	14 ②●	15 ②●	16
17	18 ③●	19 ③●	20 ③●	21 ③●	22 ③●	23
24	25 ④●	26	27	28	29	30
31						

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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4th period: 15:10~16:40 5th period: 16:50~18:20 6th period: 18:30~20:00

Fall Term Classes : October 1 to December 3

Winter Term Classes : December 4 to February 8

Fall/Winter Semester Classes: October 1 to February 8

2* Thursday make-up class

3* Monday make-up class

4* Exam originally scheduled for Friday

○Numbers in black: term classes

●Numbers in white: semester classes

■ : Saturday, Sunday, National holidays, other designated holidays and office close

■ : Exams during ⑧ for term classes, for semester classes during ⑮ or ⑯

Below is a translation from the original and shall not be regarded as official documentation. The English text has been provided merely as a reference. Please note that any official rules are based solely on the Japanese text.

Regulations of the Graduate School of Engineering Science, Osaka University

Intent and Purpose

Article 1

1. The Regulations of the Graduate School of Engineering Science specify rules and regulations necessary for the Graduate School of Engineering Science, Osaka University (hereinafter referred to as the “Graduate School”) under the Osaka University Graduate School Regulations and Osaka University Degree Regulations.
2. The principle of education and research of the Graduate School is “fundamentally developing scientific technology by a fusion of science and engineering will create the true culture of humanity.” Under this principle, the Graduate School aims to develop new academic fields in response to the needs of society, and between science and engineering, to nurture students to become the following kind of specialist through our advanced graduate education well-balanced between science and engineering:
 - i) researchers and engineers with specializations enabling them to conduct research and development, ranging from the basic to the highly specialized;
 - ii) scientists and researchers who develop new interdisciplinary fields with advanced expertise and wide-ranging knowledge; and
 - iii) global leaders who have the competency to proceed with research and development independently.

Course

Article 2

1. The course of the Graduate School shall be a doctoral course.
2. The doctoral course shall be divided into the following two phases: a two-year master’s course (hereinafter referred to as the “master’s course”) and a three-year doctoral course (hereinafter referred to as the “doctoral course”).
3. The Osaka University Honors Program for the Graduate Schools in Science, Engineering and Informatics (hereto referred to as the “Honors Program”) is provided for doctoral course students.

Departments

Article 3

1. The Graduate School consists of the following Departments:
 - Department of Materials Engineering Science;
 - Department of Mechanical Science and Bioengineering; and
 - Department of Systems Innovation
2. Each Department comprises the following Divisions respectively:

Department	Division
Materials Engineering Science	Materials Physics, Chemistry, Chemical Engineering, Frontier Materials Science
Mechanical Science and Bioengineering	Nonlinear Mechanics, Mechanical Engineering, Bioengineering
Systems Innovation	Advanced Electronics and Optical Science, Systems Science and Applied Informatics, Mathematical Science, Mathematical Science for Social Systems

Lecture and Research Supervision

Article 4

1. Education at the Graduate School will be provided through both lectures on subjects and supervising the writing of a thesis or dissertation (hereinafter referred to as “research supervision”).

2. The subjects and number of credits for each Division of the respective Departments will be as indicated in the respective Tables.
3. The provisions of Article 13 of the Regulations of the School of Engineering Science of Osaka University will apply *mutatis mutandis* to calculation of credits for each subject in the Graduate School.

Academic Supervisor

Article 5

1. An academic supervisor will be allocated to each student.
2. The academic supervisor will be a Professor of the respective Department; provided that this may be substituted with an Associate Professor or a Full-time Lecturer after being approved at the Faculty Meeting of the Graduate School of Engineering Science (hereinafter referred to as the “Faculty Meeting”), when deemed necessary by the Dean of the Graduate School.

Registration Procedure for Master’s Course

Article 6.1

1. The Master’s Course students are required to complete at least thirty (30) credits from the subjects (including the compulsory subjects) for the relevant Division as listed in Table 1, in accordance with instructions given by their respective academic supervisor.
2. Notwithstanding the provision of the preceding Clause, students who have received an offer for admission as those who register the subjects to be taught in English are required to complete at least thirty (30) credits from the subjects (including the compulsory subjects) for the relevant Division as listed in Table 2, in accordance with instructions given by their respective academic supervisor. Provided, when the academic supervisor acknowledges the necessity, students may take the subjects of the respective division listed in Table 1 and obtain credits upon receiving approval by the Faculty Meeting.
3. Master’s course students who will be taking subjects in the Honors Program must adhere to the guidance of his/her academic supervisor and are required to complete at least thirty (30) credits from the list of subjects for the relevant Division found in Table 1 as well as subjects to be specified separately of the relevant division according to the separately specified course registration method despite what is stipulated in 6.1 and 6.2.
4. With regard to the preceding Clause, those who have been admitted as a student for the Special Program "Engineering Science 21st Century” must adhere to the guidance of his/her academic supervisor and are required to complete at least thirty (30) credits including twelve (12) credits for compulsory subjects from the list of subjects for the relevant Division found in Table 2 as well as subjects to be specified separately according to the separately specified course registration method. Provided, when the academic supervisor acknowledges the necessity, students may take the subjects of the respective Division listed in Table 1 and obtain credits upon receiving approval by the Faculty Meeting.
5. In addition to what is stated in 6.3 and 6.4, necessary information regarding course registration for the Honors Program is stipulated separately.
6. The master’s course students are required to receive research supervision as stipulated by each Department; provided that if the academic supervisor requires any of the students to receive further research supervision from graduate schools of other universities or institutions equivalent to those for educational purposes, this will be made possible with the approval of the Faculty Meeting.
7. The research supervision specified in the provision to the preceding Clause may not exceed a period of more than one (1) year.
8. The academic supervisor may, to the extent it deems necessary, require students to register any of the Graduate Transdisciplinary Subjects, the Leading Program Subjects or the International Exchange Subjects, and the credits obtained therefrom may be allocated to those specified in Clause 1 to 4 as applicable, with the approval of the Faculty Meeting.
9. The academic supervisor may, to the extent it deems necessary, require students to register any of the subjects for any other Division of the relevant Department of the Graduate School, subjects for any other Department or graduate school of the University, undergraduate subjects for the School of Engineering Science or any other school of the University, or graduate subjects offered by other universities including overseas universities, and the credits obtained therefrom may be allocated to those specified in Clause 1 to 4 as applicable, with the approval of the Faculty Meeting.

10. The credits which may be allocated pursuant to the provision of the preceding Clause is limited to a maximum of fifteen (15) credits, if such credits are obtained from graduate subjects in other universities including overseas universities.
11. In addition to the credits specified in the preceding Clause, if the academic supervisor deems necessary, any credit for subjects which students may have completed in a graduate school prior to their admission to the Graduate School (including any credits which are completed as a credited auditor defined in Article 15 of the Standards for Establishment of Graduate Schools (Ordinance of the Ministry of Education No. 28 of 1974)) may, with the approval of the Faculty Meeting, be allocated to those specified in Clause 1 to 4 as applicable, up to fifteen (15) credits, as if such credits had been completed at the Graduate School. Combined with the number of credits specified in the preceding Clause, the total number shall not exceed twenty (20) credits.

Long-term Completion of Master's Course

Article 6.2

1. The Dean of the Graduate School may accept any application for well-planned extended registration made by any master's course student who wishes to register for a curriculum for a period of more than two (2) years for completion thereof, with a reasonable reason such as working part-time.
2. Any other matters necessary for the students who are permitted to register in a well-planned manner for an extended period pursuant to the provision of the preceding Clause will be set out separately.

Registration Procedure for Doctoral Course

Article 7.1

1. The doctoral course students are required to complete at least twelve (12) credits from the subjects (including the compulsory subjects) for the relevant Division as listed in the Table 3.
2. Doctoral course students who will be taking subjects in the Honors Program are required to complete twelve (12) credits from the list of subjects including compulsory subjects found in Table 3 as well as subjects to be specified separately according to the separately specified course registration method despite what is stipulated in the preceding Clause.
3. In addition to what is stated in the preceding Clause, necessary information regarding course registration for the Honors Program is stipulated separately.
4. The doctoral course students are required to receive research supervision as stipulated by each Division; provided that if the academic supervisor requires any of the students to receive further research supervision from graduate schools of other universities or institutions equivalent to those for educational purposes, this will be made possible with the approval of the Faculty Meeting.
5. The academic supervisor may, to the extent it deems necessary, require students to register any of the subjects of the Graduate School, the Graduate Transdisciplinary Subjects, the Leading Program Subjects, the International Exchange Subjects or subjects for any other graduate school of the University, undergraduate subjects for the School of Engineering Science or any other school of the University, or graduate subjects offered by other universities including overseas universities.

Long-term Completion of Doctoral Course

Article 7.2

1. The Dean of the Graduate School may accept any application for well-planned extended registration made by any doctoral course student who wishes to register for a curriculum for a period of more than three (3) years for completion thereof, with a reasonable reason such as working part-time.
2. Any other matters necessary for the students who are permitted to register in a well-planned manner for an extended period pursuant to the provision of the preceding Clause will be set out separately.

Registration Plan

Article 8

Students are required to submit a Course Registration Plan indicating their proposed subjects and any other issues necessary in such form and by such date as designated, in accordance with instructions given by the academic supervisor.

Examination in Registered Subject

Article 9

Examinations in registered subjects will be conducted in writing, orally or by research paper.

Recognition of Completion

Article 10

1. Certain credits will be awarded for the subjects of which a student has passed the examination pursuant to the provision of the preceding Article.
2. In principle, any recognition for research recognition will be given by the academic supervisor at the end of each academic year; provided that such recognition may be given at any other time, if necessary for a special reason.

Master's/Doctoral Thesis and Final Examination

Article 11

1. Students are required to submit a master's or doctoral thesis as applicable, by the due date for the assessment, and to take a final examination.
2. The final examination will be conducted in writing or orally mainly for the assessed master's or doctoral thesis, and for thesis-related subjects.
3. Pass /fail assessment of the master's or doctoral thesis and the final examination will be determined by the Faculty Meeting based on reports from the Dissertation Committee.
4. The assessment of the master's thesis may be substituted with assessment of findings of a specific research study, if the Dean of the Graduate School deems appropriate with the approval of the Faculty Meeting.

Special Research Student, Special Auditor and Credited Auditor

Article 12

1. Any of the following applicants may submit an application to the Dean of the Graduate School in accordance with the applicable procedure:
 - i) a graduate student of another university who wishes to receive research supervision at the Graduate School;
 - ii) a graduate student of another university including overseas universities who wishes to take any subject at the Graduate School; or
 - iii) a working adult who wishes to take subjects at the Graduate School.
2. Any application from the applicants specified in the preceding Clause may be accepted with the approval of the Dean of the Graduate School, subject to assessment, as a special research student, if the applicant falls into paragraph i) above, as a special auditor if the applicant falls into paragraph ii) above, or as a credited auditor if the applicant falls into paragraph iii) above, as applicable.
3. The subjects that special auditors may take are as listed in Table 1; provided that international students shall select subjects from Table 1 and others that are approved by the graduate school.
4. The subjects that credited auditors may take are as listed in Table 1; provided that Table 4 will apply to credited auditors who take the Advanced Inter-/Multi-disciplinary Graduate-level Programs for Education, Research and Training in Nanoscience and Nanotechnology (Continuing Education Program).

Article 13

1. In principle, special research students may stay for one (1) year; provided that the students may extend such period of time each year by submitting the appropriate document, if necessary.
2. Special auditors and credited auditors may stay for a period of time during which the relevant subject is offered; provided that any special auditor or credited auditor may extend such period of time, if the Dean of the Graduate School accepts an application for extension submitted by such auditor to the Dean.
3. The provisions of Articles 9 and 10.1 will apply *mutatis mutandis* to examination in registered subjects and recognition of completion for special auditors and credited auditors.

Research Student

Article 14

1. The Dean of the Graduate School may accept an application for admission as a research student which is submitted by an applicant who wishes to pursue a specific theme at the Graduate School, subject to assessment by the Faculty Meeting.
2. Each applicant for admission as a research student is required to meet one of the following admission criteria:
 - i) those who have master's degree; or
 - ii) those deemed as having met academic standards equivalent to a master's degree.
3. Research students are required to enroll at the beginning of any of the semesters; provided that research students may enroll at any other time, if necessary, for special reasons.
4. An academic supervisor will be allocated to each research student.
5. Research students may stay for up to one (1) year; provided that such period of time may be extended, if it is deemed necessary by the Dean of the Graduate School with the approval of the Faculty Meeting for research purposes.
6. In case a research student intends to withdraw from the Graduate School, an appropriate document must be submitted to the Dean of the Graduate School through his/her academic supervisor.

Removal from registration of Special Research Student, Special Auditor, Credited Auditor and Research Student

Article 15

The Dean of the Graduate School is entitled to remove from registration any student or auditor who is deemed inappropriate as a special research student, special auditor, credited auditor or research student, after discussion by the Faculty Meeting.

Other Matters

Article 16

Any other necessary matters not stipulated herein will be determined by the Dean of the Graduate School with the approval of the Faculty Meeting.

Criteria for Degree Examination and Thesis/Dissertation Evaluation
Graduate School of Engineering Science,
Osaka University

The degree examination and thesis/dissertation evaluation at the Graduate School of Engineering Science, Osaka University are based on the following criteria.

- (1) A doctoral dissertation must have substantial academic value. The recipient of the doctoral degree must have both a solid grasp of the academic field written and described in the doctoral dissertation as well as general knowledge, possess the academic ability to conduct research as an independent researcher as well as the ability to explain how the academic content of the doctoral dissertation will contribute to society.
- (2) The doctoral dissertation must be written clearly, and the administrative process set forth by the graduate school must be followed regarding the application procedures, style, and submission of a written statement of novelty. Its content must be presented, discussed and deliberated at the dissertation presentation and review sessions in a manner appropriate to academic research.
- (3) The recipient of the master's degree must have the ability to conduct research in the field that he/she is majoring in as well as the ability to take up a profession that requires a high level of expertise, and the master's thesis must include research that will contribute to the development of this field of study.
- (4) The master's thesis must be written clearly, and its content must be presented, discussed and deliberated at the thesis presentation and review sessions held by each division in a manner appropriate to academic research.

General Affairs Committee
Graduate School of Engineering Science
July 8, 2009

1. Special Program of “Engineering Science 21st Century”

Contents of Study

The Graduate School of Engineering Science aims to acquire a strong international reputation through increased exchange of students and researchers, and in joint research projects. For this objective, the Graduate School of Engineering Science has decided to offer a new interdisciplinary program in which all lectures, as well as all instructions and supervision in research-related activities and seminars, are given in English. The students are not required to learn Japanese to join this program. In this program, globally recognized and highly qualified graduates are expected to be educated under the guiding principles of the Graduate School of Engineering Science which strives to integrate science and technology.

Outline and Features of the Program

1. The aim of this program is to develop human resources with high level, creative and flexible problem-solving ability. This is achieved through multi- and interdisciplinary research training, seminars, and lectures, given by prominent professors in their respective fields.
2. Students receive guidance and are supervised in English.
3. **The master’s course students** are required to complete at least thirty (30) credits from the subjects (including the compulsory subjects) as given in **Table 1**. The list of courses given in English is shown in **Table 2**. Course codes of compulsory courses (Seminar and Research I-IV) are shown in **Table 3**. Provided, if the student wishes to take subjects offered in the general course and wish to apply the credits for completion, he or she may do so based on the regulations set separately. Contact the Graduate Students Section for details.
Doctoral course students are required to obtain twelve (12) credits in “Advanced/Special Research I to VI” for each division as shown in **Table 4** as well as to take “Research Training for Doctor’s Thesis”(*) with no credit.
(*) This is a procedure to be taken between the Graduate Students Section and the supervising professor. The student will not need to carry out any procedures.
4. The opportunity for an internship at a prominent Japanese company or research organization will be provided in order to increase the knowledge and experience of cutting edge technologies. This internship will allow international students to become discerning and well-balanced scientists, with a deeper understanding of the Japanese society. The internship will also meet the requirements of the international students who wish to have practical experience in industry.
5. Those finishing their master’s course will be awarded the Master of Engineering degree. Those finishing their doctoral course will be awarded the Doctor of Philosophy in Engineering or Doctor of Philosophy in Science degree.

Table 1. Required Credits of Master’s Course in English

Category	Compulsory/Optional	Minimum Number of Required Credits
Course	Optional	18
Seminar I-IV in your Division	Compulsory	4
Research I-IV in your Division	Compulsory	8

Table 2-1. Master's Course List

* Biennial class. No class in 2023, Semester will be specified in 2024

● Exclusively for Special Program of "Engineering Science 21st Century"

Course Code	Course Name	Credit Units	Semester/Term	Division
290370	Solid State Spectroscopy	2	Spring/Summer	Materials Physics
290430	Science and Engineering of Correlated Electron Materials	2	Fall/Winter	Materials Physics
290763	Advanced magnetism and spintronics	2	Fall/Winter	Materials Physics
290631	Properties of Materials	2	Fall/Winter	Materials Physics
290851	Bio-Inspired Chemical Engineering 1	1	Fall	Chemical Engineering
290852	Bio-Inspired Chemical Engineering 2	1	Winter	Chemical Engineering
290630	Molecular Nanotechnology	2	Spring/Summer	Frontier Materials Science
290434	Photophysics of Nanoscale Materials	2	Spring/Summer	Frontier Materials Science
290565	Frontier of Nano-scale Materials	2	Fall/Winter	Frontier Materials Science
290735	International Exchange Lecture on Nanoscience and Nanoengineering A	1	Fall/Winter (Intensive)	Frontier Materials Science
290740	International Exchange Lecture on Nanoscience and Nanoengineering B	1	Summer (Intensive)	Frontier Materials Science
290741	International Exchange Lecture on Nanoscience and Nanoengineering C	1	Summer (Intensive)	Frontier Materials Science
29E637	Turbulence Dynamics	2	*	Nonlinear Mechanics
29E815	Advanced Fluid Mechanics	2	Spring/Summer	Nonlinear Mechanics
29E104	Advanced Experimental Mechanics	2	Fall/Winter	Nonlinear Mechanics
29E833	Vibrations and Waves	2	*	Nonlinear Mechanics
29E731	Topics in Multiphase Flow Engineering	2	*	Mechanical Engineering
29E040	Topics on Robotics	2	*	Mechanical Engineering
29E639	Stability Analysis of Dynamical Systems	2	Fall/Winter	Mechanical Engineering
29E623	Advanced Theoretical Solid Mechanics	2	*	Mechanical Engineering
29E624	Advanced Computational Mechanics	2	Fall/Winter	Mechanical Engineering
29E025	Biomechanics	2	Spring/Summer	Bioengineering
29E100	Theory of Optimum Design and Synthesis	2	Fall/Winter	Bioengineering
29E765	Biomechanism	2	*	Bioengineering
29E775	Biomedical data science	2	*	Bioengineering
290776	Biosystem Engineering	2	Spring/Summer	Bioengineering

Course Code	Course Name	Credit Units	Semester/Term	Division
29E766	Engineering in biology and medicine	2	*	Bioengineering
29E708	Medical Virtual Reality	2	Fall/Winter	Bioengineering
290870	Fundamentals of Engineering Science Research	1	Fall	Bioengineering
290582	Advanced Optoelectronics	2	Fall/Winter	Advanced Electronics and Optical Science
29E853	Adaptive Robotics	2	*	Systems Science and Applied Informatics
29E510	Signal Analysis Theory	2	Fall/Winter	Systems Science and Applied Informatics
29E292	Theory of Systems Analysis	2	*	Systems Science and Applied Informatics
29E713	Applied Robotics	2	*	Systems Science and Applied Informatics
29E714	Intelligent Robotics	2	Fall/Winter	Systems Science and Applied Informatics
29E719	Mixed Reality Systems	2	*	Systems Science and Applied Informatics
29E343	Imaging Systems	2	*	Systems Science and Applied Informatics
29E646	Database Systems	2	*	Systems Science and Applied Informatics
29E715	Communication Robot	2	*	Systems Science and Applied Informatics
29E803	Intelligent Learning System	2	*	Systems Science and Applied Informatics
29E855	Mathematical Cognitive Systems	2	*	Systems Science and Applied Informatics
290822	Topics in Mathematical Sciences 1	1	*	Mathematical Science / Mathematical Science for Social Systems
290823	Topics in Mathematical Sciences 2	1	*	Mathematical Science / Mathematical Science for Social Systems
290824	Topics in Mathematical Sciences 3	1	Fall	Mathematical Science / Mathematical Science for Social Systems
290825	Topics in Mathematical Sciences 4	1	Winter	Mathematical Science / Mathematical Science for Social Systems
290826	Topics in Mathematical Statistics 1	1	*	Mathematical Science / Mathematical Science for Social Systems
290827	Topics in Mathematical Statistics 2	1	*	Mathematical Science / Mathematical Science for Social Systems
290828	Topics in Mathematical Statistics 3	1	Spring	Mathematical Science / Mathematical Science for Social Systems
290829	Topics in Mathematical Statistics 4	1	Summer	Mathematical Science / Mathematical Science for Social Systems
290649	Nonlinear System Theory	2	Spring/Summer	Mathematical Science for Social Systems
29E007	Systems Optimization and Analysis	2	*	Mathematical Science for Social Systems
29E588	Intelligent Mathematical Programming System	2	Fall/Winter	Mathematical Science for Social Systems
290366	Introduction to Engineering Science	2	Spring/Summer	Engineering Science
290816	Engineering Science Research Internship 1	1	arranged by supervisor	Engineering Science

Course Code	Course Name	Credit Units	Semester/Term	Division
290817	Engineering Science Research Internship 2	2	arranged by supervisor	Engineering Science
290556	Advanced Physical Chemistry	2	Fall/Winter	●Chemistry
290557	Advanced Organic Chemistry	2	Fall/Winter	●Chemistry
290634	Advanced Chemistry for Material Science	2	*	●Chemistry
290857	Chemical Reaction Engineering	2	Fall/Winter	●Chemical Engineering
290840	Biochemical Materials Engineering	2	*	●Chemical Engineering
290603	Solid State Devices	2	Spring/Summer	●Advanced Electronics and Optical Science
290604	Opto- and Quantum Electronics	2	Fall/Winter	●Advanced Electronics and Optical Science
290656	Advanced Mathematical Science A	2	Spring/Summer	●Mathematical Science
290657	Advanced Mathematical Science B	2	Fall/Winter	●Mathematical Science
290658	Advanced Mathematical Science C	2	Fall/Winter	●Mathematical Science for Social Systems
	Seminar I in your Division (Course codes in Table 3 according to your division must be used for registration.)	1	SS/FW	Each Division
	Seminar II in your Division (Course codes in Table 3 according to your division must be used for registration.)	1	SS/FW	Each Division
	Seminar III in your Division (Course codes in Table 3 according to your division must be used for registration.)	1	SS/FW	Each Division
	Seminar IV in your Division (Course codes in Table 3 according to your division must be used for registration.)	1	SS/FW	Each Division
	Research I in your Division (Course codes in Table 3 according to your division must be used for registration.)	2	SS/FW	Each Division
	Research II in your Division (Course codes in Table 3 according to your division must be used for registration.)	2	SS/FW	Each Division
	Research III in your Division (Course codes in Table 3 according to your division must be used for registration.)	2	SS/FW	Each Division
	Research IV in your Division (Course codes in Table 3 according to your division must be used for registration.)	2	SS/FW	Each Division

Table 2-2. Master's Course List

Spring Term 2023 (April 11 – June 12)

Summer Term 2023 (June 13 – August 8)

Spring Summer Semester 2023 (April 11 – August 8)

Course Name	Course Name in Japanese	Lecturer	Credit Units	Day	Period	Lecture room	Course code	Semester/Term
Solid State Spectroscopy	汎分光	Akira SEKIYAMA, Takayuki KISS	2	Mon	3	Σ/B104	290370	Spring/ Summer
Molecular Nanotechnology		Hirokazu TADA, Ryo YAMADA	2	Wed	3	Σ/A304	290630	Spring/ Summer
Photophysics of Nanoscale Materials	微小物質光学応答	Masaaki ASHIDA, Masaya NAGAI	2	Tue	2	Σ/G509	290434	Spring/Su mmer
International Exchange Lecture on Nanoscience and Nanoengineering B	国際ナノ理工学特論B	Hiroshi MIYASAKA, Seiji TAKEDA, and others	1	Intensive		Interdisciplinary Research Bldg. 3F /305	290740	Summer
International Exchange Lecture on Nanoscience and Nanoengineering C	国際ナノ理工学特論C	Hiroshi MIYASAKA, Seiji TAKEDA, and others	1	Intensive		Interdisciplinary Research Bldg. 3F /305	290741	Summer
Advanced Fluid Mechanics	流体力学特論	Michio OOTSUKI	2	Fri	3	Σ/B104	29E815	Spring/ Summer
Biomechanics	バイオメカニクス	Shigeo WADA	2	Fri	4	Σ/B204	29E025	Spring/ Summer
Biosystem Engineering		Yasuyuki SUZUKI	2	Tue	3	Σ/B202	290776	Spring/ Summer
Topics in Mathematical Statistics 3	統計数理概論3	Kousuke MORIKAWA, Futoshi FUTAMI	1	Tue	1	Σ/J617	290828	Spring
Topics in Mathematical Statistics 4	統計数理概論4	Kousuke MORIKAWA, Futoshi FUTAMI	1	Tue	1	Σ/J617	290829	Summer
Nonlinear System Theory	非線形システム論	Takashi MATSUBARA	2	Mon	1	Σ/E401	290649	Spring/ Summer
Introduction to Engineering Science		Lectures from each division	2	Mon	4	Σ/B300	290366	Spring/ Summer
Solid State Devices		Masayuki ABE, and others	2	Fri	4	Σ/B104	290603	Spring/ Summer
Advanced Mathematical Science A		Michinori ISHIWATA, Takahiro OKABE, and others	2	Mon	1	Σ/J617	290656	Spring/ Summer

*Σ: Lecture room at the Graduate School of Engineering Science

Class Time Schedule:

1st period: 8:50-10:20 2nd period: 10:30-12:00
 3rd period: 13:30-15:00 4th period: 15:10-16:40
 5th period: 16:50-18:20 6th period: 18:30-20:00

Fall Term 2023 (October 1 – December 3)

Winter Term 2023 (December 4 – February 8)

Fall/Winter Semester 2023 (October 1 – February 8)

Course Name	Course Name in Japanese	Lecturer	Credit Units	Day	Period	Lecture room	Course code	Semester/Term
Science and Engineering of Correlated Electron Materials	強相関電子機能工学	Koichi IZAWA, Masaaki SHIMOZAWA	2	Wed	2	Σ/B104	290430	Fall/ Winter
Advanced magnetism and spintronics	磁性とスピントロニクス特論	Yoshishige SUZUKI	2	Wed	4	Σ/B301	290763	Fall/ Winter
Properties of Materials	物性概論	Shintaro ISHIWATA, Hidekazu MUKUDA	2	Tue	2	Σ/A403	290631	Fall/ Winter
Bio-Inspired Chemical Engineering 1	生物発想化学工学1	Hiroshi UMAKOSHI, Yukihiro OKAMOTO	1	Fri	1	Σ/A304	290851	Fall
Bio-Inspired Chemical Engineering 2	生物発想化学工学2	Hiroshi UMAKOSHI, Yukihiro OKAMOTO	1	Fri	1	Σ/A304	290852	Winter
Frontier of Nano-scale Materials	先端微小物質科学特論	Hajime ISHIHARA, and others	2	Tue	3	Σ/B102	290565	Fall/ Winter
International Exchange Lecture on Nanoscience and Nanoengineering A	国際ナノ理工学特論A	Hiroshi MIYASAKA, Seiji TAKEDA, and others	1	Intensive		Interdisciplinary Research Bldg. 3F / 305	290735	Fall/ Winter (Intensive)
Advanced Experimental Mechanics	実験力学特論	Keitarou HORIKAWA	2	Thu	2	Σ/B301	29E104	Fall/ Winter
Stability Analysis of Dynamical Systems	システム安定解析	Atsushi NISHIKAWA	2	Fri	3	Σ/B104	29E639	Fall/ Winter
Advanced Computational Mechanics	計算力学特論	Akio ISHI	2	Tue	3	Σ/B105	29E624	Fall/ Winter
Theory of Optimum Design and Synthesis	最適設計論	Shinya AOI	2	Mon	2	Σ/B102	29E100	Fall/ Winter
Medical Virtual Reality	医用バーチャルリアリティ論	Sei IKEDA	2	Tue	2	Σ/B301	29E708	Fall/Winter
Fundamentals of Engineering Science Research		Matija Milosevic	1	Thu	4	Σ/B102	290870	Fall
Advanced Optoelectronics	先端光エレクトロニクス	Tadao NAGATUMA, Masayuki FUJITA	2	Wed	3	Σ/B202	290582	Fall/Winter
Signal Analysis Theory	信号解析論	Youji IIGUNI	2	Mon	3	Σ/E401	29E510	Fall/Winter
Intelligent Robotics	知能ロボット学特論	Hiroshi ISHIGURO, Naoki SAIWAKI	2	Mon	2	Σ/E401	29E714	Fall/Winter
Topics in Mathematical Sciences 3	数理概論3	Masato HOSHINO, Satoshi MASAKI	1	Wed	5	Σ/J617	290824	Fall
Topics in Mathematical Sciences 4	数理概論4	Masato HOSHINO, Satoshi MASAKI	1	Wed	5	Σ/J617	290825	Winter
Intelligent Mathematical Programming System	知的計画論	Naoki HAYASHI	2	Fri	3	Σ/E401	29E588	Fall/Winter
Advanced Physical Chemistry		Ken-ichi FUKUI, and others	2	Tue	4	Σ/A304	290556	Fall/Winter
Advanced Organic Chemistry		Shigenori IWAI, and others	2	Fri	3	Σ/A304	290557	Fall/Winter
Chemical Reaction Engineering		Norikazu NISHIYAMA	2	Wed	1	Σ/B302	290857	Fall/Winter
Opto- and Quantum Electronics		Atsushi SANADA, and others	2	Fri	5	Σ/B302	290604	Fall/Winter
Advanced Mathematical Science B		Michinori ISHIWATA, Takahiro OKABE, and others	2	Mon	1	Σ/J617	290657	Fall/Winter
Advanced Mathematical Science C		Jun SEKINE, and others	2	Fri	1	Σ/J617	290658	Fall/Winter

*Σ : Lecture room at the Graduate School of Engineering Science

Class Time Schedule:

1st period: 8:50-10:20

2nd period: 10:30-12:00

3rd period: 13:30-15:00

4th period: 15:10-16:40

5th period: 16:50-18:20

6th period: 18:30-20:00

Table 3. Compulsory course code for Master's Course, Graduate School of Engineering Science

[Department of Materials Engineering Science]

(Division of Materials Physics)

Course	Lecturer	Course code	
		SS	FW
Materials Science and Engineering Seminar I	supervisor	290660	299660
Materials Science and Engineering Seminar II	supervisor	299661	290661
Materials Science and Engineering Seminar III	supervisor	290662	299662
Materials Science and Engineering Seminar IV	supervisor	299663	290663
Materials Science and Technology Research I	supervisor	290664	299664
Materials Science and Technology Research II	supervisor	299665	290665
Materials Science and Technology Research III	supervisor	290666	299666
Materials Science and Technology Research IV	supervisor	299667	290667

(Division of Chemical Engineering)

Course	Lecturer	Course code	
		SS	FW
Chemical Engineering Seminar I	supervisor	290422	299422
Chemical Engineering Seminar II	supervisor	299423	290423
Chemical Engineering Seminar III	supervisor	290424	299424
Chemical Engineering Seminar IV	supervisor	299425	290425
Chemical Engineering Research I	supervisor	290426	299426
Chemical Engineering Research II	supervisor	299427	290427
Chemical Engineering Research III	supervisor	290428	299428
Chemical Engineering Research IV	supervisor	299429	290429

[Department of Mechanical Science and Bioengineering]

(Division of Nonlinear Mechanics)

Course	Lecturer	Course code	
		SS	FW
Seminar in Nonlinear Mechanics I	supervisor	290453	299453
Seminar in Nonlinear Mechanics II	supervisor	299454	290454
Seminar in Nonlinear Mechanics III	supervisor	290455	299455
Seminar in Nonlinear Mechanics IV	supervisor	299456	290456
Research in Nonlinear Mechanics I	supervisor	290457	299457
Research in Nonlinear Mechanics II	supervisor	299458	290458
Research in Nonlinear Mechanics III	supervisor	290459	299459
Research in Nonlinear Mechanics IV	supervisor	299460	290460

(Division of Bioengineering)

Course	Lecturer	Course code	
		SS	FW
Seminar in Bioengineering I	supervisor	290486	299486
Seminar in Bioengineering II	supervisor	299487	290487
Seminar in Bioengineering III	supervisor	290488	299488
Seminar in Bioengineering IV	supervisor	299489	290489
Research in Bioengineering I	supervisor	290490	299490
Research in Bioengineering II	supervisor	299491	290491
Research in Bioengineering III	supervisor	290492	299492
Research in Bioengineering IV	supervisor	299493	290493

[Department of Systems Innovation]

(Division of Advanced Electronics and Optical Science)

Course	Lecturer	Course code	
		SS	FW
Seminar in Advanced Electronics and Optical Science I	supervisor	290676	299676
Seminar in Advanced Electronics and Optical Science II	supervisor	299677	290677
Seminar in Advanced Electronics and Optical Science III	supervisor	290678	299678
Seminar in Advanced Electronics and Optical Science IV	supervisor	299679	290679
Research in Advanced Electronics and Optical Science I	supervisor	290680	299680
Research in Advanced Electronics and Optical Science II	supervisor	299681	290681
Research in Advanced Electronics and Optical Science III	supervisor	290682	299682
Research in Advanced Electronics and Optical Science IV	supervisor	299683	290683

(Division of Mathematical Science)

Course	Lecturer	Course code	
		SS	FW
Mathematical Science Seminar I	supervisor	290684	299684
Mathematical Science Seminar II	supervisor	299685	290685
Mathematical Science Seminar III	supervisor	290686	299686
Mathematical Science Seminar IV	supervisor	299687	290687
Mathematical Science Research I	supervisor	290688	299688
Mathematical Science Research II	supervisor	299689	290689
Mathematical Science Research III	supervisor	290690	299690
Mathematical Science Research IV	supervisor	299691	290691

(Division of Chemistry)

Course	Lecturer	Course code	
		SS	FW
Seminar in Chemistry Course I	supervisor	290392	299392
Seminar in Chemistry Course II	supervisor	299393	290393
Seminar in Chemistry Course III	supervisor	290394	299394
Seminar in Chemistry Course IV	supervisor	299395	290395
Research in Chemistry Course I	supervisor	290396	299396
Research in Chemistry Course II	supervisor	299397	290397
Research in Chemistry Course III	supervisor	290398	299398
Research in Chemistry Course IV	supervisor	299399	290399

(Division of Frontier Materials Science)

Course	Lecturer	Course code	
		SS	FW
Seminar in Frontier Materials Science I	supervisor	290668	299668
Seminar in Frontier Materials Science II	supervisor	299669	290669
Seminar in Frontier Materials Science III	supervisor	290670	299670
Seminar in Frontier Materials Science IV	supervisor	299671	290671
Thesis Research in Frontier Materials Science I	supervisor	290672	299672
Thesis Research in Frontier Materials Science II	supervisor	299673	290673
Thesis Research in Frontier Materials Science III	supervisor	290674	299674
Thesis Research in Frontier Materials Science IV	supervisor	299675	290675

(Division of Mechanical Engineering)

Course	Lecturer	Course code	
		SS	FW
Seminar in Mechanical Engineering I	supervisor	290465	299465
Seminar in Mechanical Engineering II	supervisor	299466	290466
Seminar in Mechanical Engineering III	supervisor	290467	299467
Seminar in Mechanical Engineering IV	supervisor	299468	290468
Research in Mechanical Engineering I	supervisor	290469	299469
Research in Mechanical Engineering II	supervisor	299470	290470
Research in Mechanical Engineering III	supervisor	290471	299471
Research in Mechanical Engineering IV	supervisor	299472	290472

(Division of Systems Science and Applied Informatics)

Course	Lecturer	Course code	
		SS	FW
Seminar in Systems Science I	supervisor	290757	299757
Seminar in Systems Science II	supervisor	299758	290758
Seminar in Systems Science III	supervisor	290759	299759
Seminar in Systems Science IV	supervisor	299760	290760
Research in Systems Science I	supervisor	290516	299516
Research in Systems Science II	supervisor	299517	290517
Research in Systems Science III	supervisor	290518	299518
Research in Systems Science IV	supervisor	299519	290519

(Division of Mathematical Science for Social Systems)

Course	Lecturer	Course code	
		SS	FW
Social System Mathematical Science Seminar I	supervisor	290692	299692
Social System Mathematical Science Seminar II	supervisor	299693	290693
Social System Mathematical Science Seminar III	supervisor	290694	299694
Social System Mathematical Science Seminar IV	supervisor	299695	290695
Social System Mathematical Science Research I	supervisor	290696	299696
Social System Mathematical Science Research II	supervisor	299697	290697
Social System Mathematical Science Research III	supervisor	290698	299698
Social System Mathematical Science Research IV	supervisor	299699	290699

Table 4. Compulsory course code for Doctoral Course, Graduate School of Engineering Science

【Department of Materials Engineering Science】

(Division of Materials Physics)

Course	Lecturer	Course code	
		SS	FW
Advanced Research in Materials Physics I	supervisor	296001	298001
Advanced Research in Materials Physics II	supervisor	296002	298002
Advanced Research in Materials Physics III	supervisor	296003	298003
Advanced Research in Materials Physics IV	supervisor	296004	298004
Advanced Research in Materials Physics V	supervisor	296005	298005
Advanced Research in Materials Physics VI	supervisor	296006	298006

(Division of Chemical Engineering)

Course	Lecturer	Course code	
		SS	FW
Special Research in Chemical Engineering I	supervisor	296013	298013
Special Research in Chemical Engineering II	supervisor	296014	298014
Special Research in Chemical Engineering III	supervisor	296015	298015
Special Research in Chemical Engineering IV	supervisor	296016	298016
Special Research in Chemical Engineering V	supervisor	296017	298017
Special Research in Chemical Engineering VI	supervisor	296018	298018

【Department of Mechanical Science and Bioengineering】

Course	Lecturer	Course code	
		SS	FW
Advanced Research in Mechanical Science and Bioengineering I	supervisor	296025	298025
Advanced Research in Mechanical Science and Bioengineering II	supervisor	296026	298026
Advanced Research in Mechanical Science and Bioengineering III	supervisor	296027	298027
Advanced Research in Mechanical Science and Bioengineering IV	supervisor	296028	298028
Advanced Research in Mechanical Science and Bioengineering V	supervisor	296029	298029
Advanced Research in Mechanical Science and Bioengineering VI	supervisor	296030	298030

【Department of Systems Innovation】

(Division of Advanced Electronics and Optical Science)

Course	Lecturer	Course code	
		SS	FW
Special Research in Advanced Electronics and Optical Science I	supervisor	296043	298043
Special Research in Advanced Electronics and Optical Science II	supervisor	296044	298044
Special Research in Advanced Electronics and Optical Science III	supervisor	296045	298045
Special Research in Advanced Electronics and Optical Science IV	supervisor	296046	298046
Special Research in Advanced Electronics and Optical Science V	supervisor	296047	298047
Special Research in Advanced Electronics and Optical Science VI	supervisor	296048	298048

(Division of Mathematical Science)

Course	Lecturer	Course code	
		SS	FW
Special Research in Mathematical Science I	supervisor	296055	298055
Special Research in Mathematical Science II	supervisor	296056	298056
Special Research in Mathematical Science III	supervisor	296057	298057
Special Research in Mathematical Science IV	supervisor	296058	298058
Special Research in Mathematical Science V	supervisor	296059	298059
Special Research in Mathematical Science VI	supervisor	296060	298060

(Division of Chemistry)

Course	Lecturer	Course code	
		SS	FW
Special Research in Chemistry Course I	supervisor	296007	298007
Special Research in Chemistry Course II	supervisor	296008	298008
Special Research in Chemistry Course III	supervisor	296009	298009
Special Research in Chemistry Course IV	supervisor	296010	298010
Special Research in Chemistry Course V	supervisor	296011	298011
Special Research in Chemistry Course VI	supervisor	296012	298012

(Division of Frontier Materials Science)

Course	Lecturer	Course code	
		SS	FW
Special Research in Frontier Materials Science I	supervisor	296019	298019
Special Research in Frontier Materials Science II	supervisor	296020	298020
Special Research in Frontier Materials Science III	supervisor	296021	298021
Special Research in Frontier Materials Science IV	supervisor	296022	298022
Special Research in Frontier Materials Science V	supervisor	296023	298023
Special Research in Frontier Materials Science VI	supervisor	296024	298024

(Division of Systems Science and Applied Informatics)

Course	Lecturer	Course code	
		SS	FW
Special Research in Systems Science I	supervisor	296049	298049
Special Research in Systems Science II	supervisor	296050	298050
Special Research in Systems Science III	supervisor	296051	298051
Special Research in Systems Science IV	supervisor	296052	298052
Special Research in Systems Science V	supervisor	296053	298053
Special Research in Systems Science VI	supervisor	296054	298054

(Division of Mathematical Science for Social Systems)

Course	Lecturer	Course code	
		SS	FW
Special Research in Mathematical Science for Social Systems I	supervisor	296061	298061
Special Research in Mathematical Science for Social Systems II	supervisor	296062	298062
Special Research in Mathematical Science for Social Systems III	supervisor	296063	298063
Special Research in Mathematical Science for Social Systems IV	supervisor	296064	298064
Special Research in Mathematical Science for Social Systems V	supervisor	296065	298065
Special Research in Mathematical Science for Social Systems VI	supervisor	296066	298066

【For both MC and DC】

Course	Lecturer	Course code	
		SS	FW
Engineering Science International Internship 1	supervisor	297005 *	
Engineering Science International Internship 2	supervisor	297009 *	
Engineering Science International Internship 3	supervisor	297010 *	
Engineering Science Laboratory Rotation A	supervisor	297007 *	
Engineering Science Laboratory Rotation B	supervisor	297008 *	

2. Important Notes for Students

1. Course registration

- 1) Please follow your supervisor's instructions and register for courses on the academic information system (KOAN) within the designated period. (Please note that CLE will not be available for courses that are not registered, so please be especially careful about courses conducted via media.) We will let you know when the registration period will be separately.
- 2) If you wish to register for courses offered by the Graduate School not required for completion and wish to apply the credits toward the completion requirements, please submit the "Application form to apply for credits regarding subjects not required for completion" to the Graduate Students Section after receiving the stamp of approval from your supervisor.
- 3) In principle, no course additions or cancellations can be made after the course registration period, so please make sure that your course registration details are correct. However, courses offered in the summer and winter semesters may be added or cancelled during the "period when changes can be made".

2. Academic Appeals Process

If you wish to make an appeal against an academic decision such as grades, you may do so by submitting an Academic Appeal Form during the designated period to the Graduate Students Section. This form is available at the Graduate Students Section.

3. Status Changes

When submitting notifications of student status changes (i.e. leave of absence, readmission, withdrawal, study abroad), please fill out the designated form and submit it to the Graduate Students Section after obtaining the approval of your academic advisor.

Please note that applications for leave of absence, withdrawal and study abroad must be submitted to the Graduate Students Section after the payment of the tuition fees at least one month prior to the start of leave of absence, withdrawal and study abroad.

Please note that your formal request may not be accepted in case of late submission or if you have not paid tuition fees.

* In particular, please keep in mind that in case of leave of absence or withdrawal, if you should leave without submitting a formal request, you will be obliged to pay tuition fees for the next semester.

4. Application procedure of Doctoral Degree

It is necessary to apply for the doctoral degree through the respective laboratory. There may be changes regarding how to submit the documents. Details will be provided upon completion of the course.

Documents to be submitted	Note
Title of doctoral thesis for Ph.D. applicant and relevant information	Both Data and Paper <u>*After submission, the title cannot be changed.</u>
Form 1: Application for Academic Degree	
Doctoral Thesis	Books and PDF file
Check List	Submit with Doctoral Thesis.
Form 2: List of Theses	
Form 3: Abstract of Thesis	
Form 4: Applicant History	
Form 10: Doctoral Thesis Internet Publication Confirmation (University's institutional repository)	* Form 11 should be submitted only if applicable.

Pledge	
Written Statement (This document should be submitted only if applicable.)	
Letter of consent (This document should be submitted only if applicable)	
Form 9: Confirmation Sheet	This sheet is to confirm the spelling and the order of your name to be printed on your diploma and transcript.

5. Method for making tuition payments

Tuition is paid in two equal installments. The first installment is due on May 27; the second installment is due on November 27. Tuition fees are withdrawn from the account one opens at a bank designated by the university. If the payment due date falls on a non-business day, your payment will be processed on the next business day.

- 1) Students who cannot pay tuition fees by automatic deduction, are required to pay via bank transfer. Please transfer the tuition fee at a bank using the request form for tuition payment sent by the university.
- 2) If/When tuition fees are revised, outstanding fees must be paid at the revised rate.
- 3) For additional information on tuition fee payment procedures, please contact the Accounting Manager, Accounting Division, Department of Finance, Administration Bureau. **Tel: 06-6879-7055**
- 4) If the student fails to pay the tuition fee by the appointed date and after a considerable period following several requests for payment, he/she shall be removed from the university registration.
*Frequently Asked Questions (FAQs) can be found on the following website: <http://osku.jp/i0628>

Tuition Fee Exemption

A student who is experiencing difficulty paying tuition and/or enrollment fees and who has achieved the minimum academic standard may apply for a tuition fee exemption. Applicants who have passed Osaka University screening can receive a full- or half-tuition and/or enrollment fee exemption: <http://osku.jp/m0684>

6. Accident Insurance

Personal Accident Insurance for Students Pursuing Education and Research (PAS)

Personal Accident Insurance for Students --in Japanese, "Gakusei Kyoiku Kenkyu Saigai Shogai Hoken" [shortened to: "Gakkensai"]--is a nationwide system to indemnify students for the number of days that medical treatment is needed for injury incurred during regular curricular activities, extracurricular activities, or while commuting to or from university. All students are required to join this insurance plan.

Students who have not obtained the insurance and those who are repeating a year of school are required to pay the premium as soon as possible at a post office.

1) Duration of insurance

Admission	Duration of insurance
April	April 1 ~ March 31 of the expected year of graduation
October	October 1 ~ September 30 of the expected year of graduation

The duration of insurance for students who obtain this insurance plan from the middle of a semester starts on the day following the date of premium payment.

2) Premiums

	Master's Course	Doctoral Course
1 st year	1,750	2,600
2 nd year	1,000	1,750
3 rd year		1,000

Students in the master's course cannot make a lump payment of the insurance premiums for both the master's course and the doctor's course. Insurance premiums must be paid at the start of the doctor's course after advancing to the course.

3) Types and amounts of insurance

For more information, view the **Handbook for Enrollment of Personal Accident Insurance for Students**

Pursuing Education and Research that you are given at the time of participation.

Type of indemnity	Types and amounts of insurance	Additional indemnity for hospitalization
During regular curricular activities or school events	<ul style="list-style-type: none"> ● Indemnity for loss of life: 20 million yen ● Insurance for disability: In relation to the degree of aftereffect: 1,200,000 yen - 30 million yen ● Injury and/or disease requiring four or more days of actual medical treatment: 3,000 yen - 300,000 yen ● Number of treatment days: 1 or more 	4,000 yen/day (from day 1)
While commuting to and from school facilities	<ul style="list-style-type: none"> ● Indemnity for loss of life: 10 million yen ● Insurance for disability: In relation to the degree of aftereffect: 600,000 yen - 15 million yen ● Injury and/or disease requiring four or more days of actual medical treatment: 6,000 yen - 300,000 yen ● Number of treatment days: 4 or more 	4,000 yen/day (from day 1)
During extracurricular activities at or in school facilities While you are in school facilities	<ul style="list-style-type: none"> ● Indemnity for loss of life: 10 million yen ● Insurance for disability: In relation to the degree of aftereffect: 600,000 yen - 15 million yen ● Injury and/or disease requiring four or more days of actual medical treatment :30,000 yen - 300,000 yen ● Number of treatment days: 14 or more 	4,000 yen/day (from day 1)

* Accidents when engaged in an activity prohibited by the university are not covered by this insurance.

* Accidents while commuting to and from school facilities are covered as long as you observe what is stipulated in Bicycle and Transportation Regulations.

* Only extracurricular activities outside school facilities that you have informed the university of are covered by this insurance.

* Accidents that occur while you are in a dormitory on campus are not covered by this insurance.

4) Procedures for insurance claim

If an accident that may be covered by this insurance occurs, contact the COOP office as soon as possible. Information regarding the date, location, and injury or illness must be communicated to the insurance company within 30 days of the accident. If this is not communicated within 30 days, you may not get paid by the insurance company.

Documents necessary for claiming insurance are available at the COOP offices on the Toyonaka, Suita, and Minoh campuses. Please submit the insurance claim form to the COOP Office after the treatment has been completed.

Personal Liability Insurance

The Graduate School of Engineering Science **strongly recommends** that international students purchase personal liability insurance that covers accidents during university activities as well as in the daily life. For example, the “Comprehensive Insurance for Students Lives Coupled with "Gakkensai" for International Students” is an option.

https://www.osaka-u.ac.jp/ja/international/inbound/exchange_program/files/cv7q0l

- The Graduate School of Engineering Science recommends “Comprehensive Insurance for Students Lives Coupled with "Gakkensai" for International Students.” Type D (you may choose a more expensive type if you wish).
- The Osaka University Liability Insurance coupled with PAS “Gakkenbai” (LSR Course A), which is a personal liability insurance, is available at Osaka University. However, as this only covers accidents during university activities, the Graduate School of Engineering Science does not recommend taking this out.
- If you have taken out another liability insurance with similar coverage, you do not need to purchase the “Comprehensive Insurance for Students Lives Coupled with "Gakkensai" for International Students”.

			A Type	B Type	C Type (*1)	D Type (*1)
Insurance Amount 保険料総額	1	Personal compensation responsibility ⁽²⁾ 個人賠償責任 ⁽²⁾	Limited to 100 million yen per incident both domestically and overseas 1事故 国内：1億円 国外：1億円 限度			
	2	Death-Physical impediment ⁽³⁾ 死亡・後遺障害 ⁽³⁾	1,000,000 yen	1,000,000 yen	1,000,000 yen	1,000,000 yen
	3	Medical treatment expenses ⁽⁴⁾ 治療費用 ⁽⁴⁾	Out-of-pocket medical expenses 治療費用実費	Not covered	Out-of-pocket medical expenses 治療費用実費	Not covered
		Medical treatment expenses ⁽⁴⁾ 治療費用 ⁽⁴⁾				
	4	Rescuer expenses, etc. 救護者費用等	3,000,000 yen	3,000,000 yen	3,000,000 yen	3,000,000 yen
	5	Movable property for daily use ⁽⁵⁾ 生活用動産 ⁽⁵⁾	500,000 yen	500,000 yen	Not covered	Not covered
6	Tenant liability ⁽⁵⁾ 借家人賠償責任 ⁽⁵⁾	10,000,000 yen	10,000,000 yen			
Insurance premium (lump sum up until graduation) 保険料総額(卒業まで一括)	Insurance period 保険期間	1 month 1ヶ月	—	1,320 yen	—	460 yen
		2 months 2ヶ月	—	1,870 yen	—	660 yen
		3 months 3ヶ月	—	2,400 yen	—	840 yen
		4 months 4ヶ月	8,240 yen	2,940 yen	6,330 yen	1,030 yen
		5 months 5ヶ月	9,740 yen	3,470 yen	7,480 yen	1,210 yen
		6 months 6ヶ月	10,480 yen	3,730 yen	8,060 yen	1,310 yen
		7 months 7ヶ月	11,220 yen	3,990 yen	8,630 yen	1,400 yen
		8 months 8ヶ月	11,970 yen	4,260 yen	9,200 yen	1,490 yen
		9 months 9ヶ月	12,720 yen	4,530 yen	9,780 yen	1,590 yen
		10 months 10ヶ月	13,480 yen	4,800 yen	10,360 yen	1,680 yen
		11 months 11ヶ月	14,220 yen	5,060 yen	10,930 yen	1,770 yen
		1 year 1年間	14,970 yen	5,330 yen	11,500 yen	1,860 yen
		2 years 2年間	26,190 yen	9,320 yen	20,130 yen	3,260 yen
		3 years 3年間	37,440 yen	13,340 yen	28,780 yen	4,680 yen
	4 years 4年間	48,670 yen	17,340 yen	37,410 yen	6,080 yen	
	5 years 5年間	59,880 yen	21,320 yen	46,030 yen	7,470 yen	
	6 years 6年間	67,360 yen	23,980 yen	51,780 yen	8,400 yen	

7. Cancellation of classes due to weather warnings, disasters, and suspension of public transportation

Make sure to refer to the following website for the latest information: <http://osku.jp/w0540>

8. Travel Abroad

Those who wish to travel overseas are required to adhere to the following procedures.

1) Travel Abroad Registration System (required for all students)

If you travel abroad for any of the reasons noted below, be sure to enter your travel information into the system.

1. When you participate in programs such as student exchange programs and training overseas sponsored by the University,
2. When you are involved in research activity overseas for participating in academic conferences or fieldwork,
3. When you travel abroad for any reason other than those mentioned above, such as internships overseas, study/travel overseas, or when international students return home temporarily, regardless of whether it be for business or personal reasons.

Go to the following URL to register: <http://osku.jp/m0783>

2) Travel abroad insurance (required for all students)

3) OSSMA(Optional)

Osaka University has asked students who will study abroad to join the Overseas Student Safety Management Assistance (OSSMA).

When you are in trouble and need some advice while traveling abroad, services will be available in Japanese 24 hours a day, 365 days a year. Further information can be found on the following website: <http://osku.jp/j0283>

9. Housing Information

1) University dormitory

Osaka University has various types of university dormitories in and around the campuses. For detailed information, please refer to the website below.

<https://www.osaka-u.ac.jp/en/international/inbound/support/residence.html>

2) Private housing

International students who wish to find private housing are required to join the necessary insurance as well as go through procedures for joint guarantee. For detailed information, please refer to the website below.

<https://iss-intl.osaka-u.ac.jp/supportoffice/eng/housing/procedures/move-in/>

Joint guarantor

A joint guarantor is required when renting private housing in Japan. Osaka University recommends using “Coop-Rent Insure” (Joint Guarantor Agency). It is an agency for foreigners to use, providing Rent Guarantee Service for international students and scholars. You can complete the procedures through the real estate company that mediates the rent contract or at the “MY ROOM” counter for the property handled by CO-OP MY ROOM (Housing Division, Osaka University CO-OP).

Guarantee Charge	Initial charge (first year) 12,000 yen Renewal charge (after the second year) 10,000 yen per year
Guarantee Period	From signing the contract until moving out has been completed
Guarantee Limit	Up to for 24 months of the monthly rent
Guarantee Content	● Monthly rent: Common service expenses, parking lot fee, fixed water bill, and other expenses to be paid in addition to the rent ● Restoration cost: Up to one month of the maximum total monthly rent ● Litigation expense for evacuation: Expenses incurred from cancelation of lease contract up to the evacuation.
Support Desk	Assistance in 5 languages: English, Chinese, Korean, Vietnamese, Indonesian
Website	https://www.coop-ri.com/index_en.html

10. Bicycle and Transportation Regulations

1) Transportation to and from campus

Osaka University encourages its students to walk or use public transportation to get to and from its campus. Students are not permitted to commute to OU campuses by car, motorcycle, or motor scooters.

Students are strongly requested to always obey all traffic regulations and behave in a responsible and mature manner. Students commuting by bicycle are expected to obey the following rules.

2) Bicycle Regulations (Excerpt)

Be considerate of pedestrians and local people. Under the Road Traffic Law, bicycles are deemed as vehicles. Cyclists must follow traffic rules, and malicious violators and individuals who cause fatal accidents in violation of these rules will be strictly punished. Keep in mind that bicycles can be dangerous to pedestrians.

The following are rules for safe bicycling on and around the OU campus. Cyclists should be aware that they must use the vehicle carefully in order to keep the general public living near OU as well as those on campus safe.

1. Maintain safe and reasonable speeds at all times.
2. Ride on the left side of the road.
3. The following acts cause trouble and are dangerous as well: please do **not**: park on the road, abandon your bicycle, park for an extended period of days, ride your bicycle in parallel, and/or use your cell phone while riding.
4. Riding bicycles on the *Handai-zaka* [Osaka University Slope] is prohibited.
5. Regarding motorized vehicles, bicyclists are requested to use the **designated gates only** for entering and leaving OU campuses.
6. Riding your bicycle on the sidewalks on campus is prohibited.
7. Bicycles should be parked in an orderly manner in the bicycle parking lots.
8. Prevent theft of your bicycle by double-locking it.
9. In principle, using your bicycle to move around within the campus is prohibited.
10. Be careful not to cause trouble for the general public living near OU.

3) **Bicycle Insurance**

Osaka Prefecture passed an ordinance requiring all bicycle owners to have bicycle insurance, which came into effect on July 1, 2016. Those who come to school by bicycle, or otherwise use a bicycle outside of school grounds, must obtain bicycle insurance. Please purchase an insurance plan at your earliest convenience. For those who have already purchased any of the insurance plans listed below are not required to enroll in bicycle insurance.

1. Expansive Insurance for General Student Life (Futaigakuso)
 2. Personal Liability Insurance for Students (Gakubai) through the COOP Insurance Program
 3. Automobile Insurance (limited to only when the Personal Liability Clause is added)
 4. Fire Insurance (limited to only when the Personal Liability Clause is added)
 5. Study Abroad Insurance (limited to only when the Personal Liability Clause is added)
- *For any inquiries about taking out bicycle insurance, please contact the Graduate Students Section.

11. Preventing all types of harassment --Aiming for a harassment-free university--

In order to maintain an environment supportive of education, research, and work, Osaka University strives to prevent and eliminate all forms of harassment.

If you're unsure whether you're experiencing some form of harassment or not, please visit one of our Harassment Counseling Offices for consultation just in case right away.

- * Visitors to the Harassment Counseling Offices will receive advice and support from "counseling experts".
- * You can also receive counseling from campus-wide counselors selected from each department on campus. These counselors can provide counseling to anyone regardless of affiliation.
- * Counseling in English is also provided at some offices.

If you would like to receive counseling, please call and make a reservation.

For detailed information regarding location, office hours and telephone numbers please refer to the website below. Basic policies and regulations, guidelines and other information can also be found here.

(Japanese)

https://www.osaka-u.ac.jp/ja/guide/student/prevention_sh

(English)

https://www.osaka-u.ac.jp/en/campus/life/prevention_sh/prevention_sh

12. Information about The Σ Advising Room for International Students (Σ ARIS)

1) **About the purpose of the Σ Advising Room for International Students (Σ ARIS)**

This room serves as a place to help international students enrolled in the Graduate School of Engineering Science with various problems so that their everyday life will be as fulfilling as possible.

Students can go to get advice about everyday life and studies, get information that they are looking for, enjoy communicating with other Japanese students as well as their tutors, and feel free just to come to talk with other international students as well.

In addition, Japanese students are welcome to use it as a place to interact/spend time with international students.

Office hours	Mondays through Fridays (closed on holidays) 11:00~17:00 Assis. Prof. Morikawa will be in the room for consultations on Tuesdays, 13:30~15:30.
Place	Wing A, 3 rd floor (Room A325)
Annual events (Details will be posted etc.)	• English Café, English Hour, Japanese Hour ... held once a week • Welcome Party... held twice a year (in the spring and fall) • Bus tours ... a one-day bus trip in November

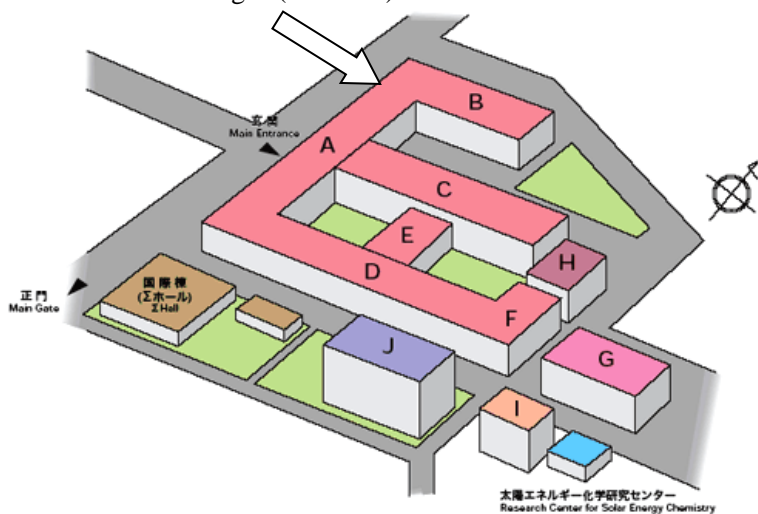
2) Request to our international students

1. We ask that you come to the Advisement Room for International Students at least once a month.
2. If there is a change in your address, please update this information via KOAN. ([Student – Registering address])
3. If you are planning to go back to your home country temporarily or to go abroad on a trip, be sure to register the necessary information in the “Osaka University Travel Abroad Registration System”. For details, refer to 7-1 “Travel Abroad Registration System (required for all students)”.
4. Be sure to take the annual medical checkup at the Health and Counseling Center every spring.

[Building map of Graduate School of Engineering]

Graduate Students Section

*Second floor of Wing A (A216-20)



[Contact Information]

Graduate Students Section,
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