令 和 5 年 度

Academic Year 2023

大 学 院 学 修 要 覧

Graduate Programs and Procedures

(Excerpt version)

(Note) The official version of the Graduate Programs and Procedures is the Japanese one. This English version is a translation of the original Graduate Programs and Procedures for reference purposes only. If there is any inconsistency between the Japanese version and the English version, the Japanese version shall always prevail.

電気通信大学大学院情報理工学研究科

The University of Electro-Communications
Graduate School of Informatics and Engineering

Table of Contents

10 Reference

(Omitted)

(Omitted)

(Omitted)

4 Learning and Educational Goals and Registration Methods

(2) Points of Program Completion

1) Supervisor

At the time of enrollment, more than one supervisor is assigned to each student. Supervisors guide students in all aspects of schoolwork, including research guidance, class registration, and leave of absence or withdrawal from school during their time at the Graduate School. They prepare a Research Guidance Plan「研究指導計画書」 in consultation with a student at the beginning of the academic year and show the guidance plan and content for the year. Supervisors also give the student guidance and advice based on an Annual Study Plan「年間履修計画書」 at the beginning of the academic year.

If it is deemed necessary, supervisors may be changed.

2) Requirements for degree

a. Requirements for degree for the Master's Program

A master's degree is awarded to those who have been enrolled in the Graduate School for at least two years, have earned 30 or more credits, and have passed the master's dissertation examination and final examination after receiving necessary research guidance. However, the number of credits to be earned may be changed in special programs.

b. Requirements for degree for the Doctoral Program

A doctoral degree is awarded to those who have been enrolled in the Graduate School for at least three years, have earned 8 or more credits (in the Joint Doctoral Program for Sustainability Research, 16 credits), and have passed the doctoral dissertation examination and final examination after receiving necessary research guidance.

The system for Shortened Period for Graduation 「短縮修了」 applicable to those who have made outstanding research achievements in these programs will be described later.

For students to whom the system for Extending the Period of Registration 「長期履修」 is permitted to apply, their enrollment period is longer than the extended period of registration.

3) Credits required for degree

Students are required to earn the number of credits shown in the table below from the class subjects offered in the curriculum of each department.

Master's Program

Category	Number of credits
Graduate School Fundamental Subjects 大学院基礎教育科目	2 credits or more
Graduate School Practical Subjects 大学院実践教育科目	
Graduate Seminar 大学院輪講	4 credits
Graduate Technical English 大学院技術英語	2 credits
Graduate School Industry–Academia Collaborative Subjects 大学院産学連携科目	2 credits or more
Graduate School Major Subjects 大学院専門教育科目	
Major Subjects I 専門科目 I	10 credits or more
Major Subjects II 専門科目 II	8 credits or more
Subtotal	28 credits or more
In addition to the above, from the categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, and Graduate School Major Subjects	2 credits or more
Total	30 credits or more

Note 1: Students must earn 6 or more credits of Major Subjects II in the department to which they belong. Students in the Department of Mechanical and Intelligent Systems Engineering must include 4 or more credits of Major Subjects II (A) as the credits to be earned from Major Subjects II.

Note 2: In order to complete the Design Thinking and Data Science Program of the Department of Informatics, students must earn at least 2 credits from "Advanced Internship (Overseas) " or "Advanced Internship (Long-term & Overseas) " for graduate school industry -academia collaboration courses.

With regard to credits earned in other graduate schools and earned before enrollment, a total of up to 4 may be counted as the credits of Major Subjects II (in the case of the Department of Mechanical and Intelligent Systems Engineering, Major Subjects II (B)).

The ◎ mark in the Master's Program (Program) column in Appended Table 1 shows compulsory subjects. The ○ mark shows the subjects which are preferably to be taken in elective subjects based on the course tree.

Doctoral Program

Category	Number of credits
Graduate School Fundamental Subjects 大学院基礎教育科目	0 credit or more
Graduate School Practical Subjects 大学院実践教育科目	
Graduate Seminar 大学院輪講	4 credits
Graduate School Industry–Academia Collaborative Subjects 大学院産学連携科目	0 credit or more
Graduate School Major Subjects 大学院専門教育科目	
Major Subjects I•II 専門科目Ⅰ、Ⅱ	0 credit or more
Major Advanced Subjects 専門上級科目	2 credits
Subtotal	6 credits or more
In addition to the above, from the categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, and Graduate School Major Subjects	2 credits or more
Total	8 credits or more

Integrated Master's–Doctoral Program

Department of Engineering Science: Engineering Science Open-innovation Program

Category	Number of credits
Graduate School Fundamental Subjects	2 credits or more
Graduate School Practical Subjects	
Graduate Seminar (I–IV)	4 credits
Graduate Seminar 2	4 credits
Graduate Technical English	2 credits
Graduate School Industry–Academia	2 credits or more

Collaborative Subjects	
Graduate School Major Subjects	
Major Subjects I	6 credits or more
Major Subjects II	12 credits or more
Subtotal	32 credits or more
In addition to the above, from the categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, and Graduate School Major Subjects	2 credits or more
Total	34 credits or more

Note 1: Of Major Subjects I, Graduate School Laboratory Practicum is excluded from the credits required for degree.

Note 2: To complete the Doctoral Program, students must earn the prescribed 34 or more credits after earning 2 or more credits from the department's designated subjects, Open Innovation School I–V, in Graduate School Industry–Academia Collaborative Subjects, and more than 12 credits from three subjects of Open Laboratory Work in Major Subjects II.

Note 3: To complete the Master's Program, students must earn 1 or more credits from Open Innovation School I–V, more than 8 credits from two subjects of Open Laboratory Work in Major Subjects II, and the prescribed 30 and more credits except Graduate Seminar 2.

Doctoral Program: Joint Doctoral Program for Sustainability Research

Subject category		Number of credits required for degree
Basic Studies in Sustainability Research 共通基盤科目		4 credits
Seminar and Laboratory Work for Sustainability Research サステイナビリティ研究セミナー／ラボワーク科目	Cooperative seminars by main and sub supervisors	6 credits
Practicum and Internship 実践実習科目	Select either Extramural Internship or Intramural Internship	6 credits
		Total 16 credits

4) Application and awarding of degrees

A degree shall be awarded as a certificate of the completion of the program to those who have been enrolled for the prescribed period, have earned credits, and have satisfied the requirements for degree through applying for a degree and passing the dissertation examination and final examination. For information related to the guidelines for degree application, see "10 Reference (19) Degree

Application Guidelines."

The types and fields of the degrees awarded to students in the Master's and Doctoral programs at the Graduate School are described as shown below.

Master's Program: Master of Engineering, Master of Science, and Master of Arts

Doctoral Program: Doctor of Engineering, Doctor of Science, and Doctor of Philosophy

The degree awarded to students in the Joint Doctoral Program for Sustainability Research shall be a Doctor of Philosophy .

5 Period of Enrollment

(1) Standard Study Period and Period of Enrollment

The standard period of study is two years for the Master's Program and three years for the Doctoral Program.

The maximum enrollment period is four years for the Master's Program and six years for the Doctoral Program. Students are not allowed to attend the programs beyond these periods. Extended-registration students shall be treated similarly. The period of leave of absence （休学） shall not be included in the period of enrollment. Leave of Absence from school will be described later.

(2) Shortened Period for Graduation 「短縮修了」

The Graduate School shall allow those who have achieved outstanding research results to complete the program by shortening the standard period of study. In this case, it shall be sufficient to be enrolled in a program for at least one year. However, those who have completed the Master's Program (including in other graduate schools) in a shortened period, and those who have completed the Master's Program in which the standard period of study is one year or more but less than two years must be enrolled in the Master's and the Doctoral programs for at least three years in total.

"Those who have achieved outstanding research results" are defined as individuals who have earned all the credits required for degree and achieved results equal to or greater than the average results that can be achieved in the standard period of study. The applicability of the system for Shortening the Period of Study shall be determined after the examination in the department.

(3) System for Extending the Period of Registration 「長期履修」

Some students might be limited in opportunities to take classes and receive research guidance and have difficulty completing their programs in the prescribed period of study (two years for the Master's Program and three years for the Doctoral Program) because they have a job. For those students (those who have a part-time job must work 30 and more hours a week), the Graduate School has the system for extending the period of registration that permits students to complete the curriculum systematically in a certain period beyond the standard period of study (within the maximum enrollment period and in one-year unit).

1) Application for the system for Extending the Period of Registration

Students newly entering the University shall apply for an Extended Period of Registration at the time of the enrollment procedure. Students enrolling in April shall apply at the beginning of

February, and those enrolling in October at the beginning of August. The specific dates shall be determined by the University.

For each applicant, ※mentor teachers (main supervisor, etc.) conduct an interview and examine the applicability to the system after confirming the study and research plans. However, students who are enrolled in or after the final year of the period of study cannot apply for the system.
An Extended Period of Registration is permitted:

• Up to twice of the standard period of study in one year-unit

The application period for an Extended Period of Registration

• New students: At the time of the enrollment procedure

• Current students: The beginning of February for students enrolled in April. The beginning of August for students enrolled in October

2) Tuition for extended-registration students （長期履修生）

The annual tuition for students who have been permitted an extended period of registration shall be the amount calculated using the following formula.

$$A = ((B \times C) - D)) \div E$$

In that formula, the following variables are used.

A = the total amount of the annual tuition for a student who has been permitted an extended period of registration

B = the amount of the annual tuition for the normal period of study

C = the number of years equivalent to the standard years of study

D = the amount of the total tuition that the student must pay during the period in which the student has been enrolled in the program

E = the number of years of the extended period of registration (excluding the period during which the student had been enrolled before the extension)

3) Extension/Shortening of the Extended Period of Registration

Those who have been permitted an Extended Period of Registration (hereinafter, "extended-registration students （長期履修生）") may extend or shorten the Extended Period of Registration with permission when their working environment has changed. Application for the extension and shortening of the Extended Period of Registration shall be for one time only in total. However, when an extended-registration student wishes for an extension again because of special circumstances, only when the faculty meeting finds it particularly necessary, the second extension/shortening can be permitted.

The application period for extension/shortening of the Extended Period of Registration

• The beginning of August for students enrolled in April. The beginning of February for students enrolled in October.

4) Cancellation of the Extended Period of Registration

Extended-registration students may cancel the Extended Period of Registration with permission when their working environment has changed. However, students who have been enrolled beyond the period of study may not apply for cancellation.

The application period for the cancellation of the extended period of registration

• Students enrolled in April shall apply at the beginning of February and those enrolled in October shall apply at the beginning of August of the year preceding the year that will be the normal period of study. However, for cases in which a student who is enrolled in the final year of the study period wishes to cancel the extended period of registration to graduate or complete the program in that year, students enrolled in April shall apply at the beginning of August, and students enrolled in October shall apply at the beginning of February of that year.

When an extended-registration student has canceled the extended period of registration, the University collects the full amount of difference between the total amount of tuition to be collected by assuming the student was a student other than an extended-registration student and the total amount of tuition that the student has already paid by that time as the tuition for the first month in the starting term of the year when the student becomes a student other than an extended-registration student.

※ Mentor teacher system

For prospective and current extended-registration students, the University assigns mentor teachers to provide consultation on study and research planning. Extended-registration students review their study and research plans by meetings with their mentor teachers. Mentor teachers for graduate students are their main supervisors.

Details of the eligibility and procedures for application will be posted before the period for application. Check the bulletin boards, , or contact the Graduate Section for Academic Administration, Academic Administration Office（教務課大学院教務係）.

6 Registration

(1) Subject Categories and Class Subjects

The subject categories of the Graduate School and the class subjects offered by each department are as described in the "10 Reference (3) The University of Electro-Communications Regulations for Studying at the Graduate School of Informatics and Engineering" in Appended Table 1.

Students shall primarily take the subjects offered by the department (by the program, in the case of the Master's Program,) to which they belong. However, after consulting with their supervisors, students may take the subjects offered by other programs and departments, if needed. In the Master's Program, the subjects offered by other programs in their department shall be treated as credits of the subject categories to which the subjects belong in the same way as the subjects in their program.

For more information related to the special cases of credit acquisition, see "(7) Special Cases of Credit Acquisition."

(2) Class Registration

Students select a specific field of study under the guidance of their supervisors and take necessary class subjects.

The content of each class is viewable on the University's website (https://campusweb.office.uec.ac.jp/campusweb/). The relations between subjects are described in

“10 Reference (4) Course Tree (Study model).” *(Note: The chapter 10-(4) is omitted in English excerpt version.)* Use it as a reference when choosing subjects to take.

1) With regard to subjects to take, students must make an annual study plan, following your supervisors’ guidance at the beginning of the year, and submit it to the Academic Administration Office（教務課） as your Annual Study Plan「年間履修計画書」. In addition to this, students must register the subjects to take in the first and second semesters using the prescribed method at the beginning of each semester.

2) Note that supervisors’ guidance and approval are the preconditions for registration. Without your supervisor’s signature and seal, the forms cannot be accepted. When a student has not completed the procedure within the prescribed period, it shall be treated similarly.

3) Be careful not to fail to register for any required subjects because students cannot take class subjects other than those that have been registered.

(3) Class Hours

1) Academic calendar such as the first semester, the second semester, and each term (each semester is divided into the first half and the second half), examination periods, vacation periods, entrance ceremonies, and degree conferment ceremonies are announced every year.

(10 Reference (17) 2023 Academic Calendar for the Graduate School of Informatics and Engineering schedule, see web page)

2) Class hours are as presented below.

Period / 限	Class Hours	Break
1	9:00 – 10:30	10 min
2	10:40 – 12:10	
Lunch Break		50 min
3	13:00 – 14:30	10 min
4	14:40 – 16:10	
5	16:15 –17:45	5 min

Note 1: For working students （社会人学生）, classes may be held in the sixth period (17:50–19:20) and the seventh period (19:30–21:00).

Note 2: With regard to the Joint Doctoral Program for Sustainability Research, check the class hours of Tokyo University of Foreign Studies （東京外国語大学） and Tokyo University of Agriculture and Technology （東京農工大学） on their websites.

(4) Class Cancellation/Absence

1) Class cancellation

The University will post notification about the cancellation of classes at teachers’ convenience on the graduate school will be announced on the portal site (UEC Student Portal UEC 学生ポータル).

UEC Student Portal: https://portalweb.uec.ac.jp/Portal/

Besides, the University treats class cancellations equally with attendance when transportation is suspended because of the following reasons.

- As of 6 a.m., the Keio Line 京王線 (Keio Main Line) has been suspended: 1st,2nd period cancelled
- As of 10 a.m., the Keio Line 京王線 (Keio Main Line) has been suspended: 3rd、4th period cancelled
- As of noon, the Keio Line 京王線 (Keio Main Line) has been suspended : 5th,6th and 7th period cancelled

However, in the case of class subjects taught by supervisors, such as Graduate Seminars, each supervisor shall decide the treatment.

2) Absence

• In a case of suspension of attendance because of contracting infectious diseases such as influenza
The absence shall be treated equally with attendance by submitting a report of absence （欠席届） to the teacher in charge of the class subject.

• In a case of absence for funerals of relatives or suspension of transportation other than Keio Line
The absence shall be treated equally with attendance by submitting a report of absence to the teacher in charge of the class subject. Students must bring a document proving the absence (e.g., an acknowledgement card, a delay certificate) at the time of the procedure.

• In a case of absence because of non-infectious diseases or injuries
When a student submits a report of absence, the teacher in charge of the class subject may treat the absence equally with attendance at their discretion. Students must bring a medical certificate or other document at the time of the procedure.

A report of absence shall become effective when the student follows the prescribed procedure in the Graduate Section for Academic Administration, Academic Administration Office （教務課大学院教務係）after the reason for absence has disappeared.

For related details, see the web page below.
http://kyoumu.office.uec.ac.jp/kyoumu-gakari/k3.pdf

(5) Examinations and Grade Evaluation

1) Grades shall be evaluated by examinations, reports, presentations, the state of attendance, or a combination of these means. The grading criteria shall be made available in syllabuses. The Graduate School sets examination periods for each semester and each term on the academic calendar. However, with regard to the implementation of examinations and the submission deadlines of reports, students must pay attention to the instructions given by the teachers in charge of the classes.

2) Grades shall be presented using the grading of S（秀）,A（優）, B（良）, C（可）, and D（不可）. The grading of C（可） and above shall be deemed as a passing grade.

S (秀) : A student particularly outstanding results met the objectives of the class subject. Grade point 90 to 100

A（優）: A student fully met the objectives of the class subject.　Grade point 80 to 89

B（良）: A student met the objectives of the class subject.　　Grade point 70 to 79

C（可）: A student generally met the objectives of the class subject. Grade point 60 to 69

D（不可）: A student did not meet the objectives of the class subject (including course abandonment).　Grade point less than 60

However, the following subjects shall be graded either Pass（合格） or Fail（不合格）: Graduate Course of Science and Technology on Communications「大学院総合コミュニケーション科学」, ETL, Advanced Experiments of Danger Experience and Failing Observation「危機・限界体験特別実験」, Graduate School Laboratory Practicum「大学院実践演習」 (I–IV), Graduate Seminar 1「大学院輪講第一」 (I–IV), and Graduate Seminar 2「大学院輪講第二」.

Pass（合格）: A student met the objectives of the class subject.

Fail（不合格）: A student did not meet the objectives of the class subject.

Graduate Seminar 2 will be evaluated in the year of completion.

3) Once a student has earned credits, the student may not cancel the credits and grades of those subjects. Note that after enrollment to the Doctoral Program, a student may not retake subjects for which the student has earned credits in the Master's Program.

4) Grades shall be notified within the prescribed period.

(6) Appeal for Grading「成績異議申し立て」

1) When a student has an appeal about grade evaluation, they may make an appeal （異議申し立て） during the period for appealing.

2) The appeal procedure and the period for appealing shall be informed separately.

(7) Special Cases of Credit Acquisition

1) Subjects offered by other departments

When a supervisor finds it particularly necessary, students may take subjects offered by other departments in the Graduate School. The earned credits shall be included in the credits required for degree as the credits of Major Subjects II「専門科目 II」 (in the Department of Mechanical and Intelligent Systems Engineering in the Master's Program, Major Subjects II (B)).

In the Joint Doctoral Program for Sustainability Research, these credits shall be treated as the credits earned outside of the requirements for degree because of a difference in the subject categories.

2) Credits earned at other graduate schools

The University has credit transfer systems（単位互換制度） with other universities and inter-university exchange agreements with universities abroad. The class subjects taken under these systems may be included in the credits required for degree as the credits of Major Subjects II (in the Department of Mechanical and Intelligent Systems Engineering in the Master's Program, Major Subjects II (B)) up to a total of 4 credits in the items of a. to f. shown below through credit approval at the University. Note that the registration procedure differs from the normal procedure. Details of the procedure shall be informed by a notice on a bulletin board.

In the Joint Doctoral Program for Sustainability Research, these credits shall not be included in the requirements for degree because of a difference in the subject categories.

a. Credit transfer system with Tokyo Institute of Technology

This is a credit transfer system implemented based on the agreement between Tokyo Institute of Technology（東京工業大学） and the University. Students can take the subjects offered under the agreement related to the Tokyo Institute of Technology's Innovator and Inventor Development Platform and IT Human Resources Development.

b. Credit transfer system with national universities in the Tama area

This is a credit transfer system implemented based on the agreement between Tokyo University of Foreign Studies（東京外国語大学）, Tokyo Gakugei University（東京学芸大学）, Tokyo University of Agriculture and Technology（東京農工大学） and the University.

c. Credit transfer system with the University of Tokyo

This is a credit transfer system implemented based on an agreement between the University of Tokyo（東京大学） and the University. Students can take subjects at the University of Tokyo implemented by the Consortium on Education and Research on Advanced Laser Science.

d. Approval of credits earned at universities abroad based on inter-university exchange agreements

The University has signed inter-university exchange agreements（大学間交流協定） with multiple universities abroad. By this system, students studying abroad based on the agreements can take the classes held at partner universities. For details, please refer to "10 Reference (21) Dispatch Study Abroad." *(Note: The chapter 10-(20) is omitted in English excerpt version.)*

e. Credit transfer system with the member universities of the Consortium for Joint Innovative Ph.D. Programs（スーパー連携大学院）.

This is a credit transfer system implemented based

on the agreement between Muroran Institute of Technology（室蘭工業大学）, Akita Prefectural University（秋田県立大学）, and the University. Students can take the subjects with the standards of the Consortium for Joint Innovative Ph.D. Programs offered by each university through online lectures.

f. Credit transfer system with Tsuda University

This is a credit transfer system implemented based on the agreement between Tsuda University（津田塾大学） and the University

3) Approval of credits earned before enrollment

Only when a supervisor finds it particularly necessary may the credits that a student has earned at graduate school before enrollment to the Graduate School (in the case of the Doctoral Program, the credits earned beyond the requirements for degree in the Master's Program or the credits earned in the Doctoral Program) be deemed as credits earned by taking class subjects at the Graduate School through credit approval at the University. The number of credits to be included in the credits required for degree is 4 credits in the Master's Program and 2 credits in the Doctoral Program.

4) Approval of credits earned at the Graduate School while being an undergraduate student at an overseas university that has signed the inter-university exchange agreement

For a case in which a student has taken class subjects and earned credits at the Graduate School during attending the University as a short-term international student while being an undergraduate student at an overseas university that has signed the inter-university exchange agreement, the student shall be treated as special cases of approval of credits earned before enrollment and may receive credit approval after obtaining their supervisors' approval. Note that the number of credits to be approved is up to 4 credits from two class subjects, which requires completion of the prescribed procedure at enrollment.

5) Approval of credits earned at the Graduate School while being a student at the Faculty of Electro-Communications

For cases in which a student has taken class subjects in the Master's Program at the Graduate School and has received a passing grade while being a student at the Faculty of Electro-Communications at the University, the student may receive credit approval after obtaining their supervisors' approval. Note that the number of credits to be approved is up to 6 credits from three class subjects, which requires completion of the prescribed procedure at enrollment.

6) Approval of credits earned at the Graduate School while being a student in the School/Faculty of Informatics and Engineering

For cases in which a student has taken class subjects in the Graduate School designated as Graduate School Collaborative Subjects and has earned credits as optional subjects while being a student in the School/Faculty of Informatics and Engineering at the University, the student may receive credit approval after obtaining their supervisors' approval. Note that the number of credits to be approved is up to 6 credits from three class subjects, which requires completion of the prescribed procedure at enrollment.

7) Credits that students in the Doctoral Program have earned in the Master's Program

For cases in which a student entering the Doctoral Program has earned credits beyond the number of credits required for degree in the Master's Program in the Graduate School, only when the credits earned fall under any of Graduate School Fundamental Subjects（大学院基礎教育科目）, Graduate School Industry–Academia Collaborative Subjects（大学院産学連携科目）, and Graduate School Major Subjects（大学院専門教育科目）, may the student include up to 2 credits in either Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, or Graduate School Major Subjects in the Doctoral Program.

In the Joint Doctoral Program for Sustainability Research, these credits shall be treated as credits earned outside of the requirements for degree because of a difference in the subject categories.

(8) Special Cases of Educational Methods (Day and night courses)

As part of graduate school education open to society, the Graduate School intends to offer a

place of re-education for working students（社会人学生） and expand and develop “new learning” to “new technology” through active interaction between the University and industry. For the purposes, the Graduate School gives classes or research guidance in the evenings and other specific times or seasons by application of the special cases in Article 14 of the Standards for the Establishment of Universities.

Eligible students must make a solid study plan in consultation with their supervisors.

(9) Advanced Internship

There is Advanced Internship as a common class subject. It is a subject implemented by the University in cooperation with enterprises, which contributes to the consideration of vocational aptitude and future plans and the cultivation of a sense of professionalism and autonomy through working experience.

An Advanced Internship is conducted during the summer vacation, in principle. Students who wish to participate in an internship must make an application to the teacher in charge of the internship in their department after obtaining their supervisors’ approval. They are also required to purchase insurance that will be described later. For more information, students must participate in an orientation implemented by their department and follow the instructions.

Although Extramural Internship held in the Joint Doctoral Program for Sustainability Research is a practicum particularly addressing internship implemented outside the University, it is a class different from Advanced Internship.

(10) Teacher Training Course 「教職課程」

1) Types of teaching certificates to be obtained

A student who has earned the prescribed credits in the Graduate School can obtain an Advanced Teaching Certificate for Upper Secondary School（高等学校教諭専修免許状）. However, an Advanced Teaching Certificate is awarded on the premise that the student has earned a master’s degree and meets the required qualification for the Teaching Certificate for Upper Secondary School.

Department / Subject	Informatics	Computer and Network Engineering	Mechanical and Intelligent Systems Engineering	Engineering Science
Mathematics (数学)	○	○		
Informatics (情報)	○	○		
Science (理科)			○	○

2) Study in the teacher training course

The subjects to be taken in the teacher training course at the Graduate School are those

designated by law as “the subjects related to the subjects that the university adds in accordance with the type of subjects to be certified.” Students must earn 24 or more credits to obtain an Advanced Teaching Certificate. For more information related to the designated subjects required to obtain certificates, see the “Teacher Training Course Handbook「教職課程の手引」*(Note: only in Japanese)*” that will be distributed at an information session on the teacher training course held in April every year.

(11) Subjects Lectured in English

The Graduate School offers lectures in English in some subjects held in each department are categoried into Types Aa~Cb　according to the learning purposes.

・Language for lecture description(Category: A・B・C)

・Language used for teaching materials and materials(Category: a・b・c)

1. Lectures for students capable of understanding lectures solely in English: Aa,Ab
2. Lectures aimed to contribute to the improvement of English ability using both Japanese and English, particularly addressing the understanding of technical terms:　Ac, Ba, Bb, Bc, Ca, Cb

The applicable subjects shall be specified in syllabuses and timetables at the beginning of each semester.

7 Degrees

(1) Requirements of Degree Awarding

1) Master’s degree

A master’s degree shall be awarded to those who have completed the Master’s Program.

2) Doctoral degree

A doctoral degree shall be awarded to those who have completed the Doctoral Program.

3) Special cases of doctoral degree awarding

a. For cases in which a student had been enrolled in the Doctoral Program for at least three years (in the case of extended-registration students, the period beyond the period of extended registration), applied for a degree after earning the prescribed credits, and was accepted but withdrew from school, , a doctoral degree shall be awarded to the student as a certificate of completion of the Doctoral Program if the student has passed the dissertation examination and final examinations after the withdrawal.

b. For cases in which a student had been enrolled in the Doctoral Program for at least three years (in the case of extended-registration students, the period beyond the period of extended registration) and withdrew from school after earning the prescribed credits, , a doctoral degree shall be awarded to the student as a certificate of the completion of the Doctoral Program if the student applied for a degree within two years from the date of the withdrawal and has passed the dissertation examination and final examinations.

(2) How to Apply for Degrees

For more information related to how to apply for degrees, see “10 Reference (19) Degree

Application Guidelines."

(3) Degree Examination

Degree examination shall be conducted by dissertation examination and final examinations.

1) Dissertation examination: An oral or written examination about the dissertation
2) Final examinations: Oral or written examinations below.
   a. Subject(s) mainly related to the dissertation.
   b. Foreign language(s) specified by examiners to determine whether the student has knowledge of the language(s) sufficient to undertake specialized academic research (for doctoral degree examination only. In some cases, students may be exempted from this examination.)

(4) Items of Dissertation Examination

A dissertation submitted shall be evaluated in accordance with the items of dissertation examination and determined whether the student has the ability specified in the goal of human resources development for each graduate school that the University Rules prescribe.

[Items of dissertation examination in the Graduate School of Informatics and Engineering]

[Master's Program]

1. Purpose of research and the setting of topics
   • Are the purpose of research and the positioning appropriate and clear?
   • Does the student set topics after systematically analyzing topics necessary for achieving the purpose of research and sufficiently investigating previous studies?
2. Engagement in research
   • Has the student fully acquired relevant expertise?
   • Does the student adopt appropriate approaches to the topics?
3. Research results
   • Has the student achieved sufficient research results with novelty, validity, and reliability for the topics set?
4. Dissertation writing
   • Is the dissertation written in a logical and clear way?
   • Is the dissertation properly formatted as a paper?
5. Presentation/Questions and answers
   • Was the student able to present the research content in an easy-to-understand way and answer questions appropriately in the dissertation defense?

[Doctoral Program]

1. Purpose of research and the setting of topics
   • Are the purpose of research set appropriately and clearly to contribute to the development of the field of informatics and engineering?
   • Does the student set topics after systematically analyzing topics necessary for achieving the

purpose of research and sufficiently investigating earlier studies?

2. Engagement in research
   • Has the student fully acquired relevant expertise?
   • Does the student devise and exercise appropriate approaches to the topics?
3. Research results
   • Has the student achieved sufficient research results that have novelty, validity, and reliability for the topics set and are able to contribute to the development of the field of informatics and engineering?
4. Dissertation writing
   • Is the dissertation written in a logical and clear way?
   • Is the dissertation properly formatted as a paper?
5. Presentation/Questions and answers
   • Was the student able to present the research content in an easy-to-understand way and answer questions appropriately in the dissertation defense?

(5) Appeal for Degree Examination

The University strives to secure the fairness, transparency, and objectivity of degree examination through the implementation of open dissertation presentations and the appointment of external examiners. However, if a student has an objection to matters related to degree examination/degree acquisition, the student can ask questions to the chair of the dissertation examiners and their main supervisor. When dissatisfied with the answer, the student can appeal against the degree examination through the Academic Administration Office（教務課）. The appeal shall be reported to the head of the department. The head of department shall resolve the problem by hearing the situation from the student and the teachers involved in the appeal and conducting an investigation with a third party (more than one person) if needed. An appeal must be made within 90 days from the date on which the degree examination results were determined in the examination application period, in principle.

※ “Matters related to degree examination/degree acquisition” include the following:

1. Application for the departmental preliminary examination (For doctoral degree only)
2. Departmental preliminary examination (For doctoral degree only)
3. Application for a degree
4. Departmental examination
5. Graduate School examination

If a graduate student is dissatisfied with any of the matters above, the student can ask/appeal at that stage and the Department/Graduate School will deal with it immediately.

(6) Prevention of Research Misconduct

The Graduate School never allows students to engage in misconduct in research activities, such as fabrication*1, falsification*2, plagiarism*3, when carrying out research activities for their degree dissertations. Each student must be fully aware that they are researchers. Students are required to

take a strict attitude toward research activities, in which they do not overlook a person who has committed misconduct, as well as not engaging in misconduct by themselves.

The University has established the "Guidelines for Deterring Misconduct「不正行為対策ガイドライン」" for faculty, staff, and students and has been working on preventing research misconduct. It is particularly important for students to take research ethics education and check plagiarism in the degree dissertation examination using the "iThenticate Plagiarism Checking Software." Students must devote careful attention not to make any omissions in compliance with the guidance from supervisors when implementing those things.

*1 [Fabrication]

Act of fabricating non-existing data, research results, and other matters

Example: A student made up data to fit a theoretical curve, gave a presentation pretending as if the data were actually obtained, making suitable variations, and adding specious descriptions to laboratory notebooks.

*2 [Falsification]

Act of manipulating research materials/equipment/processes to alter them and processing the data and results obtained from research activities into non-genuine ones.

Example: Because a student did not obtain satisfactory data from experiments, the student made up graphs by cutting and pasting experimentally obtained results under different conditions and processing them into specious data.

*3 [Plagiarism]

Act of using another student's or researcher's ideas, analytical methods, data, research results, papers, or terms without their consent or proper citation

Example: When a student was on a reporting assignment, the student used data, texts, and figures analyzed by others without permission (copy and paste).

<Reference>

For information related to misconduct in research activities, there is a website accessible only from within the university. Refer to the website.

http://kenkyo.office.uec.ac.jp/gakunai/fusei/fusei.htm

8 Insurance Systems

Note: For International students, different insurance policy should be applied, please ask and confirm Insurance Policy and System to International Student Office（留学生係）or International Education Center（CIPE: 国際教育センター）.

In graduate schools, students are often engaged in out-of-university activities for study, including participation in academic conferences and the use of other institutes' facilities/equipment. We recommend that students take out the insurance policies below at enrollment. The application procedures are usually conducted at enrollment. For more information, refer to the Extracurricular Activities and Welfare Section of the Student Services Office（学生課課外・厚生係）.

(1) Personal Accident Insurance for Students Pursuing Education and Research ("*Gakkensai*

（学研災）：PAS")

This insurance covers students' injuries caused by disasters or accidents during educational/research activities at or on their way to university.

(2) Liability Insurance for Students Pursuing Education and Research ("*Gakkenbai* （学研賠）")

This is insurance covering compensation when a student causes injury or damage to others in Japan during and going to and from regular curriculum activities (e.g., lectures, experiments/practicums), school events, and internships managed by universities.

9 Leave of Absence 「休学」, Reinstatement 「復学」 and Withdrawal from School 「退学」

(1) Leave of Absence and Reinstatement 「休学と復学」

If a student is unable to study for three months or more for an unavoidable reason such as illness, the student may take a leave of absence with permission. Students must submit a leave of absence application by the 20th of the month before the month in which they intend to take the leave after obtaining permission from their supervisor and department head. A period of absence from school shall not exceed one year. However, when there is a special reason, the student may continue to take a leave of absence with permission. The period of absence may not exceed a total of two years in the Master's Program and three years in the Doctoral Program.

When the leave period has expired, the student must make a report using a "Notice of Reinstatement （復学届）". Unless the student goes through the procedure to extend the period of absence, the student is deemed to have returned to school and has to pay tuition from the month in which the leave period has expired. Note that the Notice of Reinstatement is a procedure to express the intention of returning to school voluntarily: the period of the leave of absence will not be extended by not submitting it.

If the reason of the leave is solved during the leave period, the student may return to school with permission. In this case, the student must submit a "Application for Reinstatement （復学願）" by the 20th of the month before the month in which the student intends to return to school after obtaining permission from their supervisor and department head.

(2) Withdrawal from School 「退学」

If a student intends to withdraw from school for illness or other unavoidable circumstances, the student must submit a withdrawal application（退学願） and gain permission after obtaining approval from their supervisor. Students must submit a withdrawal application by the 20th of the month before the month in which they intend to withdraw from school after obtaining permission from their supervisor and department head.

Note that, for cases in which a student applies for withdrawal in the middle of a semester, permission will not be given when the student has not paid the tuition for that semester.

For more information related to (1) and (2), refer to the Information Administration Section of

the Academic Administration Office（教務課情報管理係）.

(3) Withdrawal with required credits 「単位取得済退学」

For cases in which a student had been enrolled in the Doctoral Program for at least three years (in the case of extended-registration students, the period beyond the period of extended registration) and withdrew from school after earning the prescribed credits, when the student applies for a degree within two years from the date of the withdrawal, the student may be treated as having completed the program. Note that when a student wishes to withdraw from school after earning credits, the student must complete the prescribed withdrawal procedures in addition to the withdrawal procedure described above.

10 Reference

(2) The University of Electro-Communications Regulations on Leave of Absence 「休学」, Reinstatement 「復学」, Withdrawal 「退学」 and Expulsion from School 「除籍」

(Purpose)

Article 1 These Regulations prescribe the procedures related to Article 20, Article 22, Article 23, and Article 24 of the University of Electro-Communications Rules (hereinafter, the "University Rules").

(Application for Leave of Absence from School)

Article 2 Student who wishes to take a leave of absence from school must make an application using Appended form 1 by the 20th of the month prior to the first month of the period in which the student intends to take the leave (excluding cases for which it is deemed that there are unavoidable circumstances such as illness and injury).

2 In the case of the preceding item, when the 20th of the month falls on Saturday, Sunday, or a national holiday stipulated by the Act on National Holidays, the deadline shall be on the weekday immediately prior to that day.

3 In the case of Item 1, when the period during which the student intends to take the leave is in the middle of a semester, the student may not make an application if the student has not completed the procedures related to the tuition for the semester that includes the period.

(Permission for Leave of Absence from School)

Article 3 When permitting the application made under Item 1 of the preceding article, the President shall notify the student using Appended form 2.

2 Decision related to the permission in the preceding item shall be made with the document for approval passed to the dean of the school or the graduate school to which the student belongs.

3 When finding it necessary, the President may request deliberation on the reason for the absence and other matters at the faculty meeting of the school or the graduate school to which the student belongs.

(Handling of Registration)

Article 4 When a student who had registered classes made an application under Item 1 of Article 2 and was permitted, the registration related to the semester that includes the period of absence shall be canceled.

(Application for Reinstatement)

Article 5 If the reason for the absence disappears during absence, when the student wishes to return to school before the initial period of absence expires, the student must make an application using Appended form 3. In this case, when it is deemed necessary to pay special attention to the disappearance of the reason for the absence, the student must clarify the disappearance of the reason for the absence with a medical certificate or other document.

(Permission for Reinstatement)

Article 6 The President shall permit students to return to school upon the application in the preceding article. However, this shall not apply to cases for which it is deemed that there are special circumstances related to the permission for returning to school.

2 In the proviso to the preceding item, when the President finds it necessary, the provisions of Item 3 of Article 3 shall apply with the necessary modifications.

3 Provisions of Item 2 of Article 3 shall apply to the decision related to the permission in Item 1.

(Notice of Reinstatement)

Article 7 A student who wishes to return to school because the period of leave of absence has expired must give notice using Appended form 4. In this case, when the reason for the absence is illness or injury, the student must clarify the disappearance of the reason for the absence with a medical certificate or other document.

(Obligations of Students)

Article 8 Delay in giving notice in the preceding article shall not prevent obligations that students must fulfill, including the payment of tuition.

(Application for Continuance of Absence from School)

Article 9 When a student wishes to continue a leave of absence after the period has expired, the student must make an application to the President using Appended form 1 by the deadline specified separately.

(Permission for Continuance of Absence from School)

Article 10 When permitting the application made under the preceding article, the President shall notify the student using Appended form 2.

2 Provisions of Item 2 of Article 3 shall apply to the decision related to the permission in the preceding item with the necessary modifications.

3 When the President finds it necessary, the provisions of Item 3 of Article 3 shall apply to the reason for the continuance of absence and other matters with the necessary modification.

(Application for Withdrawal from School)

Article 11 Student who wishes to withdraw from school must make an application using Appended form 5 no later than ten days before the date on which the student intends to withdraw (excluding cases for which it is deemed that there are unavoidable circumstances such as illness and injury).

2 Provisions of Item 2 of Article 2 shall apply to the deadline in the preceding item with the

necessary modification.

3 In the case of Item 1, when the student has not completed the procedures related to the tuition for the semester that includes the day on which the student intends to withdraw from school, the student may not make an application.

(Permission for Withdrawal from School)

Article 12 When permitting the application made under Item 1 of the preceding article, the President shall notify the student using Appended form 6.

2 Provisions of Item 2 of Article 3 shall apply to the decision related to the permission in the preceding item with the necessary modifications.

3 When the President finds it necessary, the provisions of Item 3 of Article 3 shall apply to the reason for withdrawal and other matters with the necessary modification.

(Procedures for Expulsion from School)

Article 13 Provisions of Item 2 of Article 3 shall apply to the decision of expulsion from school under the provisions of paragraphs (1), (5), and (6) of Article 24 the University Rules with the necessary modification.

2 Expulsion under the provisions of paragraphs (3) and (4) of Item 1 of Article 24 of the University Rules shall be provided for separately.

3 When a student has been removed/expulsed from school under the preceding two items, the President shall notify the student or relatives of the student (which refers to those registered in the University as contact persons) using Appended form 7.

(Miscellaneous Provisions)

Article 14 In addition to those prescribed in these Regulations, matters related to absence, reinstatement, withdrawal, and expulsion from school shall be provided for separately.

(3) The University of Electro-Communications Regulations for Registration in the Graduate School of Informatics and Engineering

(Purpose)

Article 1 These Rules prescribe the curriculum and registration methods in the Graduate School of Informatics and Engineering at the University of Electro-Communications (hereinafter, the "Graduate School") based on the provisions of Item 3 of Article 60 of the University of Electro-Communications Rules (hereinafter, the "University Rules").

(Class Subjects and Number of Credits)

Article 2 Class subjects and the number of credits in each department of the Graduate School based on the provisions of Article 59 of the University Rules shall be as shown in Appended Table 1.

(Establishment of special education programs)

Article 2-2 The Graduate School may establish special educational programs that offer the prescribed class subjects from the class subjects specified in the preceding article according to educational purposes special to the department.

2 Necessary matters related to special educational programs shall be provided for separately.

(Number of Credits required for degree)

Article 3 Number of credits required for degree based on the provisions of Article 68-2 and Article 69 of the University Rules shall be as shown in Appended Table 2.

(Supervisor)

Article 4 The Graduate School shall assign supervisors to each student to give guidance on class subject registration and research.

2 Student shall have more than one supervisor.

3 Supervisors shall notify the dean of the Graduate School within a specified period of time, about a clear outline of the methodology used for research guidance, the contents of research guidance, and a schedule of research guidance for the year, along with presenting it to their students separately.

(Special Cases of Educational Methods)

Article 5 When it is deemed particularly necessary from an educational perspective, the Graduate School may provide education by appropriate methods, such as offering classes or research guidance in the evenings and other specific times or seasons.

(Registration Form)

Article 6 Students shall select a specific field of study under the guidance of their supervisors and take the class subjects needed for the study.

2 Students must notify the class subjects that they intend to take under the preceding item at the beginning of the semester using the prescribed form after obtaining approval from their supervisors.

(Credits Earned in the Master's Program)

Article 7 For cases in which a student has earned credits in the Master's Program in the Graduate School beyond the number of credits specified in Article 3, only when the credits were earned from any of the subject categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, Graduate School Major Subjects, the student may include up to 2 credits in the number of the credits in Article 3 as the credits of either of the subject categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, and Graduate School Major Subjects in the Doctoral Program.

(Special Cases of Credits to Take)

Article 8 When a supervisor finds it particularly necessary, students may take other departments' class subjects after obtaining approval from the teacher in charge of the class subject. The credits that the student earns may be included in the number of credits in Article 3 as the credits of Major Subjects II.

(Credits Earned at Other Graduate Schools)

Article 9 When a student in the Master's Program has earned credits by taking class subjects at other graduate schools (including graduate schools abroad) under the provisions of Article 19 and Item 1 of Article 60 of the University Rules, the student may include up to 4 credits in the number of credits in Article 3 as the credits of Major Subjects II.

2 Approval of credits, handling of grade evaluation, and other necessary matters under the

provisions of the preceding item shall be provided for at the faculty meeting of the Graduate School (hereinafter, the "Faculty Meeting").

(Approval of credits Earned before Enrollment)

Article 10 The credits that students have earned from the class subjects taken at graduate schools before entering the Graduate School may be deemed as the credits earned by taking the class subjects at the Graduate School after enrollment, up to 4 credits for the Master's Program and up to 2 credits for the Doctoral Program, under the provisions of Item 2 of Article 60 of the University Rules.

2 In the case for which it is deemed that credits have been earned by taking the class subjects in the Doctoral Program in the Graduate School under the provisions of the preceding item, of the credits earned in master's programs before entering the Graduate School, the credits earned beyond the number of credits required for degree or the credits earned in doctoral programs shall be applicable.

(Research Guidance at Other Graduate School)

Article 11 Research guidance received at other graduate schools or research institutes under the provisions of Article 65 of the University Rules shall be deemed as the research guidance that students received at the Graduate School.

(Evaluation of learning outcomes)

Article 12 The results of learning in the courses taken shall be evaluated by examination or research report.

2 Examinations or research reports shall be conducted for a fixed period after the end of the course period. However, it may be done at an appropriate time if necessary.

3 In addition to the preceding two paragraphs, the results of learning may be evaluated in an appropriate manner during the class period.

Article 12-2 Assessment Standards of academic achievement in accordance with Article 43, which applies mutatis mutandis to Article 62 of the University Rules shall be as follows.

Assessment	Grade		Assessment Standards
Pass	S	100 points or less 90 points or more	A students particularly outstanding results met the objectives of the class subjects.
	A	Less than 90 points 80 points or more	A student fully met the objectives of the class subject.
	B	Less than 80 points 70 points or more	A student met the objectives of the class subject.
	C	Less than 70 points 60 points or more	A student generally met the objectives of the class subject.
Fail	D	Less than 60 points	A student did not meet the objectives of the class subject.

2 Assessment Standards of academic achievement in accordance with the proviso to Article 43, which applies mutatis mutandis to Article 62 of the University Rules shall be as follows.

Assessment	Assessment Standards
Pass	A student met the objectives of the class subject.
Fail	A student did not meet the objectives of the class subject.

(Makeup examination, Re-examination)

Article 13 When it is deemed particularly necessary at the Faculty Meeting, a makeup examination may be given.

2 Re-examination will not be given.

(Degree Dissertation)

Article 14 Student who intends to submit a master's dissertation must have been enrolled in the Master's Program for at least one year and have earned 20 and more credits. However, the handling of cases to which the provisions of the proviso to Article 68-2 of the University Rules applies shall be provided for separately by the Faculty Meeting.

2 Student who intends to submit a doctoral dissertation must have been enrolled in the Doctoral Program for at least two years and have earned 4 or more credits. However, the handling of cases to which the provisions of the proviso to Item 1 of Article 69 of the University Rules applies shall be provided for separately by the Faculty Meeting.

3 With regard to the application of the preceding item related to students who belong to the Joint Doctoral Program for Sustainability Research, "must have earned 4 or more credits" in that item shall be replaced with "must expect to earn 16 credits."

4 Time of dissertation submission shall be provided for separately by the Faculty Meeting.

(Final Examinations)

Article 15 With regard to the examination and final examinations of degree dissertations are governed by the provisions of the University of Electro-Communications Regulations on Degrees.

(Miscellaneous Provisions)

Article 16 In addition to those prescribed in these Regulations, matters related to the Graduate School shall be provided for by the Faculty Meeting.

(Appended Table 1)

1. 大学院基礎教育科目 Graduate School Fundamental Subjects

全専攻共通　For to all departments

授業科目名 Name of Class Subjects	単位数 Number of Credits	開講学期 Semester		開講課程 Program	
		前学期 Spring Semester	後学期 Fall Semester	前期課程 Master's Program	後期課程 Doctoral Program
大学院総合コミュニケーション科学 Graduate Course of Science and Technology on Communications	2		○	○	
幾何学基礎論 Fundamentals of Geometry	2	○		○	
解析学基礎論 Fundamentals of Analysis	2	○		○	
代数学基礎論 Fundamentals of Algebra	2	○		○	
技術者と安全・環境・倫理 Safety, Environment and Ethics in Engineering	2	○		○	○
国際社会の政治・経済 Politics and Economics in the International Community	2		○	○	○
科学技術の歴史 History of Science	2		○	○	○
現代社会と倫理 Modern Society and Ethics	2	○		○	○
世界の多極化と異文化理解 Multipolarization of the World and Cross-cultural Understanding	2		○	○	○
日本語と思考 Japanese Language and Thought	2	○		○	○
幾何学特論 Advanced Topics of Geometry	2		○	○	○
解析学特論 Advanced Topics in Analysis	2		○	○	○
代数学特論 Advanced Topics in Algebra	2		○	○	○
教育学特論 Advanced Pedagogy	2		○	○	○
大学院特別講義 Advanced Lecture on Informatics and Engineering (International Standardization and the Future of Japan)	2	○	(○)	○	○

注：開講課程欄の○は選択を表す。

Note: The ○ mark in the column of Program denotes elective subjects.

2. 大学院実践教育科目 Graduate School Practical Subjects

全専攻共通　Common to all departments

授業科目名 Name of Class Subjects		単位数 Number of Credits	開講学期 Semester		開講課程 Program	
			前学期 Spring Semester	後学期 Fall Semester	前期課程 Master's Program	後期課程 Doctoral Program
大学院輪講 Graduate Seminars	大学院輪講第一 Graduate Seminar 1 (Ⅰ)	1	○		◎	
	大学院輪講第一 Graduate Seminar 1 (Ⅱ)	1		○	◎	
	大学院輪講第一 Graduate Seminar 1 (Ⅲ)	1	○		◎	
	大学院輪講第一 Graduate Seminar 1 (Ⅳ)	1		○	◎	
	大学院輪講第二 Graduate Seminar 2	4	○	○		◎
大学院技術英語 Graduate Technical English		2	○		◎	
大学院産学連携科目 Graduate School Industry–Academia Collaborative Subjects	ベンチャービジネス特論 Advanced Lectures on Venture Business	2		○	○	○
	知的財産権特論 Advanced Intellectual Property	2		○	○	○
	先端技術開発特論 Advanced Engineering Development	2		○	○	○
	ETL(Elementary Teaching Laboratory)	2	○	○	○	○
	大学院国際プロジェクト Graduate Course International Project	2	○		○	
	危機・限界体験特別実験 Advanced Experiments of Danger Experience and Failing Observation	2	○	○	○	
	国際科学技術コミュニケーション論 International Communication for Science and Technology	2		○	○	○
	SDGs を支える情報通信論 Information and Communications Technologies for SDGs	2	○		○	○
	経営実践特論 Management Principles and Practices	2	○		○	○
	ＩＴ最前線 Leading Edge Information Technology	2		○	○	○
	実システム創造	2	○	○	○	

	Project-based Learning of Practical Information System					
	データサイエンティスト特論 Advanced Data Scientist	2		○	○	○
	データアントレプレナー実践論 Data Entrepreneur Practical Theory	2		○	○	○
	オープンイノベーションスクールⅠ Open Innovation School Ⅰ	1	○	(○)	○	
	オープンイノベーションスクールⅡ Open Innovation School Ⅱ	1	○	(○)	○	
	オープンイノベーションスクールⅢ Open Innovation School Ⅲ	1	○	(○)		○
	オープンイノベーションスクールⅣ Open Innovation School Ⅳ	1	○	(○)		○
	オープンイノベーションスクールⅤ Open Innovation School Ⅴ	1	○	(○)		○
	大学院インターンシップ Advanced Internship	2	○		○	○
	大学院インターンシップ（海外） Advanced Internship (Overseas)	2	○		○	○
	大学院インターンシップ（長期） Advanced Internship (Long-term)	4	○		○	○
	大学院インターンシップ（海外・長期） Advanced Internship (Long-term & Overseas)	4	○		○	○
	大学院海外語学研修Ⅰ Graduate Overseas Language Training Ⅰ	1	○	(○)	○	○
	大学院海外語学研修Ⅱ Graduate Overseas Language Training Ⅱ	2	○	(○)	○	○

注１：開講課程欄の◎は必修、○は選択を表す。
注２：「大学院輪講第二」は 120 時間の学修に対して修了年次に４単位を与える。
注３：「ETL(Elementary Teaching Laboratory)」は２年間で 60 時間の学修に対して２単位を与える。
注４：「危機・限界体験特別実験」は１年間で講義 15 時間、実験 30 時間の学修に対して２単位を与える。
注５：「オープンイノベーションスクールⅠ～Ⅴ」「大学院海外語学研修Ⅰ・Ⅱ」は、通年開講ではなく、前学期又は後学期の半期ごとの開講である。
注６：「インターンシップ」は１年次に履修することが望ましい。
Note 1: The ◎ mark in the column of Program denotes compulsory subjects and the ○ mark elective subjects.
Note 2: In Graduate Seminar 2, 4 credits are awarded in the year of completion for 120 hours of study.
Note 3: In Elementary Teaching Laboratory (ETL), 2 credits are awarded for 60 hours of study in two years.
Note 4: In Advanced Experiments of Danger Experience and Failing Observation, 2 credits are awarded for 15 hours of study in lectures and 30 hours in experiments in one year.

Note 5: Open Innovation School I–V and Graduate Overseas Language Training I/II are not offered throughout the year. These are held half-yearly either in the Spring semester or the Fall semester.
Note 6: It is preferable to take an Internship in the first year.

3. 大学院専門教育科目 Graduate School Major Subjects

3-1 情報学専攻 Department of Informatics

科目区分 Subject Category	授業科目 Name of Class Subjects	単位数 Number of Credits	開講学期 Semester		開講課程 Program				
			前学期 Spring Semester	後学期 Fall Semester	前期課程 (プログラム) Master's Program				後期課程 Doctoral Program
					メディア情報学 Media Science and Engineering	経営・社会情報学 Management Science and Social Informatics	セキュリティ情報学 Information Security Engineering	デザイン思考・データサイエンス The Design Thinking and Data Science Program	
専門科目Ⅰ Major subject Ⅰ	大学院実践演習（Ⅰ） Graduate School Laboratory Practicum（Ⅰ）	1	○		◎	◎	◎	◎	
	大学院実践演習（Ⅱ） Graduate School Laboratory Practicum（Ⅱ）	1		○	◎	◎	◎	◎	
	大学院実践演習（Ⅲ） Graduate School Laboratory Practicum（Ⅲ）	1	○		◎	◎	◎	◎	
	大学院実践演習（Ⅳ） Graduate School Laboratory Practicum（Ⅳ）	1		○	◎	◎	◎	◎	
	メディアアート論 Topics in Media Art	2		○	○			○	
	知的学習システム Advanced Topics in Machine Learning	2	○		○			○	
	コンピュータグラフィックス応用 Applied Computer Graphics	2	○		○				
	データマイニング Data Mining	2	○		○	○	○	○	
	音声音響情報処理 Speech and Acoustic Information Processing	2	○		○				
	実践ソフトウェア開発基礎論 Fundamentals of Practical Software Development	2	○		○	○	○	○	
	情報理論基礎 Fundamentals of Information Theory	2		○	○	○	○	○	
	数理統計学基礎 Fundamentals of Mathematical Statistics	2		○	○	○	○	○	
	会計情報システム Fundamentals of Accounting Information Systems	2	○			○			

	経営情報システム Management Information Systems	2	○			○			
	経営計画 Management Planning	2	○			○			
	ソフトウェア品質学 Software Quality	2		○		○	○	○	
	セキュリティ基礎 Fundamentals of Security	2	○				○	○	
	実践ソフトウェア開発概論Ⅱ Practical Software Development Ⅱ	2	○		○	○	○	○	
	実践ソフトウェア開発概論Ⅲ Practical Software Development Ⅲ	2		○	○	○	○	○	
	現代代数学 Modern Algebra	2		○	○	○	○	○	○
	数理解析学 Mathematical Analysis	2		○	○	○	○	○	○
専門科目Ⅱ Major subject Ⅱ	認知科学特論 Advanced Cognitive Sciences	2	○		○	○		○	○
	画像認識システム特論 Advanced Image Recognition Systems	2		○	○		○	○	○
	学習工学特論 Learning Informatics	2	○		○		○		○
	認知プロセス論特論 Topics on Cognitive Processing	2	○		○				○
	視覚情報処理特論 Advanced Visual Computing	2		○	○		○		○
	コミュニケーション論特論 Advanced Lectures on Communication	2		○	○			○	○
	計算機科学特論 Advanced Computer Science	2		○	○		○	○	○
	インタラクティブシステム特論 Advanced Interactive System	2	○		○				○
	マルチメディアコンピューティング特論 Advanced Multimedia Computing	2		○	○		○		○
	マルチエージェントシステム特論 Advanced Multiagent System	2	○		○				○
	サービス・サイエンス特論 Advanced Service Science	2	○			○		○	○
	金融工学特論 Advanced Financial Engineering	2	○			○		○	○
	生体システム工学特論 Advanced Topics in Biological Systems Engineering	2		○		○			○
	経営システム工学特論 Advanced Management System Engineering	2	○			○			○
	言語認知システム特論 Advanced Topics in Language and Cognitive Systems	2	○			○	○		○

人間工学特論 Advanced Topics on Ergonomics	2		○		○			○
生産システム特論 Advanced Manufacturing Systems Engineering	2		○		○			○
システム信頼性特論 Advanced Theory of Systems Reliability	2	○			○			○
コンテンツセキュリティ特論 Advanced Topics of　Content Security	2	○				○	○	○
ネットワークセキュリティ特論 Advanced Network Security	2	○				○	○	○
離散情報構造特論 Advanced Topics on Discrete Information Structure	2		○			○		○
ソフトウェアセキュリティ特論 Advanced Software Security	2		○			○	○	○
暗号理論特論 Advanced Topics on Cryptography	2		○			○	○	○
進化計算特論 Advanced Evolutionary Computation	2	○		○				○
インテリジェントシステム特論 Advanced Topics on Intelligent Soft Computing Systems	2		○	○			○	○
対話型システム特論 Advanced Topics in Interactive Systems	2		○	○			○	○
ヒューマンインタフェース特論 Advanced Human Interface	2	○		○			○	○
知能ロボティクス特論 Advanced Topics on Intelligent Robotics	2		○	○			○	○
システム設計特論１ Advanced System Design I	2		○	○				○
システム設計特論２ Advanced System Design II	2	○		○				○
システム設計特論３ Advanced System Design III	2		○	○				○
メディアデザイン特論 Advanced Media Design	2	○		○			○	○
人工知能特論 Artificial Intelligence	2	○			○		○	○
時空間情報科学特論 Spatiotemporal Informatics	2		○		○			○
リスクマネジメント論 Risk management	2	○			○			○
ゲーム理論 Game theory	2		○		○			○
ネットワークアーキテクチャ論 Network Architecture	2	○				○		○
コンピュータネットワーク特論 Advanced Computer Networks	2		○			○	○	○

	大学院データサイエンス実践演習 1 Advanced Practical Exercise in Data Science 1	1	○					◎	
	大学院データサイエンス実践演習 2 Advanced Practical Exercise in Data Science 2	1	○					◎	
＊	情報学特論 Advanced Informatics	2	○						◎

＊専門上級科目

注：開講課程欄の◎は必修、○は選択を表す。

* Major Advanced Subjects

Note: The ○ mark in the column of Programs denotes elective subjects.

3-2　情報・ネットワーク工学専攻

Department of Computer and Network Engineering

科目区分 Subject Category	授業科目 Name of Class Subjects	単位数 Number of Credits	開講学期 Semester		開講課程 Program				
			前学期 Spring Semester	後学期 Fall Semester	前期課程(プログラム) Master's Program (Name of Program)				後期課程 Doctral Program
					情報数理工学 Mathematical Information Science Program	コンピュータサイエンス Computer Science	情報通信工学 Information and Communication Engineering	電子情報学 Electronics and Information Engineering	
専門科目Ⅰ Major subject Ⅰ	大学院実践演習（Ⅰ） Graduate School Laboratory Practicum（Ⅰ）	1	○		◎	◎	◎	◎	
	大学院実践演習（Ⅱ） Graduate School Laboratory Practicum（Ⅱ）	1		○	◎	◎	◎	◎	
	大学院実践演習（Ⅲ） Graduate School Laboratory Practicum（Ⅲ）	1	○		◎	◎	◎	◎	
	大学院実践演習（Ⅳ） Graduate School Laboratory Practicum（Ⅳ）	1		○	◎	◎	◎	◎	
	情報・ネットワーク工学専攻基礎 Fundamentals of Computer and Network Engineering	2	○		○	○	○	○	
	情報伝送基礎 Fundamentals of Information Transmission	2	○				○		
	VLSI Low Power Circuit Design	2	○				○		
	情報通信ネットワーク Information and Communication Networks	2	○				○	○	
	データ圧縮基礎 Fundamentals of Data Compression	2	○				○	○	
	回路システム基礎 Fundamentals of Circuits and Systems	2		○			○	○	
	集積回路基礎 Fundamentals of VLSI Fabrication	2	○				○	○	
	ディジタル信号処理基礎 Fundamentals of Digital Signal Processing	2	○					○	
	計算機アーキテクチャ基礎論 Fundamentals of Computer Architecture	2	○		○	○			

	応用解析基礎論 Fundamentals of Applied Analysis	2	○		○				
	アルゴリズム基礎論 Fundamentals of Algorithm Theory	2	○		○	○			
	応用アルゴリズム論 Applied Algorithms	2		○	○	○			
	ハイパフォーマンスコンピューティング基礎論 Fundamentals of High Performance Computing	2		○	○	○			
	シミュレーション理工学基礎論 Fundamentals of Simulation in Science and Engineering	2		○	○				
	プログラム言語基礎論 Fundamentals of Programming Languages	2	○			○			
	離散最適化基礎論 Foundation of Discrete Optimization	2		○	○	○			
	連続最適化基礎論 Foundation of Continuous Optimization	2		○	○	○			○
専門科目Ⅱ Major subject Ⅱ	集積回路設計特論 Advanced Integrated Circuit Design	2	○				○	○	○
	マイクロ波回路設計特論 Advanced Microwave Circuit Design	2	○				○		○
	環境電磁工学特論 Advanced Electromagnetic Compatibility	2	○				○		○
	無線通信システム特論 Advanced Radio Communication Systems	2	○				○		○
	情報理論特論 Advanced Information Theory	2		○			○		○
	情報光工学特論 Advanced Information Optics and Photonics	2		○			○	○	○
	宇宙通信工学特論 Advanced Space Communication Engineering	2		○			○		○
	光通信システム特論 Advanced Optical Communication System	2		○			○		○
	CMOS 集積回路設計学特論 CMOS Advanced Integrated Circuit Design	2		○			○		○
	センシング工学特論 Advanced Sensing Technology	2		○			○	○	○
	マルチメディア信号処理特論 Advanced Multimedia Signal Processing	2	○				○	○	○
	信号解析学特論 Advanced Signal Processing	2	○				○	○	○
	伝送工学特論 Advanced Transmission Engineering	2	○					○	○
	電磁波環境観測技術特論 Advanced topics on electromagnetic wave technology	2		○				○	○
	生体電磁工学特論 Advanced electromagnetics Engineering and Applications	2		○				○	○

非線形システム特論 Nonlinear Dynamical Systems	2		○				○	○
ヒューマンインタフェース特論 Advanced Topics on Human Interface	2		○		○		○	○
固体照明工学特論 Solid State Lighting	2	○					○	○
音響システム特論 Advanced Acoustic System	2	○					○	○
知識データ工学特論 Advanced Data and Knowledge Engineering	2	○		○	○			○
ハイパフォーマンスコンピューティング特論 Advanced High Performance Computing	2	○		○	○			○
並列分散システム特論 Topics on Parallel and Distributed Systems	2		○	○	○			○
シミュレーション理工学特論 Advanced Topics of Simulation in Science and Engineering	2		○	○				○
アルゴリズム特論 Topics on Algorithms	2		○	○	○			○
応用解析学特論 Advanced Applied Analysis	2		○	○				○
知能情報特論 Advanced Intelligent Information Systems	2		○	○	○			○
理論計算機科学特論 Advanced Study for Theoretical Computer Science	2	○		○				○
ソフトウェア基礎特論 Advanced Theory of Software Sciences	2	○		○	○			○
計算機構特論 Topics on Theory of Computation	2	○		○	○			○
ソフトウェアセキュリティ特論 Advanced Software Security	2		○	○	○			○
ゲームの数理 Mathematical Models in Games	2	○		○				○
画像認識システム特論 Advanced Image Recognition Systems	2		○		○			○
マルチメディアコンピューティング特論 Advanced Multimedia Computing	2		○		○			○
情報ネットワーク特論 Topics on Information Networks	2		○		○			○
ネットワークアプリケーション特論 Advanced Topics on Network Applications	2		○		○			○
ベイズ的人工知能特論 Advanced Theory on Bayesian Artificial Intelligence	2	○		○				○
統計的機械学習特論 Advanced Statistical Machine Learning	2		○	○				○
情報幾何学特論	2		○			○		○

	Advanced Topics on Information Geometry								
	量子情報数理特論 Advanced Topics on Quantum Information Theory	2	○				○		○
	ネットワークコンピューティング特論 Advanced Network Computing	2	○			○			○
	計算機ネットワーク特論 Advanced Interconnection Networks	2		○		○			○
	情報データ解析論 Advanced Theory on Information Data Analysis	2	○					○	○
	データ解析最適化論 Advanced Topics in Data Analysis Optimization	2		○				○	○
	音声対話処理 Advanced Theory on Spoken Dialog Processing	2		○		○			○
	アルゴリズム工学特論 Advanced Topics on Algorithmic Engineering	2	○			○			○
	システムソフトウェア特論 Advanced Topics on System Software	2		○	○	○			○
	基盤ソフトウェア特論 Advanced Programming Languages: Concepts and Implementation	2		○	○				○
	データ工学原論１ Principles of Data Engineering 1	2	○			○			○
	データ工学原論２ Principles of Data Engineering 2	2	○			○			○
	並列処理論第一 Parallel Processing I	2	○		○				○
	並列処理論第二 Parallel Processing II	2		○	○				○
＊	情報・ネットワーク工学特論 Advanced Computer and Network Engineering	2	○						◎

＊専門上級科目

注：開講課程欄の◎は必修、○は選択を表す。

* Major Advanced Subjects

Note: The ○ mark in the column of Programs denotes elective subjects.

3-3　機械知能システム学専攻

Department of Mechanical and Intelligent Systems Engineering

科目区分 Subject Category	授業科目 Name of Class Subjects	単位数 Number of Credits	開講学期 Semester		開講課程 Program				
			前学期 Spring Semester	後学期 Fall Semester	前期課程 (プログラム) Master's Program (Name of Program)				後期課程 Doctoral Program
					計測・制御システム Measurement and Control Systems	先端ロボティクス Advanced Robotics	機械システム Mechanical Systems	先端ロボティクスジョイント Advanced Joint Robotics	
専門科目Ⅰ Major subject Ⅰ	大学院実践演習（Ⅰ） Graduate School Laboratory Practicum（Ⅰ）	1	○		◎	◎	◎	◎	
	大学院実践演習（Ⅱ） Graduate School Laboratory Practicum（Ⅱ）	1		○	◎	◎	◎	◎	
	大学院実践演習（Ⅲ） Graduate School Laboratory Practicum（Ⅲ）	1	○		◎	◎	◎	◎	
	大学院実践演習（Ⅳ） Graduate School Laboratory Practicum（Ⅳ）	1		○	◎	◎	◎	◎	
	機械知能システム学専攻基礎 Fundamental of Mechanical and Intelligent Systems Engineering	2	○		○	○	○	○	
	熱工学基礎 Fundamentals of Thermodynamics	2	○		○	○	○	○	
	流体工学基礎 Fundamentals of Fluid Engineering	2	○		○	○	○	○	
	バイオメカニクス基礎 Fundamentals of Biomechanics	2	○		○	○	○	○	
	材料強度学基礎 Fundamentals of Strength and Fracture of Materials	2	○		○	○	○	○	
	生産加工学基礎 Fundamentals of Mechanical Working	2	○		○	○	○	○	
	計測工学基礎 Fundamentals of Measurement Engineering	2	○		○	○	○	○	
	ロボット工学基礎	2	○		○	○	○	○	

	Fundamentals of Robotics								
	制御系設計学基礎 Fundamentals of Control System Design	2	○		○	○	○	○	
専門科目Ⅱ Major subject Ⅱ	センサ信号処理学特論 Advanced Signal Processing of Sensor Systems	2		○	A	B	B	B	○
	生体計測工学特論 Advanced Bioinstrumentation Engineering	2		○	A	B	B	B	○
	ロバスト制御工学特論 Advanced Robust Control	2		○	A	B	B	B	○
	組込み制御システム学特論 Advanced Embedded Control System	2		○	A	B	B	B	○
	知覚システム特論 Advanced topics in perceptual system	2	○		A	B	B	B	○
	感覚運動システム特論 Advanced topics on sensorimotor system	2	○		A	B	B	B	○
	メカトロニクス特論 Advanced Mechatronics	2		○	B	A	B	A	○
	ロボット応用工学特論 Advanced Robotics Engineering and Applications	2		○	B	A	B	A	○
	ロボット機構制御特論 Advanced Course of Robotics and Control	2		○	B	A	B	A	○
	運動計測学特論 Advanced Measurement and Evaluation of Human Motor Movement	2		○	B	A	B	A	○
	バーチャルリアリティ特論 Advanced Virtual Reality	2		○	B	A	B	A	○
	コンピュータビジョン特論 Advanced Computer Vision	2		○	B	A	B	A	○
	ロボット情報工学特論 Advanced Information Engineering for Robotics	2		○	B	A	B	A	○
	設計システム工学特論 Advanced Engineering of Design Systems	2		○	B	B	A	B	○
	知的生産システム特論 Advanced Intelligent Production System	2		○	B	B	A	B	○
	機械情報学特論 Advanced Informatics on Intelligent Machineries	2		○	B	B	A	B	○
	力学系現象特論 Advanced Theory of Dynamical Systems	2		○	B	B	A	B	○
	計算力学特論 Advanced Computational Mechanics	2		○	B	B	A	B	○
	ナノトライボロジー特論 Advanced Nanotribology	2		○	B	B	A	B	○
	Advanced Robotics and Mechatronics Engineering	2	○	(○)	B	B	B	B	○
	大学院国際協働学術研修	2	○	(○)	#	#	#	#	#

	Graduate International Jointly Offered Academic Training								
	大学院国際協働学術研修（長期） Graduate International Jointly Offered Academic Training (Long-term)	4	○	＃	＃	＃	＃	＃	＃
＊	機械知能システム学特論 Advanced Mechanical and Intelligent Systems Engineering	2	○						◎

＊専門上級科目

注１：開講課程欄の◎は必修、○は選択を表す。

注２：専門科目Ⅱ欄のＡは専門科目Ⅱ（Ａ）を、Ｂは専門科目Ⅱ（Ｂ）を表す。
なお、専門科目Ⅱ（Ａ）及び専門科目Ⅱ（Ｂ）は選択科目である。

注３：開講課程欄の＃は、修了要件単位にできない科目を表す。

注４：先端ロボティクスジョイントプログラムは、本学で開講される Advanced Robotics and Mechatronics Engineering（集中）及び大学院国際協働学術研修（長期）と、派遣先で協働開講される科目を履修すること。

注５：「Advanced Robotics and Mechatronics Engineering」「大学院国際協働学術研修」「大学院国際協働学術研修（長期）」は、通年開講ではなく、前学期又は後学期の半期ごとの開講である。

* Major Advanced Subjects

Note 1: The ◎ mark in the column of Program denotes compulsory subjects and the ○ mark elective subjects.

Note 2: A and B in the column of Major Subjects II denotes respectively Major Subjects II (A) and Major Subjects II (B).
Major Subjects II (A) and Major Subjects II (B) are elective subjects.

Note 3: The ＃ mark in the column of Program denotes subjects that cannot be included in the credits for requirements for degree.

Note 4: In the Advanced Robotics Joint Program, students must take “Advanced Robotics and Mechatronics Engineering (Intensive)” and “Graduate International Jointly Offered Academic Training II (Long-term) held at the University and the subjects jointly offered in the universities where students are dispatched to.

Note 5: Advanced Robotics and Mechatronics Engineering, Graduate International Jointly Offered Academic Training, and Graduate International Jointly Offered Academic Training (Long-term) are not offered throughout the year. These are held half-yearly either in the Spring semester or the Fall semester.

3-4　基盤理工学専攻　Department of Engineering Science

科目区分 Subject Category	授業科目 Name of Class Subjects	単位数 Number of Credits	開講学期 Semester		開講課程 Program					
			前学期 Spring Semester	後学期 Fall Semester	前期課程 (プログラム) Master's Program (Name of Program)					後期課程 Doctoral Program
					電子工学 Electronic Engineering	光工学 Optical Science and Engineering	物理工学 Applied Physics	化学生命工学 Chemistry and Biotechnology	基盤理工学オープンイノベーション Open innovation	
専門科目Ⅰ Major subject Ⅰ	大学院実践演習（Ⅰ） Graduate School Laboratory Practicum（Ⅰ）	1	○		◎	◎	◎	◎		／
	大学院実践演習（Ⅱ） Graduate School Laboratory Practicum（Ⅱ）	1		○	◎	◎	◎	◎		／
	大学院実践演習（Ⅲ） Graduate School Laboratory Practicum（Ⅲ）	1	○		◎	◎	◎	◎		／
	大学院実践演習（Ⅳ） Graduate School Laboratory Practicum（Ⅳ）	1		○	◎	◎	◎	◎		／
	基盤理工学専攻基礎 Fundamental of Engineering Science	2	○		○	○	○	○	○	／
	実践的先進機器分析 Practical advanced instrumental analysis	2		○	○	○	○	○	○	／
	先端半導体デバイス基礎 Fundamentals of Modern Semiconductor Devices	2		○	○	○	○		○	／
	光・量子エレクトロニクス基礎 Fundamentals of Optical and Quantum Electronics	2	○		○	○	○		○	／
	光デバイス工学基礎 Fundamentals of Photonic Devices	2	○		○	○	○		○	／
	量子物理工学基礎 Fundamentals of Quantum Physics	2	○		○	○	○		○	／
	固体物性論基礎 Fundamentals of Solid State Physics	2	○		○	○	○	○	○	／
	分子細胞生物学基礎 Fundamentals of Cell and Molecular Biology	2	○		○			○	○	／

	生体情報学基礎 Fundamentals of Information Biology	2	○		○			○	○	
	集積回路基礎 Fundamentals of VLSI Fabrication	2	○		○	○	○		○	
	量子エネルギー科学 Quantum Energy Science	2		○	○	○	○	○	○	
	画像情報学基礎 Fundamentals of Image Engineering	2	○			○			○	
	光化学 Fundamentals of Photochemistry	2	○			○		○	○	
	応用電磁気学 Fundamentals of Electromagnetic Theory	2		○		○	○		○	
	固体量子工学 Fundamentals of Solid State Electronics	2	○				○		○	
	生物有機化学 Bio-organic chemistry	2	○					○	○	
	生体機能システム学基礎 Basic human physiology	2		○				○	○	
専門科目Ⅱ Major subject II	環境材料学特論 Advanced Environmental Materials Science	2	○		○				○	○
	ナノフォトニクス特論 Advanced Nanophotonics	2	○		○	○			○	○
	光通信システム特論 Advanced Optical Communication System	2		○	○	○			○	○
	ナノエレクトロニクス特論 Advanced Nano-Electronics	2	○		○	○	○		○	○
	超伝導デバイス特論 Advanced Superconducting Electronic Devices	2		○	○				○	○
	計算物理学特論 Computational Physics	2		○	○		○		○	○
	集積回路設計学特論 Advanced Integrated Circuit Design	2		○	○				○	○
	光通信デバイス特論 Design Techniques of Opto-electronic Devices	2		○	○	○			○	○
	固体・ソフトマターフォトニクス特論 Solid-State and Soft Matter Photonics	2	○			○			○	○
	光計測特論 Advanced Optical Measurements	2	○		○	○	○	○	○	○
	情報光工学特論 Advanced Information Optics and Photonics	2		○		○			○	○
	生体計測工学特論 Advanced Bioinstrumentation Engineering	2		○		○		○	○	○
	物理工学特論 Advanced Engineering Physics	2	○		○	○	○		○	○

固体照明工学特論 Solid State Lighting		2	○		○	○			○	○
量子情報光学特論 Quantum Information Optics		2		○		○	○		○	○
低温量子物性工学特論 Advanced Low Temperature Physics		2	○				○		○	○
固体量子工学特論 Advanced Solid State Electronics		2	○				○		○	○
ナノトライボロジー特論 Advanced Nanotribology		2		○	○	○	○		○	○
統計物理工学特論 Advanced Statistical Physics		2		○			○		○	○
現代レーザー分光学特論 Advanced Laser Spectroscopy		2	○				○		○	○
原子光工学特論 Advanced Atomic and Optical Physics		2	○				○		○	○
凝縮体量子工学特論 Selected Topics on Quantum Degenerate Systems		2		○			○		○	○
電子物性特論 Advanced Lectures on Electronic Properties in Solids		2		○			○		○	○
X線結晶学特論 Advanced X-Ray Crystallography		2		○			○	○	○	○
固体物性化学特論 Advanced Solid State Chemistry		2		○				○	○	○
生命分子科学特論 Biomolecular Chemistry		2	○					○	○	○
生体情報システム学特論 Advanced Information Biology		2	○					○	○	○
化学生命工学特論 Selected Topics in Chemistry and Biotechnology		2	○					○	○	○
無機物質化学特論 Advanced Inorganic Materials Chemistry		2		○				○	○	○
物理化学特論 Advanced Physical Chemistry		2		○				○	○	○
ゲノム生物学特論 Advanced Genome Biology		2		○				○	○	○
オープンラボワー	オープンラボワークⅠ挑戦 Open Laboratory work Ⅰ Challenge	4	○	(○)	○	○	○	○	●	／
	オープンラボワークⅡ開拓 Open Laboratory Work Ⅱ Development	4	○	(○)	○	○	○	○	●	／
	オープンラボワークⅢ融合 Open Laboratory Work Ⅲ Fusion	4	○	(○)	○	○	○	○	●	○

		オープンラボワークⅣ革新 Open Laboratory Work Ⅳ Innovation	4	○	(○)	○	○	○	○	●	○
＊		基盤理工学特論 Advanced Engineering Science	2	○							◎

＊専門上級科目

注１：開講課程欄の◎は必修、●は選択必修、○は選択を表す。

注２：オープンラボワークは、通年開講ではなく、前学期又は後学期の半期ごとの開講である。

* Major Advanced Subjects

Note 1: The ◎ mark in the column of Program denotes compulsory subjects, the ● mark elective compulsory subjects, and the ○ mark elective subjects.

Note 2: Open Laboratory Work is not offered throughout the year but is held half-yearly either in the Spring semester or the Fall semester.

4. 共同サステイナビリティ研究専攻

Joint Doctoral Program for Sustainability Research

科目区分 Subject Category	授業科目名 Name of Class Subjects	開講 Program	必修／選択 Compulsory/Elective	単位数 Number of Credits	1年次 1st Year		2年次 2nd Year		3年次 3rd Year	
					前 Spring Semester	後 Fall Semester	前 Spring Semester	後 Fall Semester	前 Spring Semester	後 Fall Semester
共通基盤科目 Basic Studies in Sustainability Research	サステイナビリティ研究基礎A Foundations of Sustainability Research A	共同 Joint	必 Compulsory	2	◎					
	サステイナビリティ研究基礎B Foundations of Sustainability Research B	共同 Joint	必 Compulsory	2		◎				
サステイナビリティ研究セミナー／ラボワーク科目 Sustainability Research Seminar/Laboratory Work	協働分野セミナーⅠ Interdisciplinary Seminar I	共同 Joint	必 Compulsory	1	◎	◎				
	協働分野セミナーⅡ Interdisciplinary Seminar II	共同 Joint	必 Compulsory	1	◎	◎				
	協働分野セミナーⅢ Interdisciplinary Seminar III	共同 Joint	必 Compulsory	1			◎	◎		
	協働分野セミナーⅣ Interdisciplinary Seminar IV	共同 Joint	必 Compulsory	1			◎	◎		
	協働分野セミナーⅤ Interdisciplinary Seminar V	共同 Joint	必 Compulsory	1					◎	◎
	協働分野セミナーⅥ Interdisciplinary Seminar VI	共同 Joint	必 Compulsory	1					◎	◎
実践実習科目 Practicum and Internship	サステイナビリティ研究先端演習Ⅰ Sustainability Research Advanced Practicum I	共同 Joint	必 Compulsory	1	◎	◎				
	サステイナビリティ研究先端演習Ⅱ Sustainability Research Advanced Practicum II	共同 Joint	必 Compulsory	1	◎	◎				
	サステイナビリティ研究先端演習Ⅲ Sustainability Research Advanced Practicum III	共同 Joint	必 Compulsory	1			◎	◎		
	サステイナビリティ研究先端演習Ⅳ Sustainability Research Advanced Practicum IV	共同 Joint	必 Compulsory	1			◎	◎		

	学外実践実習 Extramural Internship	各大学 Each univ.	選 Elective	2		○	(○)	(○)		
	学内実践実習 Intramural Internship	各大学 Each univ.	選 Elective	2		○	(○)	(○)		

注１：◎は必修、○は選択必修を表す。
注２：「学外実践実習」と「学内実践実習」は選択必修科目であり、どちらかを１年次後学期、２年次前学期または後学期のいずれかの学期に必ず履修する。

Note 1: The ◎ mark denotes compulsory subjects and the ○ mark elective compulsory subjects.

Note 2: Extramural Internship and Intramural Internship are elective compulsory subjects. Students must take either of them in the Fall semester of the first year or in either the Spring or Fall semester of the second year.

(Appended Table 2)

Credits required for degree

Master's Program

Category	Number of credits
Graduate School Fundamental Subjects 大学院基礎教育科目	2 credits or more
Graduate School Practical Subjects 大学院実践教育科目	
Graduate Seminar 大学院輪講	4 credits
Graduate Technical English 大学院技術英語	2 credits
Graduate School Industry–Academia Collaborative Subjects 大学院産学連携科目	2 credits or more
Graduate School Major Subjects 大学院専門教育科目	
Major Subjects I 専門科目Ⅰ	10 credits or more
Major Subjects II 専門科目Ⅱ	8 credits or more
Subtotal	28 credits or more
In addition to the above, from the categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects,	2 credits or more

and Graduate School Major Subjects	
Total	30 credits or more

Note: Students must earn 6 or more credits of Major Subjects II in the department to which they belong.

Students in the Department of Mechanical and Intelligent Systems Engineering must include 4 or more credits of Major Subjects II (A) as credits to be earned from Major Subjects II.

Master's Program

(All Departments: Practical Software Development Specialization Program for Advanced IT Personnel Training)

Category	Number of credits
Compulsory subjects 必修科目	16 credits
Elective compulsory subjects 選択必修科目	2 credits or more
Elective subjects 選択科目	8 credits or more
Graduate School Major Subjects offered by the department to which students belong 所属専攻で開設する大学院専門教育科目	10 credits or more
Total	40 credits or more

Note: To fulfill 40 and more credits required for degree, students must earn 16 credits from compulsory subjects, 2 credits from elective compulsory subjects, 8 credits from elective subjects, 10 credits from Graduate School Major Subjects in the department to which students belong, and 4 or more credits from elective compulsory subjects, elective subjects, and Graduate School Major Subjects in their department.

Doctoral Program

Category	Number of credits
Graduate School Fundamental Subjects 大学院基礎教育科目	0 credit or more
Graduate School Practical Subjects 大学院実践教育科目	
Graduate Seminar 大学院輪講	4 credits
Graduate School Industry–Academia Collaborative Subjects 大学院産学連携科目	0 credit or more
Graduate School Major Subjects 大学院専門教育科目	
Major Subjects I•II 専門科目Ⅰ、Ⅱ	0 credit or more
Major Advanced Subjects 専門上級科目	2 credits
Subtotal	6 credits or more
In addition to the above, from the categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, and Graduate School Major Subjects	2 credits or more
Total	8 credits or more

Integrated Master's–Doctoral Program

Department of Engineering Science: Engineering Science Open-innovation Program

Category	Number of credits
Graduate School Fundamental Subjects	2 credits or more
Graduate School Practical Subjects	
Graduate Seminar (I–IV)	4 credits
Graduate Seminar 2	4 credits
Graduate Technical English	2 credits
Graduate School Industry–Academia Collaborative Subjects	2 credits or more
Graduate School Major Subjects	
Major Subjects I	6 credits or more
Major Subjects II	12 credits or more
Subtotal	32 credits or more

In addition to the above, from the categories of Graduate School Fundamental Subjects, Graduate School Industry–Academia Collaborative Subjects, and Graduate School Major Subjects	2 credits or more
Total	34 credits or more

Note 1: Of Major Subjects I, the Graduate School Laboratory Practicum is excluded from the credits required for degree.

Note 2: To complete the Doctoral Program, students must earn the prescribed 34 or more credits after earning 2 or more credits from the department's designated subjects, Open Innovation School I–V, in Graduate School Industry–Academia Collaborative Subjects, and 12 or more credits from three subjects of Open Laboratory Work in Major Subjects II.

Note 3: To complete the Master's Program, students must earn 1 or more credits from Open Innovation School I–V, 8 or more credits from two subjects of Open Laboratory Work in Major Subjects II, and the prescribed 30 and more credits except Graduate Seminar 2.

Doctoral Program: Joint Doctoral Program for Sustainability Research

Subject category		Number of credits required for degree
Basic Studies in Sustainability Research 共通基盤科目		4 credits
Seminar and Laboratory Work for Sustainability Research サステイナビリティ研究セミナー／ラボワーク科目	Seminar and Laboratory Work for Sustainability Research	6 credits
Practicum and Internship 実践実習科目	Practicum and Internship	6 credits
		Total 16 credits

(17) 2023 Academic Calendar for the Graduate School of Informatics and Engineering

Category	Date	Remarks
Entrance ceremony	April 6 (Thu.)	
Spring-term/Spring-semester (I) classes	April 10 (Mon.) – June 3 (Fri.)	
Spring-term examination	June 5 (Mon.) and June 6 (Tue.)	
Summer-term/spring-semester (2) classes	June 7 (Wed.) – July 29 (Sat.)	
Commencement (June term)	June 30 (Fri.)	
Schedule adjustment day	April 22 (Sat.), May 20 (Sat.), June17 (Sat.), July 15 (Sat.)	
Summer-term/Spring-semester examination	Summer-term: July 31 (Mon.) and August 1 (Tue.) Spring-semester: July 31 (Mon.) – August 5 (Sat.)	
Special measures to secure the number of school days ※1	Classes are held on the Mountain day (August 17 (Mon.))	
Summer vacation	August 7 (Mon.) – September 30 (Sat.)	
Commencement (September term)	September 29 (Fri.)	
Entrance ceremony (October enrollment)	September 29 (Fri.)	
Fall-term/Fall-semester classes (1)	October 2 (Mon.) – November 29 (Wed.)	
Fall-term examination	November 30 (Thu.) and December 1 (Fri.)	
Winter-term/Fall-semester (2)	December 2 (Sat.) - December 26 (Tue.)	
Special measures to secure the number of school days ※2	Classes are held on the sports day (October 19(Mon.)), the culture day (November 3 (Fri.)) and the UEC founding day (December 8 (Fri.)).	
Commencement (December term)	December 22 (Fri.)	
Winter vacation	December 27, 2022 (Wed.) – January 3, 2024 (Wed.)	
Winter-term/Fall-semester classes (3)	January 4, 2024 (Thu.) – February 3 (Sat.)	
Schedule adjustment day	October 21 (Sat.), November 18 (Sat.), December 16 (Sat.),January 20 (Sat.)	
Winter-term/Fall -semester examination	Winter-term: February 5 (Mon.) and February 6 (Tue.) Fall-semester: February 5 (Mon.) – February 10 (Sat.)	
Spring vacation	February 12 (Mon.) – April 3 (Wed.)	

Commencement	March 25 (Mon.)

※1 ※2 Measures under the proviso to Article 10 of the University Rules.
※3 The 2024 entrance ceremony is scheduled for April 4, 2024 (Thu.).
* For information related to the academic affairs schedule in and after 2023, check the campus bulletin boards and the University's website.
http://www.uec.ac.jp/campus/academic/calendar/

(19) Degree Application Guidelines

See the web pages below. Information is available in English.

Degree Application Procedure/Schedule
http://kyoumu.office.uec.ac.jp/daigakuin/gakusei-gakui-nittei.html

Application Documents
http://kyoumu.office.uec.ac.jp/daigakuin/gakui-shinsei.html