English-Taught Courses List **As of April 2026**

（Graduate School of Engineering） **This is for your reference only.**

Code	Course title	Semester	Quarter	Main Instructor	Course description
106a0608	Wireless communication II	Fall Semester	3rd Quarter	UMEBAYASHI Kenta	In wireless communications, estimation is one of the fundamental issues. Specifically, to receive and demodulate the received signal properly, the receiver has to estimate not only the transmitted signal but also channel response. However, typically they involve randomness, we have to consider it in the estimation problems. In this class, we will study the estimation problem and techniques.
106a0610	Selected Topics in Artificial Intelligence II	Spring Semester	1st Quarter	WOLFER Geoffrey	This course studies the theory of AI / machine learning, emphasizing probability and statistics over computation / optimization. You will learn the mathematical principles that show how algorithms learn, generalize, and the fundamental limits of learning. The course also teaches tools to analyze, understand and compare well-known AI algorithms.
106a0619	Academic communication	Spring Semester	1st Quarter	FUJITA Katsuhide	Students learn the flow of research, including literature review, experimental design, program implementation and evaluation, with the supervisor. In addition, students are required writing papers and making presentation in English at an international conference.
106a0624	Academic communication	Fall Semester	3rd Quarter	FUJITA Katsuhide	Students learn the flow of research, including literature review, experimental design, program implementation and evaluation, with the supervisor. In addition, students are required writing papers and making presentation in English at an international conference.
106c3009	Applied Chemistry: Advanced Seminar I	Spring Semester	ONE-YEAR	MURAOKA Takahiro	The aim of the course is to learn items necessary to promote the graduation study such as literature survey, presentation, discussion, experimental safety, and operation of scientific instruments in a seminar style. Students need to take this course along with Graduation Thesis, and learn mainly the following items: 1) Safety education, 2) understanding of the purpose and background of the study, 3) acquisition of knowledge and techniques necessary for the study. The format and schedule is dependent on each adviser, and active involvement in the course is very important.
106c3010	Applied Chemistry: Advanced Seminar I	Spring Semester	ONE-YEAR	GODA Hiroshi	The aim of the course is to learn items necessary to promote the graduation study such as literature survey, presentation, discussion, experimental safety, and operation of scientific instruments in a seminar style. Students need to take this course along with Graduation Thesis, and learn mainly the following items: 1) Safety education, 2) understanding of the purpose and background of the study, 3) acquisition of knowledge and techniques necessary for the study. The format and schedule is dependent on each adviser, and active involvement in the course is very important.
106c3022	Applied Chemistry: Advanced Seminar I	Spring Semester	ONE-YEAR	LOUIS Marine	The aim of the course is to learn items necessary to promote the graduation study such as literature survey, presentation, discussion, experimental safety, and operation of scientific instruments in a seminar style. Students need to take this course along with Graduation Thesis, and learn mainly the following items: 1) Safety education, 2) understanding of the purpose and background of the study, 3) acquisition of knowledge and techniques necessary for the study. The format and schedule is dependent on each adviser, and active involvement in the course is very important.
106c3122	Applied Chemistry: Advanced Seminar II	Spring Semester	ONE-YEAR	LOUIS Marine	[Purpose] Communicating with others through research presentations is an extremely important element as a researcher. Therefore, the progress of research in the master's program is announced in front of teachers other than the supervisor, and opinions are exchanged. In addition, by exchanging opinions, the aim is to find out information that cannot be obtained through literature surveys, etc., and to find new perspectives that were not noticed by oneself, and to make use of them for their own research. [Outline] An interim presentation will be held in early May every year, and the progress of research in the master's program will be announced through short presentations and poster presentations. Answer questions from other students and teachers, and present questions after listening to other students' announcements.

Code	Course title	Semester	Quarter	Main Instructor	Course description
106c3209	Applied Chemistry: Practical Study Ⅰ	Spring Semester	ONE-YEAR	MURAOKA Takahiro	Purpose: In addition to conducting research for a master's thesis under a faculty advisor, it is important for a researcher to communicate with others through research presentations. The purpose of this course is to provide students with the opportunity to present the progress of their research in the Master's Course in front of faculty members other than their supervisors, to exchange opinions, and to discover information and new perspectives that cannot be obtained through literature survey and other means. Students are expected to take this course in their first year of the Master's program, and to present the progress of their research in the Master's program at the midterm presentation scheduled in December. Students will answer questions from other students and faculty members, as well as present questions after listening to other students' presentations.
106c3222	Applied Chemistry: Practical Study Ⅰ	Spring Semester	ONE-YEAR	LOUIS Marine	Purpose: In addition to conducting research for a master's thesis under a faculty advisor, it is important for a researcher to communicate with others through research presentations. The purpose of this course is to provide students with the opportunity to present the progress of their research in the Master's Course in front of faculty members other than their supervisors, to exchange opinions, and to discover information and new perspectives that cannot be obtained through literature survey and other means. Students are expected to take this course in their first year of the Master's program, and to present the progress of their research in the Master's program at the midterm presentation scheduled in December. Students will answer questions from other students and faculty members, as well as present questions after listening to other students' presentations.
106c3322	Applied Chemistry: Practical Study Ⅱ	Spring Semester	ONE-YEAR	LOUIS Marine	Purpose: In addition to conducting research for a master's thesis under a faculty advisor, it is important for a researcher to communicate with others through research presentations. The purpose of this course is to provide students with the opportunity to present the progress of their research in the Master's Course in front of faculty members other than their supervisors, to exchange opinions, and to discover information and new perspectives that cannot be obtained through literature survey and other means. Students are expected to take this course in their first year of the Master's program, and to present the progress of their research in the Master's program at the midterm presentation scheduled in December. Students will answer questions from other students and faculty members, as well as present questions after listening to other students' presentations.
106c3409	Applied Chemistry: Practical Presentation Ⅰ	Spring Semester	ONE-YEAR	MURAOKA Takahiro	Purpose: It is the responsibility of researchers to publish the results of their research at conferences, etc. and to return the results to society. In the future, there will be many opportunities to present the results and progress of research at companies, etc., and this is highly important. The purpose of this course is to practice and master a series of tasks up to the presentation, such as preparation of a presentation draft, preparation of presentation materials, practice of presentation, and presentation at an academic conference. With the consent of the academic advisor, students will present their research at academic societies. The student will be evaluated on her/his ability to give a professional presentation at an academic conference and answer questions after preparing a presentation draft and presentation materials and practicing the presentation
106c3422	Applied Chemistry: Practical Presentation Ⅰ	Spring Semester	ONE-YEAR	LOUIS Marine	Purpose: It is the responsibility of researchers to publish the results of their research at conferences, etc. and to return the results to society. In the future, there will be many opportunities to present the results and progress of research at companies, etc., and this is highly important. The purpose of this course is to practice and master a series of tasks up to the presentation, such as preparation of a presentation draft, preparation of presentation materials, practice of presentation, and presentation at an academic conference. With the consent of the academic advisor, students will present their research at academic societies. The student will be evaluated on her/his ability to give a professional presentation at an academic conference and answer questions after preparing a presentation draft and presentation materials and practicing the presentation

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106I0110	Biological Organic Chemistry	Fall Semester	3rd Quarter	SAKURAI Kaori	The aim of this class is to introduce students with advanced organic chemistry and chemical biology for elucidating and understanding the biological phenomena key concepts for understanding structures of compounds at atomic level, which will be an important foundation to study higher level courses at the Department of Bioengineering and Life Science. While reviewing high school-level chemistry, classes will introduce the key principles in chemistry, which involves atomic orbitals, valence bond theory, molecular orbital theory, molecular representations, acids and bases, stereochemistry. A particular emphasis is placed on learning the structures of organic compounds, so that it will serve as an introductory course for Bioorganic Chemistry courses.
106I0116	International Research: Special Lecture Writing and Presentation for Biotechnology Ⅰ	Spring Semester	1st Quarter	JAMES BALDWIN	This course aims to develop graduate students' academic writing and oral presentation skills in English. In addition to developing scientific writing and referencing skills, students will also practice skills and strategies to deliver more effective oral presentations about their individual research projects.
106I0117	International Research: Special Lecture Writing and Presentation for Biotechnology Ⅱ	Fall Semester	3rd Quarter	JAMES BALDWIN	This course aims to further develop graduate students' scientific writing and oral presentation skills in English. To achieve this goal, reading and critically analyzing scientific journal articles plays an important role in the learning process. In addition to developing science writing skills, students will also practice skills and strategies to deliver more effective oral presentations about their individual research.
106I0118	Brainstorming in English	Fall Semester	3rd Quarter	JAMES BALDWIN	The aim of this course is to introduce and practice strategies to improve students' scientific communication in English. Class activities will focus on discussion and presentation of students' research. Skills to be covered include preparing a brief "science pitch", leading a discussion, delivering an effective oral presentation, and handling Q&A sessions.
106I0121	Life Sciences	Fall Semester	3rd Quarter	VAVRICKA JR CHRISTOPHER JOHN	This course will focus on topics relating to Protein Engineering, Enzyme Engineering, Metabolic Engineering and Synthetic Biology. Detailed information will be posted on Google Classroom (Class code will be provided later).
106I0123	Frontieres of Biotechnology	Fall Semester	3rd Quarter	MORI Tetsushi	Each faculty member of the Department of Biotechnology will introduce cutting-edge research related to biotechnology, focusing on their own research. They will explain how technology based on " biotechnology " is important for the development of science and explain about biotechnology. While learning the needs and seeds of the advanced area, learn the way of thinking for advancing cutting-edge research in the area. The lecture will be given in English. This subject is associated with perspectives A, B, and C of the Diploma Policy.
106I1003	Biofunction Engineering: Presentation Ⅰ	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop advanced level presentation skills relevant in the field of biofunctionengineering through poster or oral presentations at a scientific meeting or a conference.
106I1021	Biofunction Engineering: Presentation Ⅰ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop presentation skills relevant in the field of biotechnology through poster or oral presentations at a scientific meeting or a conference.
106I1024	Biofunction Engineering: Presentation Ⅰ	Spring Semester	ONE-YEAR	VAVRICKA JR CHRISTOPHER JOHN	Students are to develop presentation skills relevant in the field of biotechnology through poster or oral presentations at a scientific meeting or a conference.
106I1053	Biofunction Engineering: Presentation Ⅱ	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop presentation skills relevant in the field of biofunction engineering through poster or oral presentations at a scientific meeting or a conference.
106I1071	Biofunction Engineering: Presentation Ⅱ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop presentation skills relevant in the field of biotechnology through poster or oral presentations at a scientific meeting or a conference.
106I1103	Biofunction Engineering: PresentationⅢ	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop presentation skills relevant in the field of biofunction engineering through poster or oral presentations at a scientific meeting or a conference.
106I1121	Biofunction Engineering: PresentationⅢ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop presentation skills relevant in the field of biotechnology through poster or oral presentations at a scientific meeting or a conference.
106I1153	Biofunction Engineering: PresentationⅣ	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop presentation skills relevant in the field of biofunction engineering through poster or oral presentations at a scientific meeting or a conference.

Code	Course title	Semester	Quarter	Main Instructor	Course description
106I1171	Biofunction Engineering: PresentationⅣ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop presentation skills relevant in the field of biotechnology through poster or oral presentations at a scientific meeting or a conference.

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106I1221	Education Study on Biotechnology and Life Science Ⅰ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	The aim of this class is to develop a sense of purpose with future career through the experience of undergraduate education and internship.
106I1271	Education Study on Biotechnology and Life Science Ⅱ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	The aim of this class is to develop a sense of purpose with future career through the experience of undergraduate education and internship.
106I1321	Biotechnology and Life Science: Advanced Study	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Under supervisor’s guidance, student will investigate an advanced research topic in the field of life-science and biotechnology. Student will develop abilities to discuss the results obtained from the research, as well as skills to write paper based on the research.
106I1353	Biotechnology and Life Science: Seminar Ⅰ	Spring Semester	1st Quarter	KURODA Yutaka	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1371	Biotechnology and Life Science: Seminar Ⅰ	Spring Semester	1st Quarter	NAKAMURA Chikashi	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1403	Biotechnology and Life Science: Seminar Ⅱ	Fall Semester	3rd Quarter	KURODA Yutaka	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1421	Biotechnology and Life Science: Seminar Ⅱ	Fall Semester	3rd Quarter	NAKAMURA Chikashi	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1424	Biotechnology and Life Science: Seminar Ⅱ	Fall Semester	3rd Quarter	VAVRICKA JR CHRISTOPHER JOHN	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1453	Biotechnology and Life Science: Seminar Ⅲ	Spring Semester	1st Quarter	KURODA Yutaka	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1471	Biotechnology and Life Science: Seminar Ⅲ	Spring Semester	1st Quarter	NAKAMURA Chikashi	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1503	Biotechnology and Life Science: Seminar Ⅳ	Fall Semester	3rd Quarter	KURODA Yutaka	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1521	Biotechnology and Life Science: Seminar Ⅳ	Fall Semester	3rd Quarter	NAKAMURA Chikashi	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1524	Biotechnology and Life Science: Seminar Ⅳ	Fall Semester	3rd Quarter	VAVRICKA JR CHRISTOPHER JOHN	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1546	Biotechnology and Life Science: Seminar Ⅳ	Spring Semester	1st Quarter	NAKAMURA Chikashi	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
106I1553	Biotechnology and Life Science: Special Study	Spring Semester	1st Quarter	KURODA Yutaka	Student will examine to make a report based on papers from the related research field of life-science and biotechnology. Student will acquire to find problems and discuss future perspectives in the examination.
106I1571	Biotechnology and Life Science: Special Study	Spring Semester	1st Quarter	NAKAMURA Chikashi	Student will examine to make a report based on papers from the related research field of life-science and biotechnology. Student will acquire to find problems and discuss future perspectives in the examination.

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106m0516	Mechanical Systems Engineering: Practice Ⅲ	Fall Semester	3rd Quarter	TAKADA Satoshi	research institute, and it is considered as an aid of career path formation.
106m0518	Advances in Mechanical Systems Engineering	Fall Semester	3rd Quarter	RAKSINCHARO ENSAK Pongsathorn	This course is intended to provide both TUAT grduate students and short-term exchange program (STEP, AIMS, semester program, etc.) students with an innovative and inclusive scope on the Advances in Mechanical Systems Engineering. The course consists of fourteen 90 minutes classes and all lectures are given in English by selected speakers in various field of Mechanical Systems Engineering. For this course, google classroom service will be used. The details of that service will be provided at the first class of this course.
106m5110	Mechanical Systems Engineering Thesis: Seminar Ⅰ	Spring Semester	ONE-YEAR	RAKSINCHARO ENSAK Pongsathorn	Participants carry out his / her own research as Master course theses. In this course, job-on training style is used for planning, experiments, analysis, and discussions. Students in Master course Year-1 must complete this course as compulsive.
106m5205	Mechanical Systems Engineering Thesis: Seminar Ⅱ	Spring Semester	ONE-YEAR		Participants carry out his / her own research as Master course theses. In this course, job-on training style is used for planning, experiments, numerical analysis, and discussions. Students in Master course Year-2 must complete this course as compulsive, especially for the final theses and presentation. *Language is depend on the decision by the supervisor.
106m5210	Mechanical Systems Engineering Thesis: Seminar Ⅱ	Spring Semester	ONE-YEAR	RAKSINCHARO ENSAK Pongsathorn	Participants carry out his / her own research as Master course theses. In this course, job-on training style is used for planning, experiments, analysis, and discussions. Students in Master course Year-1 must complete this course as compulsive.
106m5219	Mechanical Systems Engineering Thesis: Seminar Ⅱ	Spring Semester	ONE-YEAR	TAKADA Satoshi	Participants carry out his / her own research as Master course theses. In this course, job-on training style is used for planning, experiments, numerical analysis, and discussions. Students in Master course Year-2 must complete this course as compulsive, especially for the final theses and presentation. *Language is depend on the decision by the supervisor.
106t0012	Omics Analysis for Biotechnology	Spring Semester	1st Quarter	TSUGAWA Hiroshi	In omics analysis, this course particularly focuses on metabolomics. Metabolomics refers to the technology for measuring metabolites (metabolome) within living organisms. In this lecture, you will learn the basics of mass spectrometry and informatics technologies used in metabolomics. Additionally, you will study the interpretation of metabolome data obtained, in order to understand living organisms.
106t0031	Advanced Control System Engineering	Fall Semester	3rd Quarter	RAKSINCHARO ENSAK Pongsathorn	This course introduces the basic design theory of feedback control systems for linear dynamical systems. Several applications on automotive control as well as aircraft dynamics control are described based on control theories. Classical control and Modern control theories are introduced in the class. The theory of state observer and Kalman filtering are also introduced.
106t0052	Human, Language and Society Ⅱ	Spring Semester	2nd Quarter	ISHIZUKA Masayuki	Pragmatics, a subfield of Formal Linguistics which examines how natural language meaning can be captured by mathematical logic. Additionally, students will study linguistic typology to uncover commonalities and variations among languages worldwide. Through this diverse set of topics, students will gain a well-rounded understanding of the fundamental concepts and methods in the field of linguistics.

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Code	Course title	Semester	Quarter	Main Instructor	Course description
106t0081	Engineering: Special Lecture Ⅰ (Entrepreneurship Advanced)	Fall Semester	3rd Quarter	LIU SIMON JIAN HONG	In an era of rapid technological advancement and increasing societal complexity, researchers are expected not only to generate new knowledge but also to translate their research outcomes into tangible value for society. At the same time, global competition and technological change require researchers to develop an “ambidextrous” mindset, combining the ability to explore new research domains with the ability to deepen their expertise. This course is designed for graduate students in engineering, agriculture and life sciences to develop an entrepreneurial perspective and practical skills for transforming research outcomes into innovative business and social solutions. It also encourages students to view entrepreneurship to strengthen their research capabilities and discover opportunities for new interdisciplinary research areas. Through lectures, case discussions, group work, and guest talks by practitioners, students will learn the mindset, processes, and tools for entrepreneurial value creation. The course emphasizes interdisciplinary thinking, design thinking, business model development, and entrepreneurial finance, while examining how academic research can lead to innovation and venture opportunities. Students will collaborate with peers from diverse academic backgrounds and reconsider their research from the perspectives of innovation and societal impact. By integrating research and entrepreneurship as complementary drivers, the course aims to cultivate researchers who can advance new research frontiers while translating research into societal value.
106u0404	Advanced Quantum Engineering I	Fall Semester	3rd Quarter	HATAKEYAMA Atsushi	Following undergraduate quantum physics courses, students learn the principles and hot topics of quantum technologies, including (1)the review of basic quantum mechanics, (2)quantum sensors, (3)quantum communication, and (4)quantum computing.
106u0411	Special Lecture on Advanced Chemical Physics Ⅱ "Physical and Energy Engineering"	Fall Semester	3rd Quarter	SATRIA ZULKARNAEN BISRI	The title of this lecture is: "Physical and Energy Engineering" We will deal with some important physics topics in energy engineering, especially to realize Zero Carbon Society. The topics include electromagnetic waves (or light) and energy, charged particles in electromagnetic fields, radiation physics, nuclear engineering, thermal engines, and heat pumps.
106u4020	Applied Physics and Chemical Engineering Seminar I	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, students will understand the significance of their own research in preparation for their master's thesis.
106u4070	Applied Physics and Chemical Engineering Seminar I	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, students will understand the significance of their own research in preparation for their master's thesis.
106u4120	Applied Physics and Chemical Engineering Seminar II	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, students will understand the significance of their own research in preparation for their master's thesis.
106u4170	Applied Physics and Chemical Engineering Seminar II	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, students will understand the significance of their own research in preparation for their master's thesis.
106u4220	Advanced Experiment in Applied Physics and Chemical Engineering	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, the student will formulate an experimental plan and conduct preliminary and exploratory experiments in preparation for the master's thesis. The results obtained will be summarized and reported as appropriate, discussed with the supervisor, and the direction of the research for the master's thesis will be clarified based on the results of the discussions.
106u4270	Advanced Experiment in Applied Physics and Chemical Engineering	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, the student will formulate an experimental plan and conduct preliminary and exploratory experiments in preparation for the master's thesis. The results obtained will be summarized and reported as appropriate, discussed with the supervisor, and the direction of the research for the master's thesis will be clarified based on the results of the discussions.
106u4320	Advanced Research in Applied Physics and Chemical Engineering	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, the student will formulate an experimental plan and conduct preliminary and exploratory experiments in preparation for the master's thesis. The results obtained will be summarized and reported as appropriate, discussed with the supervisor, and the direction of the research for the master's thesis will be clarified based on the results of the discussions.

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106u4370	Advanced Research in Applied Physics and Chemical Engineering	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of each faculty member, the student will formulate an experimental plan and conduct preliminary and exploratory experiments in preparation for the master's thesis. The results obtained will be summarized and reported as appropriate, discussed with the supervisor, and the direction of the research for the master's thesis will be clarified based on the results of the discussions.
108a0605	Selected Topics in Dependable Computing	Spring Semester	1st Quarter	KANEKO Keiichi	By taking interconnection networks as examples, we discuss them with respect to their classification, basic concepts, design metrics, deadlock and starvation, routing algorithms from the technical and engineering aspects. [Class Code] 2refz5n
108a6355	Research Proposition for Selected Topics	Fall Semester	ACROSS ACADEMIC YEAR	KANEKO Keiichi	Each student writes a survey report for clarifying the stance of their research among other researches. Students present the progress of their investigation at every meeting in your laboratory, monthly meeting. They must answer questions and comments and often advised for further progress.
108c0311	Scope of Applied Chemistry II	Fall Semester	3rd Quarter	LOUIS Marine	[Purpose] This is a specialized course for international students offered in English, but open to graduate students in general. Students will acquire up-to-date knowledge of a wide range of applied chemistry and related fields, from basic to cutting-edge, and experience the frontlines of applied chemistry research through laboratory visits. The course also aims to provide students with a multifaceted view of various research fields and issues related to applied chemistry outside their own field of specialization, to understand the differences from their own field of specialization, and to reflect on the possibilities of reflecting the findings of these different fields and of collaboration with them. [Summary] The faculty members of the Department of Applied Chemistry take turns to give one lecture per session, covering fundamentals and topics in their respective fields of expertise, as well as their own research results, in an easy-to-understand manner to students in various fields of research. In addition, a tour of the laboratories of the Department of Applied Chemistry will be conducted at the same time. In principle, lectures will be given in English.
108c3019	Applied Chemistry: Advanced Seminar III	Spring Semester	ONE-YEAR	LOUIS Marine	[Purpose] It seems that you have acquired the basic skills necessary for conducting research in the three years leading up to the master's program, but learn more to continue your research after obtaining your doctoral degree. There are many things to do. The purpose of this course is to improve each student's ability and acquire the ability to become independent as a researcher. [Summary] The position of specialized subjects is to develop the doctoral course research under the guidance of academic advisors in each laboratory, and to develop the skills necessary to grow as an independent researcher In principle, it should be conducted in a seminar format.
108c3119	Applied Chemistry: Advanced Seminar IV	Spring Semester	ONE-YEAR	LOUIS Marine	[Purpose] It seems that you have acquired the basic skills necessary for conducting research in the three years leading up to the master's program, but learn more to continue your research after obtaining your doctoral degree. There are many things to do. The purpose of this course is to improve each student's ability and acquire the ability to become independent as a researcher. [Summary] The position of specialized subjects is to develop the doctoral course research under the guidance of academic advisors in each laboratory, and to develop the skills necessary to grow as an independent researcher In principle, it should be conducted in a seminar format.
108c3219	Applied Chemistry: Advanced Seminar V	Spring Semester	ONE-YEAR	LOUIS Marine	engineers through the research proposal for your Doctor Theses, the detailed literature surveys, and discussion about the experimental results. Following the success in “Advanced Seminar of Applied Chemistry IV”, the students will train the methods to propose and conduct the research projects independently. In addition, students will train how to organize and report the experimental results sophisticatedly through presentations and discussion.

Code	Course title	Semester	Quarter	Main Instructor	Course description
108c3319	Applied Chemistry: Advanced Study	Spring Semester	ONE-YEAR	LOUIS Marine	[Purpose] By practicing planning, investigating, reporting, and discussing research issues in the doctoral course, students will gain the advanced expertise based on chemistry and materials science, as well as the skills required of proactive researchers and engineers. [Outline] Students learn how to set a research theme for their doctoral dissertation and formulate an implementation plan, as well as how to collect and understand materials related to the research theme. They also learn how to properly organize and communicate the results of their research and investigations to others, and engage in specialized discussions. In addition, students will conduct a literature survey on their own research topic, and summarize the contents equivalent to the introduction of a doctoral dissertation in a research report based on the background and purpose of the research.
108c3405	Applied Chemistry: Practical Presentation II	Spring Semester	ONE-YEAR	MURAKAMI Yoshihiko	Purpose: It is the responsibility of researchers to publish the results of their research at conferences, etc. and to return the results to society. In the future, there will be many opportunities to present the results and progress of research at companies, etc., and this is highly important. The purpose of this course is to practice and master a series of tasks up to the presentation, such as preparation of a presentation draft, preparation of presentation materials, practice of presentation, and presentation at an academic conference. With the consent of the academic advisor, students will present their research at academic societies. The student will be evaluated on her/his ability to give a professional presentation at an academic conference and answer questions after preparing a presentation draft and presentation materials and practicing the presentation
108c3409	Applied Chemistry: Practical Presentation II	Spring Semester	ONE-YEAR	MURAOKA Takahiro	Purpose: It is the responsibility of researchers to publish the results of their research at conferences, etc. and to return the results to society. In the future, there will be many opportunities to present the results and progress of research at companies, etc., and this is highly important. The purpose of this course is to practice and master a series of tasks up to the presentation, such as preparation of a presentation draft, preparation of presentation materials, practice of presentation, and presentation at an academic conference. With the consent of the academic advisor, students will present their research at academic societies. The student will be evaluated on her/his ability to give a professional presentation at an academic conference and answer questions after preparing a presentation draft and presentation materials and practicing the presentation
108c3419	Applied Chemistry: Practical Presentation II	Spring Semester	ONE-YEAR	LOUIS Marine	The aim of this course is to develop logical and creative thinking in the fields of applied chemistry and materials science in order to develop into researchers who have both in-depth knowledge and insight into their own specialised fields and a broad perspective. The course is intended to be taken in the second year of the Master's course. The objective of the master's course is to select a research theme related to applied chemistry and materials science under the supervision of a supervisor, conduct practical master's thesis research, finally summarise the research as a master's thesis, and present and discuss the results at a master's thesis presentation meeting. To achieve these goals, daily research activities in the laboratory are important. In the process of conducting research, conducting research surveys, introducing research and exchanging opinions with supervisors, laboratory staff and students on a daily basis on your own research topic and related fields in the Master's course, you will develop the logical and creative thinking that you aim for in the process of promoting your research.
108c3459	Applied Chemistry: Practical Presentation II	Fall Semester	ACROSS ACADEMIC YEAR	MURAOKA Takahiro	Purpose: It is the responsibility of researchers to publish the results of their research at conferences, etc. and to return the results to society. In the future, there will be many opportunities to present the results and progress of research at companies, etc., and this is highly important. The purpose of this course is to practice and master a series of tasks up to the presentation, such as preparation of a presentation draft, preparation of presentation materials, practice of presentation, and presentation at an academic conference. With the consent of the academic advisor, students will present their research at academic societies. The student will be evaluated on her/his ability to give a professional presentation at an academic conference and answer questions after preparing a presentation draft and presentation materials and practicing the presentation

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Code	Course title	Semester	Quarter	Main Instructor	Course description
108I0102	Bioinformatics	Spring Semester	1st Quarter	KURODA Yutaka	In omics analysis, this course particularly focuses on metabolomics. Metabolomics refers to the technology for measuring metabolites (metabolome) within living organisms. In this lecture, you will learn the basics of mass spectrometry and informatics technologies used in metabolomics. Additionally, you will study the interpretation of metabolome data obtained, in order to understand life.
108I0111	Biomolecular Reaction	Fall Semester	3rd Quarter	SAKURAI Kaori	The aim of this class is to introduce students with advanced organic chemistry and chemical biology for elucidating and understanding the biological phenomena key concepts for understanding structures of compounds at atomic level, which will be an important foundation to study higher level courses at the Department of Bioengineering and Life Science. While reviewing high school-level chemistry, classes will introduce the key principles in chemistry, which involves atomic orbitals, valence bond theory, molecular orbital theory, molecular representations, acids and bases, stereochemistry. A particular emphasis is placed on learning the structures of organic compounds, so that it will serve as an introductory course for Bioorganic Chemistry courses.
108I0119	International Research Writing and Presentation for Biotechnology: Advanced Lecture Ⅰ	Spring Semester	1st Quarter	JAMES BALDWIN	This course aims to develop graduate students' academic writing and oral presentation skills in English. In addition to developing scientific writing and referencing skills, students will also practice skills and strategies to deliver more effective oral presentations about their individual research projects.
108I0124	Advanced Brainstorming in English	Fall Semester	3rd Quarter	JAMES BALDWIN	The aim of this course is to introduce and practice strategies to improve students' scientific communication in English. Class activities will focus on discussion and presentation of students' research. Skills to be covered include preparing a brief "science pitch", leading a discussion, delivering an effective oral presentation, and handling Q&A sessions.
108I0128	Advanced Life Sciences	Fall Semester	3rd Quarter	VAVRICKA JR CHRISTOPHER JOHN	This course will focus on topics relating to Protein Engineering, Enzyme Engineering, Metabolic Engineering and Synthetic Biology. Detailed information will be posted on Google Classroom (Class code will be provided later).
108I0130	Advanced Frontieres of Biotechnology	Fall Semester	3rd Quarter	MORI Tetsushi	Each faculty member of the Department of Biotechnology will introduce cutting-edge research related to biotechnology, focusing on their own research. They will explain how technology based on " biotechnology " is important for the development of science and explain about biotechnology. While learning the needs and seeds of the advanced area, learn the way of thinking for advancing cutting-edge research in the area. The lecture will be given in English. This subject is associated with perspectives A, B, and C of the Diploma Policy.
108I1004	Advanced Biofunction Engineering Presentation I	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop advanced level presentation skills relevant in the field of biofunctionengineering through poster or oral presentations at a scientific meeting or a conference.
108I1020	Advanced Biofunction Engineering Presentation I	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop advanced level presentation skills relevant in the field of biofunction engineering through poster or oral presentations at a scientific meeting or a conference.
108I1054	Advanced Biofunction Engineering Presentation II	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop advanced level presentation skills relevant in the field of biofunctionengineering through poster or oral presentations at a scientific meeting or a conference.
108I1070	Advanced Biofunction Engineering Presentation II	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop advanced level presentation skills relevant in the field of biofunction engineering through poster or oral presentations at a scientific meeting or a conference.
108I1073	Advanced Biofunction Engineering Presentation II	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop advanced level presentation skills relevant in the field of biofunction engineering through poster or oral presentations at a scientific meeting or a conference.
108I1104	Advanced Applied Bioengineering Presentation I	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop advanced level presentation skills relevant in the field of applied bioengineering through poster or oral presentations at a scientific meeting or a conference.
108I1120	Advanced Applied Bioengineering Presentation I	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop advanced level presentation skills relevant in the field of applied bioengineering through poster or oral presentations at a scientific meeting or a conference.
108I1154	Advanced Applied Bioengineering Presentation II	Spring Semester	ONE-YEAR	KURODA Yutaka	Students are to develop advanced level presentation skills relevant in the field of applied bioengineering through poster or oral presentations at a scientific meeting or a conference.
108I1170	Advanced Applied Bioengineering Presentation II	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Students are to develop advanced level presentation skills relevant in the field of applied bioengineering through poster or oral presentations at a scientific meeting or a conference.

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108l1204	Biotechnology and Life Science: Special Seminar Ⅰ	Spring Semester	ONE-YEAR	KURODA Yutaka	In order to bring up researchers with broad scientific vision, a detailed bibliographic survey, material preparation followed by a oral presentation would be performed by each student in the masteral program. The students should have to chose a topic different from their research theme.
108l1220	Biotechnology and Life Science: Special Seminar Ⅰ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Through the accomplishment of a scientific oral presentation via the bibliographic survey and material perparation on different topic from their research theme individually, the PhD candidates are expected to gain broad scientific vision and be able to perform the scientific review in new research fields.
108l1270	Biotechnology and Life Science: Special Seminar Ⅱ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Through the accomplishment of a scientific oral presentation via the bibliographic survey and material perparation on different topic from their research theme individually, the PhD candidates are expected to gain broad scientific vision and be able to perform the scientific review in new research fields.
108l1320	Biotechnology and Life Science: Special Seminar Ⅲ	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	Through the accomplishment of a scientific oral presentation via the bibliographic survey and material perparation on different topic from their research theme individually, the PhD candidates are expected to gain broad scientific vision and be able to perform the scientific review in new research fields.
108l1370	Advanced Research Proposal on Biotechnology and Life Science	Spring Semester	1st Quarter	NAKAMURA Chikashi	This course is aiming to help the PhD candidates to gain the ability on the bibliographic survey, scientific review, oral presentation, and research proposal on a specific topic based on the latest scientific literatures on biotechnology.
108l1420	Practical Training on Biofunction Engineering	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	The aim of this class is to learn and to experience a true picture about research and development of biotechnology. To learn about effect of bioengineering on the society, which is based on cell technology and gene technology. To understand what bioengineering has exactly given back to and contributed to the society. To consider and discuss about a criteria for contribution academically. The experience of studying abroad and having an educational training will be recognized as credit.
108l1470	Practical Training on Applied Bioengineering	Spring Semester	ONE-YEAR	NAKAMURA Chikashi	The aim of this class is to learn and to experience a true picture about research and development of biotechnology. To learn about effect of bioengineering on the society, which is based on cell technology and gene technology. To understand what bioengineering has exactly given back to and contributed to the society. To consider and discuss about a criteria for contribution academically. The experience of studying abroad and having an educational training will be recognized as credit.
108m5010	Mechanical Systems Engineering: Special Seminar Ⅰ	Spring Semester	ONE-YEAR	RAKSINCHAROENSAK Pongsathorn	In the seminar, own research must be presented periodically. Through questions and answers, we aim at obtaining sequential development of line of investigation.
108m5110	Mechanical Systems Engineering: Special Seminar Ⅱ	Spring Semester	ONE-YEAR	RAKSINCHAROENSAK Pongsathorn	In the seminar, own research must be presented periodically. Through questions and answers, we aim at obtaining sequential development of line of investigation.
108m5210	Mechanical Systems Engineering: Special Seminar Ⅲ	Spring Semester	ONE-YEAR	RAKSINCHAROENSAK Pongsathorn	In the seminar, own research must be presented periodically. Through questions and answers, we aim at obtaining sequential development of line of investigation.
108m5310	Research Proposition for Selected Topics	Spring Semester	ONE-YEAR	RAKSINCHAROENSAK Pongsathorn	The instructor and the student will discuss about a field which is different from the research topic and determine the case study based on survey and then write a report and make a presentation about the determined topic. Students have to submit the review reports, perform presentations, and answer questions about the given topic based on engineering knowledge. *Language is depend on the decision by the instructor.
108t0001	International Communication Ⅰ	Spring Semester	1st Quarter	ONWONA-AGYEMAN Siaw	（Lecture outline） This course is designed to provide graduate students with numerous opportunities to use English for scientific communication. The ultimate goal is to prepare students to write reports based on their own research work and to communicate effectively with other researchers and scientists in English. In addition to the topics below, there will also be discussions on global issues to deepen the understanding of students interested in working in a multicultural environment. There will also be discussions on the search for sustainable ways of utilizing global resources to satisfy our food, feed, fuel, fertilizer and fiber (5Fs) needs.

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108t0002	International Communication Ⅰ	Fall Semester	3rd Quarter	ONWONA-AGYEMAN Siaw	（Lecture outline） This course is designed to provide graduate students with numerous opportunities to use English for scientific communication. The ultimate goal is to prepare students to write reports based on their own research work and to effectively communicate with other researchers and scientists in English. In addition to the topics below, there will also be discussions on global issues to deepen the understanding of students interested in working in a multicultural environment. There will also be discussions on the search for sustainable ways of utilizing global resources to satisfy our energy, food and fiber needs.
108u0406	Advanced Environmental Engineering II	Fall Semester	3rd Quarter	TERADA Akihiko	Towards the resolution of various environmental problems, environmental engineering is scientific learning based on concepts of material balance and energy balance with the transport phenomenon approach.The course consists of wastewater engineering and general environmental engineering issues. The former topics will be given by Prof. Terada and the latter by Prof Riya.
108u4007	Applied Physics and Chemical Engineering Seminar III	Spring Semester	ONE-YEAR	TERADA Akihiko	Ph.D students investigate, analyze and present with respect to research topics of their doctoral thesis.
108u4017	Applied Physics and Chemical Engineering Seminar III	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of a faculty advisor, students learn methodologies for finding and approaching important unknown issues by themselves through the execution of doctoral research and research results obtained up to that point, as well as through literature research, in preparation for their doctoral dissertation. In addition, students will acquire the ability to make academic presentations in English and to write logically. Through these activities, students will eventually acquire sufficient skills to produce research results suitable for a doctoral degree and to become independent researchers.
108u4057	Applied Physics and Chemical Engineering Seminar III	Fall Semester	ACROSS ACADEMIC YEAR	TERADA Akihiko	Ph.D students investigate, analyze and present with respect to research topics of their doctoral thesis.
108u4067	Applied Physics and Chemical Engineering Seminar III	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of a faculty advisor, students learn methodologies for finding and approaching important unknown issues by themselves through the execution of doctoral research and research results obtained up to that point, as well as through literature research, in preparation for their doctoral dissertation. In addition, students will acquire the ability to make academic presentations in English and to write logically. Through these activities, students will eventually acquire sufficient skills to produce research results suitable for a doctoral degree and to become independent researchers.
108u4117	Applied Physics and Chemical Engineering Seminar IV	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of a faculty advisor, students learn methodologies for finding and approaching important unknown issues by themselves through the execution of doctoral research and research results obtained up to that point, as well as through literature research, in preparation for their doctoral dissertation. In addition, students will acquire the ability to make academic presentations in English and to write logically. Through these activities, students will eventually acquire sufficient skills to produce research results suitable for a doctoral degree and to become independent researchers.
108u4167	Applied Physics and Chemical Engineering Seminar IV	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Under the guidance of a faculty advisor, students learn methodologies for finding and approaching important unknown issues by themselves through the execution of doctoral research and research results obtained up to that point, as well as through literature research, in preparation for their doctoral dissertation. In addition, students will acquire the ability to make academic presentations in English and to write logically. Through these activities, students will eventually acquire sufficient skills to produce research results suitable for a doctoral degree and to become independent researchers.
108u4307	Special Research Planning	Spring Semester	ONE-YEAR	TERADA Akihiko	The course equips a student with state-of-the-knowledge of a study on his/her phd thesis via thorough literature review
108u4317	Special Research Planning	Spring Semester	ONE-YEAR	SATRIA ZULKARNAEN BISRI	Students will conduct research and make presentations on topics related to their doctoral dissertations, aiming to acquire "engineering design skills" such as problem-setting, conceptualization, creativity, planning and implementation, integration, expression, and communication skills necessary to compile a doctoral dissertation. In addition, the goal is to be able to clarify the position of the research by reviewing a wide range of previous research regarding the problem setting for the doctoral dissertation.

Code	Course title	Semester	Quarter	Main Instructor	Course description
108u4357	Special Research Planning	Fall Semester	ACROSS ACADEMIC YEAR	TERADA Akihiko	The course equips a student with state-of-the-knowledge of a study on his/her phd thesis via thorough literature review
108u4367	Special Research Planning	Fall Semester	ACROSS ACADEMIC YEAR	SATRIA ZULKARNAEN BISRI	Students will conduct research and make presentations on topics related to their doctoral dissertations, aiming to acquire "engineering design skills" such as problem-setting, conceptualization, creativity, planning and implementation, integration, expression, and communication skills necessary to compile a doctoral dissertation. In addition, the goal is to be able to clarify the position of the research by reviewing a wide range of previous research regarding the problem setting for the doctoral dissertation.
106i0812	経営戦略論	Fall Semester	3rd Quarter	HAYASHIDA Hideki	[Introduction] This course focuses on the theory of business strategy within the field of business administration, which falls under the category of practical disciplines—one of the two types of academic disciplines taught at the university level (theoretical and practical). In practical disciplines, practical knowledge is considered just as important as theoretical knowledge. Business administration, as a practical discipline, encompasses theoretical knowledge related to strategy, finance, accounting, marketing, and organization. At the same time, it requires knowledge necessary for real-world corporate management that cannot be fully addressed by theory alone. This refers to highly concrete, practical knowledge grounded in reality—knowledge of how to formulate strategies, make judgments and decisions under uncertainty, and implement specific actions to achieve objectives. In practical disciplines, merely understanding and analyzing problems—as theoretical disciplines aim to do—is insufficient. Action to resolve those problems in some concrete form is always required. In other words, we use theoretical knowledge to understand and analyze, and then, based on that, we execute using practical knowledge. [Lecture Format] This course follows the case method used at business schools both domestically and internationally. The case method uses “cases”—narrative descriptions of actual management events in real companies—to gain insights into the management challenges presented by the case and to fulfill the responsibility of making decisions and finding solutions to those problems. To achieve this, discussions in which participants exchange a variety of opinions are essential. There is no single “correct answer” after a case discussion. This is because while similar problems may arise, the exact same problem never does. In other words, unlike in mathematics, there is no single, definitive “correct answer” to management problems. The “correct answer” for each participant is what they personally construct through the discussion. 【Lecture Process: 3 Steps】 There are three steps: individual preparation, group discussion, and class discussion. ① Individual Preparation: During individual preparation, read the case study, assess for yourself what is written, what the situation is, and what issues are likely to arise, and then devise an action plan for how you would handle it. Students should read the case study by putting themselves in the characters' shoes and imagining they are facing the decision-making challenge. Naturally, the case study does not contain complete information. Please understand that in real-world business situations, it is impossible to make decisions based on complete information. ② Group Discussion: Please hold an informal group discussion among students only. This group will consist of the same members as the group presentations in class and will remain unchanged for the six-month course. The purpose of discussing only with fellow students is to practice voicing your opinions aloud. By doing so, you can gain insight into both your own thoughts and those of other participants. Steps ① and ② must be completed before the start of each class. ③ Class Discussion: All students will participate in a class discussion. With greater diversity among participants than in the group discussions, exchanging a wider range of opinions will lead to the discovery of new issues for consideration. Through this class discussion, you will continually engage in a thought experiment where you re-examine your own decision-making, make your own judgments, and propose actions. This course focuses on the theoretical background of business strategy and explains key concepts. By applying these concepts to real-world cases, students will learn how they relate to strategic analysis and planning through lectures and discussions that use various corporate case studies covering business, operational, and technology strategy.

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106i0831	Entrepreneur & Strategy	Spring Semester	1st Quarter	HAYASHIDA Hideki	This course provides "Knowledge Creation" from mainly University, Institute, Firm is the main driver for new business creation and innovation. Using a startup case study, we will discuss the point of creating New Business from research. Also, discuss new business developments with cutting-edge research in economics, Management, and Science & Technology research. Dr. Kengo Suzuki, who is the former CTO of Euglena, will give you lectures three times.
106i0832	Strategic Innovation Management	Fall Semester	3rd Quarter	HAYASHIDA Hideki	<Course Theme and Objectives> To deepen students' understanding of the theories and processes of innovation in the advanced technology industry. Furthermore, by examining several case studies, students will learn not only about innovation management across the entire value chain—from the early stages of new business innovation through to market delivery—but also the fundamental methodologies for innovation in existing businesses. Additionally, students will study the overview of the ISO 56000 series of innovation management systems, which has garnered significant attention in recent years.
106i0834	Research & Business Analysis	Spring Semester	2nd Quarter	TAKAHASHI Koichi	To learn about various tools, methodologies, and content levels that concretely advance research activities for the preparation of research papers in graduate school, as well as to acquire them as research skills through exercises.
106i0835	Venture Finance Essential	Spring Semester	2nd Quarter	HAYASHIDA Hideki	This course aims to deepen participants' understanding of the theories and processes involved in corporate fundraising within the high-tech industry. By examining several case studies, participants will learn the importance of implementing financing and capital strategies for new ventures in a phased manner, from the initial stages through to an IPO. In particular, by studying from the perspectives of both venture companies and venture capital firms, participants will gain a comprehensive understanding of how technology-driven venture companies are financed. 2026 Course Schedule: Intensive Course – 3 days: September 5 (Sat), September 6 (Sun), September 12 (Sat) – All sessions 8:45 AM–6:00 PM (Periods 1–5) Course Schedule in 2025: 8/23, 8/30, 8/31 (08:45-18:00, from 1 period to 5
106i0837	Technical Marketing Management	Spring Semester	2nd Quarter	HIROSUE Masayuki	This course aims to help students understand the cross-border marketing activities companies undertake to build sustainable competitive advantages amid intensifying global competition and evolving technological landscapes. Through case studies of global companies from various countries, students will learn about the characteristics of today's global markets and marketing perspectives from a technological standpoint. Through this course, students will not only gain a solid grasp of global marketing knowledge but also develop the ability to approach corporate management and marketing activities from a global perspective. 2026 Schedule: Intensive Course (3 days) August 7 (Fri), August 8 (Sat), August 9 (Sun) Periods 1–5 (8:45 AM–6:00 PM)
106i8009	技術経営実践研究Ⅰ	Spring Semester	ONE-YEAR	HAYASHIDA Hideki	For conducting innovative researches/projects, this course offers discussions on surveys, academic/industrial contributions, planning, and funding related to students' research/project, especially from the viewpoints of management of technology. The students discuss with the lecturer on surveys on shipped purchases, developments, markets, and contributions to both businesses and academia to make their research contributions quite clear and develop the research ability.
106i8059	技術経営実践研究Ⅱ	Spring Semester	ONE-YEAR	HAYASHIDA Hideki	For conducting innovative researches/projects, this course offers discussions on surveys, academic/industrial contributions, planning, and funding related to students' researches/projects, especially from the viewpoints of management of technology. Following the success in "Study of Industrial Technology Ⅰ", The students discuss with the lecture on surveys on shipped purchases, developments, markets, and contributions on both businesses and academia to make their research contributions quite clear and develop the ability to do researches.
106i8109	Case Study	Spring Semester	ONE-YEAR	HAYASHIDA Hideki	<Business Trial> In preparation for creating their own "research project proposal" or "master's thesis," students select specific companies or institutions related to their research as empirical case studies, examining and analyzing their R&D and commercialization practices. Based on these findings, students clarify the originality, advantages, and positioning of their own research themes and incorporate these insights into their research project proposals or master's theses. Through this process, students will develop the ability to predict R&D trends for commercialization, formulate future plans, and conduct benchmarking.

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Code	Course title	Semester	Quarter	Main Instructor	Course description
106i8509	Field Study	Spring Semester	ONE-YEAR	HAYASHIDA Hideki	By applying the knowledge of technology management acquired at this university, students will develop practical and academic information gathering and analytical skills through the collection and analysis of technical information (including industry trends), academic research, and market data necessary for formulating their own “research project proposals” or writing their “master’s theses.” Furthermore, students will incorporate these findings into their proposals as insights relevant to the business environment.
106i8559	Empirical Study	Spring Semester	ONE-YEAR	HAYASHIDA Hideki	By applying the knowledge of technology management acquired at this university, students will develop practical information gathering and analytical skills through the collection and analysis of technical information—including social trends—and market data necessary for formulating their own “research project proposals” and “theses.” With the goal of proposing new business ventures or launching startups as intrapreneurs or as CEOs of venture companies, students will draft business plans and incorporate them into their research project proposals and theses.
1810101	Foundations of Sustainability Research A	Spring Semester	1st Quarter	NOMURA Yoshihiro	This course aims to enable students to comprehensively and systematically acquire the basic knowledge needed in the Joint Doctoral Program for Sustainability Research. In particular, the lectures are aimed at cultivating a sense that serves as the foundation of ethical and pluralistic ways of thinking called for in international settings. The students learn about SDGs, global issues, and intellectual properties. The lectures will deal with the essence of modern globalization and the issues and frameworks surrounding the modern international community. The lecture also offers the introduction of critical concepts to deepen the understandings of current globalized world and the Sustainable Development Goals (SDGs). Also, in order to deepen understanding of content learned in the lectures and to enhance the ability to apply the knowledge learned, workshops that provide opportunities for collaborative discussions in the humanities and sciences and for interdisciplinary debates will be held along with the lectures. In particular, students with different specializations will form a team and select a particular theme by which they will discuss ideas and formulate practical measures for resolving issues and for understanding the current state of social sustainability from a broad perspective.
1810102	Foundations of Sustainability Research B	Fall Semester	3rd Quarter	NOMURA Yoshihiro	This course aims to enable students to comprehensively and systematically acquire the basic knowledge needed in the Joint Doctoral Program for Sustainability Research. In particular, the lectures are aimed at cultivating a sense that serves as the foundation of ethical and pluralistic ways of thinking called for in international settings. The students learn about SDGs, global issues, and intellectual properties. The lectures will deal with the essence of modern globalization and the issues and frameworks surrounding the modern international community. The lecture also offers the introduction of critical concepts to deepen the understandings of current globalized world and the Sustainable Development Goals (SDGs). Also, in order to deepen understanding of content learned in the lectures and to enhance the ability to apply the knowledge learned, workshops that provide opportunities for collaborative discussions in the humanities and sciences and for interdisciplinary debates will be held along with the lectures. In particular, students with different specializations will form a team and select a particular theme by which they will discuss ideas and formulate practical measures for resolving issues and for understanding the current state of social sustainability from a broad perspective.
1810103	Sustainability Research Advanced Practicum Ⅰ	Spring Semester	1st Quarter	NOMURA Yoshihiro	Students will undergo practicum on presentations and Q&As on their research concept prepared through the "Interdisciplinary Seminar I" course. Collaborative humanities and sciences colloquium to be attended by all 1st year students and faculty members of the Joint Program will be held to discuss and decide the triplet supervision scheme for each student, as well as to publicly present and discuss their doctoral dissertation research concept. Also, along with an introduction of the faculty members of the Joint Program, lectures will be given on common research ethics that all students must understand in the conduct of their doctoral research.
1810104	Sustainability Research Advanced Practicum Ⅱ	Fall Semester	3rd Quarter	NOMURA Yoshihiro	In this course, students will undergo practicum on presentations and Q&As on their research concept and implementation plan prepared through the "Interdisciplinary Seminar II" course. Collaborative humanities and sciences colloquium to be attended by all 1st year students and faculty members of the Joint Program will be held for students to publicly present and discuss their doctoral dissertation research concept, implementation plan, and internship experience. Also, as necessary, the colloquium will include lectures on research ethics.

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1810105	Sustainability Research Advanced Practicum Ⅲ	Spring Semester	1st Quarter	NOMURA Yoshihiro	Sustainability Research Advanced Practicum III is organized by all the professors of the course as an occasion to discuss the participants' research outcomes intensively and interdisciplinary. The collaborative humanities and sciences colloquium will be held in an intensive format, where students will report on the progress of their doctoral dissertation (including research results) and internship experience, as well as hold Q&A sessions regarding the report from a broad perspective.
1810106	Sustainability Research Advanced Practicum Ⅳ	Fall Semester	3rd Quarter	NOMURA Yoshihiro	The collaborative humanities and sciences colloquium will be held in an intensive format, where students will report on the progress of their doctoral dissertation (including research results) and internship experience, as well as hold Q&A sessions regarding the report from a broad perspective. Students will undergo practicum on presentation and Q&A on the progress of their research through the Interdisciplinary Seminar courses. The reporting and Q&A on the progress of their research will also serve as interim reporting and examination for their doctoral dissertation. Also, as necessary, the colloquium will include lectures on research ethics.
1810111	Foundations of Sustainability Research A	Spring Semester	1st Quarter	NOMURA Yoshihiro	This course aims to enable students to comprehensively and systematically acquire the basic knowledge needed in the Joint Doctoral Program for Sustainability Research. In particular, the lectures are aimed at cultivating a sense that serves as the foundation of ethical and pluralistic ways of thinking called for in international settings. The students learn about SDGs, global issues, and intellectual properties. The lectures will deal with the essence of modern globalization and the issues and frameworks surrounding the modern international community. The lecture also offers the introduction of critical concepts to deepen the understandings of current globalized world and the Sustainable Development Goals (SDGs). Also, in order to deepen understanding of content learned in the lectures and to enhance the ability to apply the knowledge learned, workshops that provide opportunities for collaborative discussions in the humanities and sciences and for interdisciplinary debates will be held along with the lectures. In particular, students with different specializations will form a team and select a particular theme by which they will discuss ideas and formulate practical measures for resolving issues and for understanding the current state of social sustainability from a broad perspective.
1810112	Foundations of Sustainability Research B	Fall Semester	3rd Quarter	NOMURA Yoshihiro	This course aims to enable students to comprehensively and systematically acquire the basic knowledge needed in the Joint Doctoral Program for Sustainability Research. In particular, the lectures are aimed at cultivating a sense that serves as the foundation of ethical and pluralistic ways of thinking called for in international settings. The students learn about SDGs, global issues, and intellectual properties. The lectures will deal with the essence of modern globalization and the issues and frameworks surrounding the modern international community. The lecture also offers the introduction of critical concepts to deepen the understandings of current globalized world and the Sustainable Development Goals (SDGs). Also, in order to deepen understanding of content learned in the lectures and to enhance the ability to apply the knowledge learned, workshops that provide opportunities for collaborative discussions in the humanities and sciences and for interdisciplinary debates will be held along with the lectures. In particular, students with different specializations will form a team and select a particular theme by which they will discuss ideas and formulate practical measures for resolving issues and for understanding the current state of social sustainability from a broad perspective.
1810153	Sustainability Research Advanced Practicum Ⅰ	Fall Semester	3rd Quarter	NOMURA Yoshihiro	Students will undergo practicum on presentations and Q&As on their research concept prepared through the "Interdisciplinary Seminar I" course. Collaborative humanities and sciences colloquium to be attended by all 1st year students and faculty members of the Joint Program will be held to discuss and decide the triplet supervision scheme for each student, as well as to publicly present and discuss their doctoral dissertation research concept. Also, along with an introduction of the faculty members of the Joint Program, lectures will be given on common research ethics that all students must understand in the conduct of their doctoral research.
1810154	Sustainability Research Advanced Practicum Ⅱ	Spring Semester	1st Quarter	NOMURA Yoshihiro	In this course, students will undergo practicum on presentation and Q&As on their research concept and implementation plan prepared through the "Interdisciplinary Seminar II" course. Collaborative humanities and sciences colloquium to be attended by all 1st year students and faculty members of the Joint Program will be held for students to publicly present and discuss their doctoral dissertation research concept, implementation plan, and internship experience. Also, as necessary, the colloquium will include lectures on research ethics.

English-Taught Courses List **As of April 2026**

（Graduate School of Engineering） **This is for your reference only.**

Code	Course title	Semester	Quarter	Main Instructor	Course description
1810155	Sustainability Research Advanced Practicum Ⅲ	Fall Semester	3rd Quarter	NOMURA Yoshihiro	Sustainability Research Advanced Practicum III is organized by all the professors of the course as an occasion to discuss the participants' research outcomes intensively and interdisciplinary. The collaborative humanities and sciences colloquium will be held in an intensive format, where students will report on the progress of their doctoral dissertation (including research results) and internship experience, as well as hold Q&A sessions regarding the report from a broad perspective.
1810156	Sustainability Research Advanced Practicum Ⅳ	Spring Semester	1st Quarter	NOMURA Yoshihiro	The collaborative humanities and sciences colloquium will be held in an intensive format, where students will report on the progress of their doctoral dissertation (including research results) and internship experience, as well as hold Q&A sessions regarding the report from a broad perspective. Students will undergo practicum on presentation and Q&A on the progress of their research through the Interdisciplinary Seminar courses. The reporting and Q&A on the progress of their research will also serve as interim reporting and examination for their doctoral dissertation. Also, as necessary, the colloquium will include lectures on research ethics.
1811002	Interdisciplinary Seminar Ⅰ	Spring Semester	1st Quarter	KATORI Hiroko	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811004	Interdisciplinary Seminar Ⅰ	Spring Semester	1st Quarter	NOMURA Yoshihiro	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811005	Interdisciplinary Seminar Ⅰ	Spring Semester	1st Quarter	ITO Terumasa	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811006	Interdisciplinary Seminar Ⅰ	Spring Semester	1st Quarter	HAYASHIDA Hideki	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orienting their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," helping students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811007	Interdisciplinary Seminar Ⅰ	Spring Semester	1st Quarter	BAN Takuya	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811011	Interdisciplinary Seminar Ⅰ	Spring Semester	1st Quarter	MISAWA Kazuhiko	The course is aimed at enhancing core competency in the doctoral dissertation research field and at enabling students to explain the purpose and significance of their research in relation to current research trend. Students attend tutorial under a triplet research supervision scheme: one academic principal supervisor and two co-supervisors. In addition, the course trains students in each aspect of research, namely, comprehension, analysis, and implementation, which require a higher level of competency, through discussions with supervisors. The course helps students acquire consensus-building skills and the capacity to adapt to diverse value systems and environments, while leveraging new ideas, knowledge, and information obtained through meaningful academic exchanges with researchers not only in their specialized fields but also from other disciplines, into the design of their doctoral dissertation research. Interdisciplinary Seminars consist of the three parts noted below: 1. Tutorial under Triplet Research Supervision Scheme Students take seminars tutorially by academic principal supervisor. While holding regular seminars with an academic principal supervisor, students attend seminars provided by co-supervisor or laboratory work. Students are expected to actively engage in discussions with the co-supervisors and research laboratory members and in communicating their own experience, analytical approach, and ideas. 2. Workshop Discussions with the principal supervisor and the two co-supervisors will be held to help students clarify the academic contributions of their research, narrow down their research themes, and improve their doctoral dissertation research plans in consideration of opinions of faculty members in other disciplines. 3. Academic Literacy provided by the three universities (TUFS, UEC and TUAT) The lecture trains students that enable to acquire the basic skills on scientific writing, presentation and literacy on modern technology at the university level. At the end of the course, students will prepare to write a report regarding their research concept for the collaborative humanities and sciences colloquium as part of the "Advanced Practicum in Sustainability Research I" Course.
1811052	Interdisciplinary Seminar Ⅰ	Fall Semester	3rd Quarter	KATORI Hiroko	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811056	Interdisciplinary Seminar Ⅰ	Fall Semester	3rd Quarter	HAYASHIDA Hideki	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orienting their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," helping students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811057	Interdisciplinary Seminar Ⅰ	Fall Semester	3rd Quarter	BAN Takuya	Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811101	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	MISAWA Kazuhiko	The course is aimed at enhancing core competency in the doctoral dissertation research field and at enabling students to explain the purpose and significance of their research in relation to current research trend. Students attend tutorial under a triplet research supervision scheme: one academic principal supervisor and two co-supervisors. In addition, the course trains students in each aspect of research, namely, comprehension, analysis, and implementation, which require a higher level of competency, through discussions with supervisors. The course helps students acquire consensus-building skills and the capacity to adapt to diverse value systems and environments, while leveraging new ideas, knowledge, and information obtained through meaningful academic exchanges with researchers not only in their specialized fields but also from other disciplines, into the design of their doctoral dissertation research. Interdisciplinary Seminars consist of the three parts noted below: 1. Tutorial under Triplet Research Supervision Scheme Students take seminars tutorially by academic principal supervisor. While holding regular seminars with an academic principal supervisor, students attend seminars provided by co-supervisor or laboratory work. Students are expected to actively engage in discussions with the co-supervisors and research laboratory members and in communicating their own experience, analytical approach, and ideas. 2. Workshop Discussions with the principal supervisor and the two co-supervisors will be held to help students clarify the academic contributions of their research, narrow down their research themes, and improve their doctoral dissertation research plans in consideration of opinions of faculty members in other disciplines. 3. Academic Literacy provided by the three universities (TUFS, UEC and TUAT) The lecture trains students that enable to acquire the basic skills on scientific writing, presentation and literacy on modern technology at the university level. At the end of the course, students will prepare to write a report regarding their research concept for the collaborative humanities and sciences colloquium as part of the "Advanced Practicum in Sustainability Research II" Course.
1811102	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	KATORI Hiroko	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.
1811104	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	NOMURA Yoshihiro	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811105	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	ITO Terumasa	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.
1811106	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	HAYASHIDA Hideki	Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orienting their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," helping students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811107	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	BAN Takuya	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.
1811111	Interdisciplinary Seminar Ⅱ	Fall Semester	3rd Quarter	MISAWA Kazuhiko	The course is aimed at enhancing core competency in the doctoral dissertation research field and at enabling students to explain the purpose and significance of their research in relation to current research trend. Students attend tutorial under a triplet research supervision scheme: one academic principal supervisor and two co-supervisors. In addition, the course trains students in each aspect of research, namely, comprehension, analysis, and implementation, which require a higher level of competency, through discussions with supervisors. The course helps students acquire consensus-building skills and the capacity to adapt to diverse value systems and environments, while leveraging new ideas, knowledge, and information obtained through meaningful academic exchanges with researchers not only in their specialized fields but also from other disciplines, into the design of their doctoral dissertation research. Interdisciplinary Seminars consist of the three parts noted below: 1. Tutorial under Triplet Research Supervision Scheme Students take seminars tutorially by academic principal supervisor. While holding regular seminars with an academic principal supervisor, students attend seminars provided by co-supervisor or laboratory work. Students are expected to actively engage in discussions with the co-supervisors and research laboratory members and in communicating their own experience, analytical approach, and ideas. 2. Workshop Discussions with the principal supervisor and the two co-supervisors will be held to help students clarify the academic contributions of their research, narrow down their research themes, and improve their doctoral dissertation research plans in consideration of opinions of faculty members in other disciplines. 3. Academic Literacy provided by the three universities (TUFS, UEC and TUAT) The lecture trains students that enable to acquire the basic skills on scientific writing, presentation and literacy on modern technology at the university level. At the end of the course, students will prepare to write a report regarding their research concept for the collaborative humanities and sciences colloquium as part of the "Advanced Practicum in Sustainability Research I" Course. Remote videoconference systems or other media may be used as necessary.

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811152	Interdisciplinary Seminar Ⅱ	Spring Semester	1st Quarter	KATORI Hiroko	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orientating their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," which will help students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811154	Interdisciplinary Seminar Ⅱ	Spring Semester	1st Quarter	NOMURA Yoshihiro	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.
1811155	Interdisciplinary Seminar Ⅱ	Spring Semester	1st Quarter	ITO Terumasa	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.
1811156	Interdisciplinary Seminar Ⅱ	Spring Semester	1st Quarter	HAYASHIDA Hideki	This course is divided into two main components: [1] Joint Tutorial Sessions and [2] Research under Academic Supervisor (Laboratory/Seminar). The Joint Tutorial Sessions are designed to deepen students' understanding of key academic questions within their research fields. These sessions provide opportunities to explain the purpose and significance of students' research in relation to existing research through discussions with tutors and peers. Students will develop skills in organizing and orienting their own research through feedback and collaborative reflections. The course will emphasize the distinction between a "research topic" and a "research question," helping students identify the most appropriate starting point for their research. These sessions will complement and support the research seminars led by their academic supervisors.
1811157	Interdisciplinary Seminar Ⅱ	Spring Semester	1st Quarter	BAN Takuya	Seminar under their supervisor's guidance. In this second phase, students will place more emphasis on supporting their peers, while critically re-evaluating their own research projects with a focus on their doctoral thesis. Through collaborative discussions with peers and tutors, these sessions aim to help students recognize both the commonalities and unique aspects of their work within the broader context of sustainability research. Students will be encouraged to draw logical connections between different research questions, while also developing strategies for structuring their doctoral research and thesis.
1811601	Extramural Internship	Spring Semester	1st Quarter	MISAWA Kazuhiko	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811602	Extramural Internship	Spring Semester	1st Quarter	KATORI Hiroko	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811605	Extramural Internship	Spring Semester	1st Quarter	ITO Terumasa	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811606	Extramural Internship	Spring Semester	1st Quarter	HAYASHIDA Hideki	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811607	Extramural Internship	Spring Semester	1st Quarter	BAN Takuya	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811612	Extramural Internship	Fall Semester	3rd Quarter	KATORI Hiroko	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811615	Extramural Internship	Fall Semester	3rd Quarter	ITO Terumasa	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811616	Extramural Internship	Fall Semester	3rd Quarter	HAYASHIDA Hideki	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811617	Extramural Internship	Fall Semester	3rd Quarter	BAN Takuya	NGOs, and other public organizations (including research institutions), as well as development consulting firms, multinational manufacturers, and other private companies.
1811701	Intramural Internship	Spring Semester	1st Quarter	MISAWA Kazuhiko	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.
1811702	Intramural Internship	Spring Semester	1st Quarter	KATORI Hiroko	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.
1811705	Intramural Internship	Spring Semester	1st Quarter	ITO Terumasa	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.
1811706	Intramural Internship	Spring Semester	1st Quarter	HAYASHIDA Hideki	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.
1811707	Intramural Internship	Spring Semester	1st Quarter	BAN Takuya	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.

English-Taught Courses List **As of April 2026**

（Graduate School of Engineering） **This is for your reference only.**

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811715	Intramural Internship	Fall Semester	3rd Quarter	ITO Terumasa	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.

English-Taught Courses List **As of April 2026**

（Graduate School of Engineering） **This is for your reference only.**

Code	Course title	Semester	Quarter	Main Instructor	Course description
1811716	Intramural Internship	Fall Semester	3rd Quarter	HAYASHIDA Hideki	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.
1811717	Intramural Internship	Fall Semester	3rd Quarter	BAN Takuya	The internship is aimed at working students who are unable to intern at the candidate host institutions and companies. Students will conduct laboratory work at the research laboratories of faculty members in other research institutes within the three universities. Students will learn ideas and social implementation approaches in other fields as well as improve their ability to adapt and communicate in different research environments by conducting laboratory work (equivalent to 30 classes) at the research laboratories of faculty members in other research institutes within the three universities.