JAIST
JAPAN
ADVANCED INSTITUTE OF
SCIENCE AND TECHNOLOGY
1990

Degree Completion Guide

2016-2017

JAPAN ADVANCED INSTITUTE OF

SCIENCE AND TECHNOLOGY

JAIST Founding Principle and Education Policy

Japan Advanced Institute of Science and Technology (JAIST) was established in 1990 as the first national university specializing only in graduate studies in Japan. Since then JAIST has been leading the development of graduate education in Japan through positive introduction and continuous improvement of various new education ideas and systems including admissions in Spring and Fall, quarter system, multiple supervisory system, and minor research project. This pioneering education has been recognized by many industries that hire our graduates.

More than 20 years have passed since our establishment, however, and many other universities have come to introduce the same systems. Today JAIST needs to introduce new innovative and effective ideas of its own. In order to improve our education further, we have decided to set "respecting students' purposes and intentions as much as possible" as a basic principle. Concretely speaking, hopefully we will allow students to design their course selection by themselves based on their career goal.

In April 2016, JAIST combined all the three schools into one. Free from the limitation set by the previous three schools, students now have a wider range of courses to choose from.

When graduating, students receive a transcript showing the list of the courses they have taken and their grades. By selecting courses voluntarily, students will be able to explain their reason for the selection of courses and their relevance to their career goal to their supervisor at JAIST and future employers.

JAIST has recently changed its goal on education. We put more emphasis on what ability students have obtained than on what they have understood. Reflecting this idea, every course evaluates students' performance in terms of the level of ability acquisition. This idea is also shared in the supervision of students in every laboratory.

We hope every student makes the best use of education opportunities at JAIST through their positive commitment in order to prepare for their bright future.
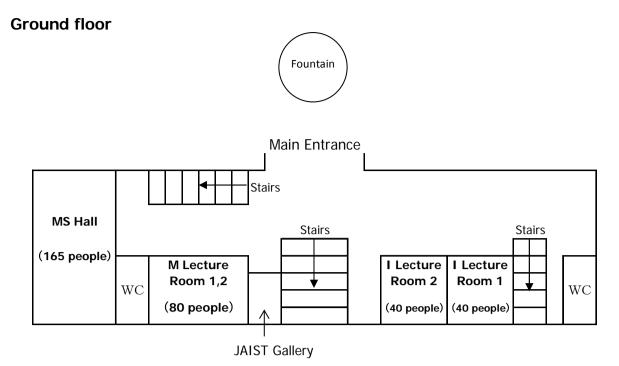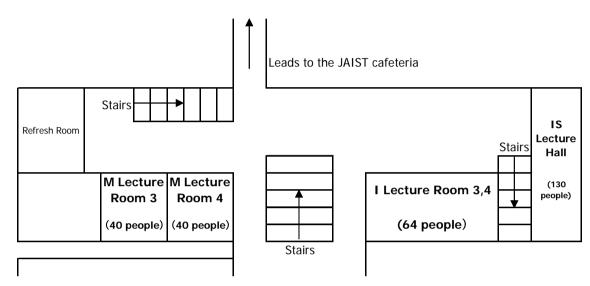
President

Tetsuo Asano

CONTENTS

Lecture room map

○IS Lecture Hall, MS Lecture Hall

Ground floor

Fountain

Main Entrance

Stairs

MS Hall

(165 people)

WC

M Lecture Room 1,2

(80 people)

Stairs

Stairs

I Lecture Room 2

(40 people)

I Lecture Room 1

(40 people)

WC

JAIST Gallery

First floor

Leads to the JAIST cafeteria

Stairs

Refresh Room

M Lecture Room 3

(40 people)

M Lecture Room 4

(40 people)

Stairs

Stairs

I Lecture Room 3,4

(64 people)

Stairs

IS Lecture Hall

(130 people)

○KS Lecture Hall

Ground floor

Stairs

WC

K Lecture Room 1・2

(60 people)

Doorway

Leads to the fountain

First floor

Notice board

Automatic certificate issuing machine

Educational Affairs Department

Doorway

Leads to the library

Stairs

WC

KS Lecture Hall

(90 people)

K Lecture Room 3・4

(80 people)

Leads to the MS Building

I. Mission, Goals, Human Resource Development, and Policies of JAIST

● **Mission of JAIST**

JAIST endeavors to foster leaders capable of contributing to the making of a future world by creation of science and technology, through its most advanced education and research in an ideal academic environment.

● **Goals of JAIST**

・JAIST develops leaders in society or industry who hold credible expertise in the frontier science and technology, broad perspectives, high level of autonomy and communication skills, through its systematic advanced graduate education.

・JAIST, to contribute to societies with research outcomes, creates a center of excellence for advancement of researches for solving problems of our world and society and develops new fields through a variety of basic researches.

・JAIST fosters active human resources by promoting faculty and student exchanges with leading institute overseas and globalizing its education and research.

● **Human Resource Development of JAIST**

JAIST develops leaders in a society or industry who hold credible expertise in the frontier science and technology, broad perspective, high level of autonomy and communication skills. In the master's program, JAIST endeavors to fulfill the role of fostering human resources capable of understanding a variety of fundamental theories and applying them to problem solving. In the doctoral program, we aim to fulfill the role of fostering researchers or engineers capable of identifying and solving problems with their global-standard research ability and comprehensive perspective.

● **Policies of JAIST**

JAIST sets the following policies to advance the education for our students.

Curriculum Policies

JAIST aims to develop leaders in society or industry by fostering researchers and engineers with advanced expertise who understand the fundamental concepts in the area of advanced science and technology, hold ability to put expert knowledge into practice, comprehend diverse cultures, possess reliable communication skills and high ethical awareness, understand a wide range of relevant fields in a comprehensive manner, and are capable of finding and solving problems. To materialize this aim, JAIST designs the curriculum hierarchically and systematically to meet the needs of each degree program.

● **Master's program**

The curriculum of the master's program is designed to promote understanding of fundamental concepts of the advanced science and technology without any overspecialization, develop ability to apply expert knowledge to problem solving, foster ability to comprehend diverse cultures, enhance communication skills, and acquire high ethical awareness.

● **Doctoral program**

The curriculum of the doctoral program is designed to foster ability to identify and solve problems based on solid understanding of theories and frameworks of the area of advanced science and technology, and develop abilities to take leadership in the area of advanced science and technology based on reliable global communication skills, high ethical awareness, and comprehensive perspectives.

Laboratory Education Policy

JAIST considers the research education based in the laboratory as important as the coursework in graduate education. Laboratories provide students a versatile educational environment that can enhance their various qualities and serve diverse goals of their study. The laboratory education provides students with abilities necessary for a series of research processes from designing and implementation of research based on acquisition of expert knowledge and survey of relevant researches, to production of research theses, and eventually to presentation of research. It also aims to foster researchers or expert engineers necessitated by society by empowering students' social competencies through the laboratory environment containing diverse goals, backgrounds and nationalities.

● **Master's program**

In the master's program, in order for students to obtain ability to apply their expert knowledge to problem solving in addition to comprehension of fundamental concepts in the area of advanced science and technology, we carry out one-on-one or small group research guidance in accordance with the need of each student. Simultaneously, we train students to obtain knowledge of diverse cultures, communication skills, and high ethical awareness.

● **Doctoral program**

In the doctoral program, we provide research guidance on a one-on-one base in order for students to acquire abilities to identify a special issue in a research field without losing a comprehensive viewpoint and to apply scientific solution to it. We foster their ability to achieve excellence in the research processes up to the presentation of research outcomes at international conferences or in academic journals, while respecting and developing their individuality. Simultaneously, we develop their ability to lead advance research projects.

Policy for Awarding of M.Sc. and Ph. D. Degrees

JAIST implements degree awarding processes with quality assurance for each academic degree by establishing flexible and versatile guidance system for education and research based on lowered barriers among fields and among laboratories, which enables students to take courses from different fields and/or fusion fields in accordance with their career goal and to receive research guidance from different viewpoints by three professors.

● **Master's program**

JAIST awards the degree of Master of Science to the students who have:
- an understanding of a wide range of fundamental concepts in the field of advanced science and technology
- the ability to apply the fundamental theories to problem solving
- the research ability and academically and socially valuable expert knowledge and skills in a particular field
- comprehension of diverse cultures
- communication skills and high ethical awareness
- completed the master's program within the specified number of years
- acquired the required number of credits
- passed their oral defense and the final examination for a master thesis or a project report, or a Ph.D. qualifying examination.

● **Doctoral program**

JAIST awards the degree of Doctor of Philosophy to students who have:
- an understanding of framework and theories in the field of advanced science and technology
- the ability to apply the framework and theories to identify and solve problems
- global communication skills and high ethical awareness
- the ability to think from comprehensive perspectives
- the ability to take leadership in the field of advanced science and technology
- global standard research achievements in a particular research field
- completed the doctoral program within the specified number of years
- acquired the required number of credits
- passed their oral dissertation defense and the final examination

Ⅱ.Academic Calendar 2016-2017

First Semester (April 1 - September 30)		
	April 1 (Fri) - April 3 (Sun)	Spring Break
	April 4 (Mon)	Entrance Ceremony
	April 2 (Sat)	Orientation at Tokyo Satellite
	April 5 (Tue) - April 11 (Mon)	Orientation at Ishikawa Campus
	April 12 (Tue) - June 3 (Fri)	Term 1-1
	June 6 (Mon)	Safty Guidance
	June 7 (Tue) , June 8 (Wed) **NOTE***	No Class Day
	June 9 (Thu) - July 28 (Thu) **NOTE****	Term 1-2
	June 24 (Fri)	Degree Conferment Ceremony
	July 29 (Fri) - September 30 (Fri)	Summer Intensive
	July 29 (Fri) - August 31 (Wed)	Summer Break
	August 12 (Fri) - August 16 (Tue)	School Office Closed (Summer Break)
	September 23 (Fri)	Degree Conferment Ceremony

> **NOTE* The last class of "Innovation Theory and Methodology for Social Competencies" and " Innovation Theory and Methodology for Creativity" meets either on June 7 or June 8.**
> **NOTE** July 28 follws the MONDAY schedule.**

Second Semester (October 1 - March 31)		
	October 1 (Sat)	School Office Closed (JAIST Anniversary)
	October 3 (Mon)	Entrance Ceremony
	October 1 (Sat)	Orientation at Tokyo Satellite
	October 4 (Tue) - October 11 (Tue)	Orientation at Ishikawa Campus
	October 12 (Wed) - December 1 (Thu)	Term 2-1
	December 2 (Fri), December 5 (Mon) **NOTE*****	No Class Day
	December 6 (Tue) - February 6 (Mon) **NOTE******	Term 2-2
	December 22 (Thu)	Degree Conferment Ceremony
	December 23 (Fri) - January 4 (Wed)	Winter Break
	December 29 (Thu) - January 3 (Tue)	School Office Closed (Winter Break)
	February 7 (Tue) - March 31 (Fri)	Winter Intensive
	March 24 (Fri)	Degree Conferment Ceremony

> **NOTE*** The last class of "Innovation Theory and Methodology for Social Competencies" and " Innovation Theory and Methodology for Creativity" meets either on December 2 or December 5.**
> **NOTE**** February 2 follows the MONDAY schedule.**

Period for Registration and Change of Courses at Ishikawa Campus

Terms	Period for Rregistration and Course Change
Term 1-1	April 12 (Tue) - April 25 (Mon)
Term 1-2	June 9 (Thu) - June 22 (Wed)
Term 2-1	October 12 (Wed) - October 25 (Tue)
Term 2-2	December 6 (Tue) - December 19 (Mon)

The terms at Tokyo Satellite

   April - June: Term I
   July - September: Term II
   October - December: Term III
   January - March: Term IV

Check the web <http://www.jaist.ac.jp/satellite/sate/facility/> for the Tokyo Satellite operating hours since it occasionally varies.

Period for Registration and Change of Courses at Tokyo Satellite

Terms	Period for Rregistration and Course Change
Term I	April 12 (Tue) - April 25 (Mon)
	NOTE: April 12 (Tue) - April 18 (Mon) for courses begin in April
Term II	June 9 (Thu) - June 22 (Wed)
Term III	October 12 (Wed) - October 25 (Tue)
	NOTE: October 12 (Wed) - October 18 (Tue) for courses begin in October
Term IV	December 6 (Tue) - December 19 (Mon)

III. Study outline
1　Campus
JAIST's campus is in Nomi City, Ishikawa Prefecture. The program for Working Professionals in Tokyo is offered at Tokyo Satellite (Minato-ku, Tokyo).

2　Programs
The Graduate School of Advanced Science and Technology at JAIST offers a doctoral program which is divided into an initial two-year program and a subsequent three-year program. The initial two-year program is called the master's program and the subsequent three-year program is called the doctoral program.

3　Academic calendar
JAIST academic calendar shows the dates of classes, vacations, institute-wide activities, course registration periods, and so on. Students must check the academic calendar which is displayed on the notice board next to the automatic certificate issuing machine and is published on JAIST's website (Education → Academic calendar).

4　Semesters and class terms/periods
Semesters and class terms/periods at JAIST are shown in the Table bellow. Each class is 100-minute long, and a class meets 14 times in one term to complete a course bearing two credits. Refer to the syllabus for details of each course. One credit (in a 2-credit course) is awarded for the study amounts of 45 hours in self-study periods in addition to class periods (for the Required courses A, one credit is awarded for the study amounts in accordance with the necessary workload for appropriate results as defined by the supervisor). Students are expected to plan their coursework and keep their study record, accordingly using a study/plan record (See the section VI.4.2 for details) under the guidance of their supervisor so that they can have sufficient time for their efficient academic work toward a degree acquisition.

Location	Class Terms	Class Periods
Ishikawa	First Semester: 　Term 1-1, Term 1-2 (8 weeks each) 　Summer Intensive (August, September) Second Semester: 　Term 2-1, Term 2-2 (8 weeks each) 　Winter Intensive (February, March)	1st Period　9:00 - 10:40 2nd Period 10:50 - 12:30 3rd Period 13:30 - 15:10 (Office Hours) 4th Period 15:20 - 17:00 5th Period 17:10 - 18:50
Tokyo	First Semester: Term I (classes starting in April to June) Term II (classes starting in July to September) Second Semester: Term III (classes starting in October to December) Term IV (classes starting in January to March)	1st Period　9:20 - 11:00 (Sat, Sun) 2nd Period 11:10 - 12:50 (Sat, Sun) 3rd Period 13:50 - 15:30 (Sat, Sun) 4th Period 15:40 - 17:20 (Sat, Sun) 5th Period 17:30 - 19:10 (Sat, Sun) 6th Period 18:30 - 20:10 (Mon to Fri) 7th Period 20:15 - 21:55 (Mon to Fri) Note: Video streaming classes in Ishikawa follows the Ishikawa class periods.

Appendix Table

IV. Matters related to tuition fees and enrollment

1 Tuition fees

Tuition fees are collected separately for the full amount for each semester (first semester: April 1st - September 30th, second semester: October 1st - March 31st), and as a rule are to be paid by bank transfer (see details in *HANDBOOK for Students*). Note that if the tuition fees are revised while in school, the new fees will be applied upon the revision.

2 Leaves of absence

When students are not able to progress in their study for more than 2 consecutive months due to illness or other special reasons, they may apply for a leave of absence. The maximum period of leave in total for each of the programs, the master's and the doctoral, is 12 months. Please note that as the leave of absence is not counted in the total period required to complete a degree, study progression including course registration and research mentoring will not be recognized during the leave of absence, but there are no restrictions on use of the JAIST library or intra-school email.

The first of each month shall be the start date of a leave of absence, and it will not be permitted midway through a month. If you wish to apply for a leave of absence, you must collect an Application for Leave of Absence from the Educational Service Section (hereafter, Kyoumu) and get approval from the supervisors, and submit the application to the president (via Kyoumu) no later than one month before the desired start of the leave of absence. If leave of absence is due to bad health, you must submit a doctor's statement also.

Please note that if the tuition payment is not completed before the desired leave of absence start date, the application will not be accepted.

If you wish to have a leave of absence partway through either semester, and you submit an application by April 10th (for the first semester) or October 10th (for the second semester), tuition will not be charged for the leave of absence. If the application is made after these dates, the full amount of tuition must be paid before the application is accepted. Check details of tuition fee payment during leaves of absence on the JAIST website (Education → Academic Procedures → Absence and Withdrawal).

3 Returning

You return when the leave of absence ends. If you wish to return to school before the end of the leave of absence, you must collect an Application for Returning at Kyoumu and submit it to the president (via Kyoumu) at least one month before your proposed month of returning. Returning status starts on the first day of the month.

4 Withdrawal

A date for withdrawal shall be the last day of the month, and withdrawal halfway through the month is not permitted. Students who wish to withdraw must collect an Application for Withdrawal from Kyoumu and obtain comments from the supervisors, and submit the application to the president (via Kyoumu) no later than one month before the proposed start of the withdrawal.

Regardless of the date of withdrawal, if the tuition and other fee payments required by JAIST are not completed, the application will not be accepted.

5 Disenrollment (loss of student status)

Students falling under any of the following categories will result in the loss of student status:

(1) Those who have remained enrolled beyond the permitted maximum periods (4 years for the master's program, 6 years for the doctoral program)
　　*Students wishing to withdraw must complete the withdrawal procedures.

(2) Those whose leave of absence exceeds the period specified in Paragraph 4, Article 27, of the JAIST School Regulations (2 years).

(3) Those who have not paid their entrance fee by the specified date and fall into one of the categories below:
　　- Students who have not been granted an entrance fee reduction or deferment.
　　- Students who have not been granted a half entrance fee reduction or deferment.

- Students whose entrance fee reduction or deferment has been revoked.

(4) Those who have neglected to pay their tuition fees and have not paid even following demands. Note that if those who fall under either (3) or (4) have course credits earned during the period in which the tuition was unpaid, the credits will also be cancelled.

6 Supplemental student status

Doctoral students may be allowed to keep student status after completed all of the academic requirements for their degree except their dissertation (S601) for a maximum period of 2 years, if the dean approves that the student will be ready to apply with the help of necessary research guidance from the supervisor for a degree conferment within 2 years. Duration of student status cannot be more than 6 years in total including the period spent in the doctoral program and this additional period. Supplemental student status can start only on April 1, July 1, October 1 or January 1. It cannot start subsequently right after leave of absence. Students wishing to get this supplemental status must contact Kyoumu at least one month before the proposed starting day of the status. This status does not allow you to conduct any academic work on campus, and thus, JAIST does not sponsor you to issue/extend/renew your student visa for the period.

7 Name changes

If you have changed your name, you must submit a Notification of Change of Name with evidential documents attesting the change (e.g. a new resident's registration) to the president (via Kyoumu). All certificates and documents issued by JAIST following acceptance of the notification will be with your new name. If you wish to continue using the old name at JAIST, you must notify it also to Kyoumu and even after the receipt of notification, your name will remain registered unchanged. Certificates will be issued only with the name registered in JAIST records.

V. Educational system

JAIST provides a detailed and unique educational system that adjusts to the ambitions, experiences, and abilities of students with the goal of helping each one realize their career targets.

1 Educational programs

JAIST offers five different educational programs that can be chosen according to each individual's career goals. Students choose one of the educational programs below and take courses accordingly. Students in the program for Working Professionals in Tokyo who are in the master's program will be in the M program and those in the doctoral program will be in the 3D program. Therefore, they do not select an educational program.

Regarding selection of the Mα, and 5D programs, an inquiry is conducted after a formal laboratory assignment (three months after enrollment), and selection is determined according to academic grades, English proficiency (scores of TOEFL or TOEIC, etc.), reason for application, and other factors.

1.1 Types of educational programs

(1) SD program (master's program • doctoral program)

This educational program is designed to identify students with top-level abilities at an early stage and to train scientists who can tackle new research challenges and open up new fields from a global perspective through a consistent doctoral education. Only those who have been admitted through the entrance examination for scholarship students for the SD program can take this program.

SD program students are given guidance by faculty groups organized by specialist area, and aim to complete the master's program in 1.5 years and the doctoral program in 2.5 years, completing the entire program in 4 years. They may be recommended to change to another educational program if they have low academic performance.

(2) 5D program (master's program • doctoral program)

This educational program provides a consistent five-year doctoral education through the master's program and the doctoral program.

Note that only 5D program students can select the "Fostering ICT Global Leader Program" (For details, see the chapter entitled "Study Programs").

(3) 3D program (doctoral program)

This educational program provides a three-year doctoral education in the doctoral program.

Points common to both the 5D and 3D programs (only for Ishikawa Campus students):

Students in the programs are strongly encouraged to participate in research activities at other research institutes in Japan or overseas, and try out long-term advanced internships at companies in accordance with their choice of career paths.

In order to give yourself opportunities to consider your future desired careers, you will choose one of two career tracks during enrollment. The tracks are; type S, for those who wish to become creative scientists who can plan and implement advanced research at education and research institutes, or wish to become university professors; and type E, for those who wish to become advanced specialist engineers who can lead and manage the latest research and development at companies. After you choose a track, you must record it in the Study Plan/Record.

Students have equal opportunities for the Grant System for Off-campus Activity (see *HANDBOOK for Students* for details) and for taking courses.

(4) M program (master's program)

This educational program is designed to provide a master's-level education for 2 years in the master's program to train practical specialist engineers who can play a leading role at companies or in other areas based on specialist knowledge and skill.

(5) Mα program (master's program)

This educational program is designed to provide a master's-level education in the same way as the M program for between 2 and 3 years, aimed at those students who wish to learn properly from the basics or who have changed their major since obtaining their bachelor's degree. Enrollments longer than 2 years in this program will qualify for reductions in tuition fees, though the reduction period is limited to a maximum of one year.

After the Mα program is selected and research progresses ahead of schedule, it is possible to shorten the period for academic work and complete the program in two years. You must apply for shortening the period, however, only when you submit a research proposal or when you submit an application for degree conferment. Cancellation after shortening will not be approved.

1.2 Changing educational programs

Changing of one's educational program after determination may be approved only in the following cases if it is necessary for an approved educational reason. Those who wish to change programs must notify the Educational Service Section (Kyoumu).

- Changing from the SD program to the 5D program / M program
- Changing from the 5D program to the M program
- Changing from the M program to the 5D program (Application can be accepted only for limited designated time)

Note that the program will be changed as soon as it is recognized that completing the SD program or the 5D program cannot be done within the allotted time including the following cases:

- When a student does not submit a research proposal by the designated submission due date in the master's program
- When a student does not submit a dissertation outline by the designated submission due date in the doctoral program

Changing the programs will disqualify the SD program students from receiving SD program scholarships.

2 Study Programs

Several study programs are offered at JAIST. Students can choose one according to your study interests. A certificate of completion will be granted to those who complete the required program work. For details, see the chapter entitled "Study Programs".

3 Innovation Theory and Methodology for Social Competencies
Innovation Theory and Methodology for Creativity

S101 Innovation Theory and Methodology for Social Competencies, S102 Innovation Theory and Methodology for Creativity in the master's program and S503 Innovation Theory and Methodology for Total Capability Development in the doctoral program are required courses. They are designed for students to strengthen human resources and creativity based on knowledge science methodology. For the course details, see the chapter entitled "Courses and Class Schedules" and the courses' syllabi.

VI. Matters related to taking courses

1 Degree completion requirements

JAIST's curriculum, which is based on the university's mission statement, is designed to help students systematically progress from the basics of knowledge science to its cutting-edge frontiers while acquiring fundamental academic skills that will enable them to make significant contributions to the development of state-of-the-art technologies and the resolution of current and future problems faced by society.

It is insufficient for you merely to take lectures with a passive attitude. To acquire abilities that will benefit you in the future, JAIST expects you to actively sow and nurture the seeds of social, organizational, or technical innovation for the next era toward a thorough understanding of advanced science and technology, and social and organizational problems through your learning process.

2 Course divisions

Each course bears a course division which might vary according to a kind of degree students plan to pursue. For example, when a student in the master's program aiming for a degree in Knowledge Science completes I2xx, it will be treated as a Technical course which can be counted for program completion, while a student in the master's program aiming for a degree in Information Science and completes I2xx, it will be a Basic course.

The details of each course divisions are below. Read it through carefully. Check the chapter entitled "Courses and Class Schedules" for more details.

2.1 Common course divisions of the master's program and doctoral program
Optional course (Opt)
A course group that contributes to supplementary reinforcement of one's academic work.
  ○ The courses are <u>not</u> to be counted as completion credits

2.2 Course divisions for the master's program
1 Global Communication course (GC)
A course group that contributes to the reinforcement of global languages while giving exposure to different cultures.
  ○ Up to 2 credits can be counted as completion credits

2 Global Liberal Arts course (GLA)
A course group that contributes to widening one's specialty by giving understanding in a wide range of interdisciplinary fields.
  ○ Up to 4 credits can be counted as completion credits in addition to required 1 credit from S101 "Innovation Theory and Methodology for Social Competencies"

3 Introductory course (Intr)
A course group that contributes to providing a foundation for one's specialty by giving understanding of the boarders of interdisciplinary fields.
<Reinforcement of master's-level specialized foundation>
  ○ Up to 4 credits can be counted as completion credits in addition to required 1 credit from S102 "Innovation Theory and Methodology for Creativity"

4 Basic course (Bsc)
A course group that contributes to the spiralization of one's specialty by crossing the boundaries of interdisciplinary fields.
<Reinforcement of core knowledge and methodology, etc., in specialized fields>
  ○ 6 credits or more are required as completion credits in addition to one of the following required elective courses:
   S201 "Science and Technology Thesis" (8 credits)
   S202 "Science and Technology Project Report" (2 credits)
   S203 "Science and Technology Survey for Doctoral Research Plan" (2 credits)

5 Technical course (Tech)

A course group that promotes advancement of one's specialty by giving an understanding of the development of science technology.

<Establishing ability to understand wide, basic, specialized knowledge and apply it for solving problems>

  ○ The courses can be counted as completion credits in addition to required 2 credits from S401 "Science and Technology Minor Research Project" or S402 "Science and Technology Internship"

2.3 Course divisions for the doctoral program

1 Intermediate course (Imd)

A course group that deepens one's specialty by giving an understanding of the development of advanced science technology.

<Course group that promotes reinforcement of doctoral-level specialty application, conducted in Japanese and English>

  ○ The courses can be counted as completion credits in addition to required 1 credit from S503 "Innovation Theory and Methodology for Total Capability Development" and required 2 credits from elective S501 "Advanced Science and Technology Minor Research Project" or S502 "Advanced Science and Technology Internship"

2 Advanced course (Adv)

A course group that promotes the establishment of one's specialty by giving an understanding of the depth of advanced science technology.

<Courses are conducted mainly in English>

<Gives advanced ability to study that can be recognized globally and ability to have a panoramic perspective to discover and resolve problems, and complete establishment>

  ○ 4 credits or more are required as completion credits in addition to required 6 credits from S601 "Advanced Science and Technology Dissertation"

3 Degree completion requirements

Degree completion requirements are shown below. All the academic activities should be planned with the advice of the assigned supervisor and other advisors. <u>Students are responsible for reviewing their course registration carefully to satisfy the requirements to complete the program.</u>

3.1.1 Degree completion requirements of the master's program

(1) In principle, students are required to spend a minimum of 2 years in the master's program. If a prior application for fast-track degree completion is made and granted, and the plan for degree completion in a shorter period (1 year minimum) is carried out with the academic grades deemed sufficiently high by faculty, in accordance with Article 36 of the JAIST School Regulations, one will be able to finish in less than 2 years. Information on fast-track degree completion will be provided at enrollment.

(2) Students must submit a master's thesis or a research project report after receiving sufficient research guidance, and pass the defense on the thesis and the final examination. Those who select a survey for Doctoral Research Plan must submit a Survey for Doctoral Research Plan report, and pass the Ph.D. qualifying examination.

(3) Students must satisfy the requirements for course credits shown in both of the following Appendix Tables 1 and 2.

Major research projects	Required credits		Elective credits (See Appendix Table 2)	Total number of credits
	Required courses A*	Required courses B **		
Master's thesis	S201 Science and Technology Thesis (8 credits)	S101 Innovation Theory and Methodology for Social Competencies (1 credit) S102 Innovation Theory and Methodology for Creativity (1 credit) S401 Science and Technology Minor Research Project OR S402 Science and Technology Internship (2 credits)	20 credits or more	32 credits or more
Research project	S202 Science and Technology Project Report (2 credits)		26 credits or more	
Survey for Doctoral Research Plan	S203 Science and Technology Survey for Doctoral Research Plan (2 credits)		28 credits or more	34 credits or more

Appendix Table1   Credit acquisition requirements according to Major Research Project

*A supervisor will give guidance on a thesis/project/research plan.

**"S101" and "S102" are courses designed to strengthening the human resource and creativity. Advisers will give guidance on a minor research project and an internship. (same in Appendix Table 2)

Course Division	Required courses A*	Required courses B**	Counted as elective credits in Appendix Table 1	Total number of credits
GC course (Global Communication)	—	—	Up to 2 credits can be counted	At least 32 or 34 credits according to Appendix Table 1
GLA course (Global Liberal Arts)	—	1 credit	Up to 4 credits excluding Required courses B can be counted	
Intr course (Introductory)	—	1 credit	Up to 4 credits excluding Required courses B can be counted	
Bsc course (Basic)	8 or 2 credits	—	6 credits or more excluding Required courses A must be obtained	
Tech course (Technical)	—	2 credits	Possible to count (No maximum)	

Appendix Table 2   Credit acquisition requirements according to course divisions

Note: There are courses with special completion conditions which may not be possible to be counted as degree completion requirements. For details, check the note for the course list in the chapter entitled "Courses and Class Schedules".

<Example>

A case of a master student pursuing a degree in Knowledge Science (with a master's thesis at the Ishikawa Campus)

    1 Global Communication course
        - E211 Intermediate Technical Communication 1 (2 credits)
    2 Global Liberal Arts course
        - S101 Innovation Theory and Methodology for Social Competencies / Required course B (1 credit)
        - L222 Introduction to Management of Technology and Intellectual Property Rights (2 credits)

3 Introductory courses
- S102 Innovation Theory and Methodology for Creativity / Required course B (1 credit)
- K111 Introduction to Management (2 credits)
- I114 Fundamental Mathematics for Information Science (2 credits)

4 Basic courses
- S201 Science and Technology Thesis / Required course A (8 credits)
- K213 Methodology for Systems Science (2 credits)
- K214 Methodology for Knowledge Media (2 credits)
- K236 Basis of Data Analytics (2 credits)

5 Technical courses
- S401 Science and Technology Minor Research Project / Required course B (2 credits)
- K411 Theory of Knowledge Management (2 credits)
- K413 Comparative Study of Knowledge Institutions (2 credits)
- I235 Game Informatics (2 credits)

Total   32 credits

3.1.2   Progression within JAIST: internal admission requirements for 5D program students

In order to advance to the doctoral program as 5D students, in addition to the degree completion requirements described in 3.1.1 above, all of the following requirements must also be met.

(1) 18 credits (9 courses) or more must be obtained from the Introductory courses, the Basic courses, and the Technical courses (excluding Required courses). Only 2 credits (1 course) from the Introductory courses can be included in the 18 credits (9 courses).

(2) 4 credits (2 courses) or more must be obtained from the E/J/G/L/Bxxx courses (including the Optional courses).

(3) One of the following conditions of English proficiency
 - completed E211 Intermediate Technical Communication or one of the higher lever courses (E212, 213, 411, 412, 413, 422)
 - submitted a master's thesis/research project report/Survey for Doctoral Research Plan report in English and passed the exam.

3.2   Degree completion requirements for the doctoral program

(1) In principle, to be eligible for a doctoral degree from JAIST, students are required to spend a minimum of 5 years in a graduate institute (including the time spent in the master's program). If an application for fast-track degree completion is made by the specified time, and it is recognized at a faculty meeting that there are excellent research achievements, one will be able to complete a doctoral program in a shorter time after spending 3 years (including the time spent in the master's program) in accordance with Article 37 of the JAIST School Regulations. See the section VIII.2.1 for details on fast-track degree completion.

(2) Students must submit a doctoral dissertation after receiving sufficient research guidance, and pass the defense on the dissertation and the final examinations.

(3) Students must satisfy the requirements for course credits shown in the following Appendix Table. Note that credits earned while in the master's program at JAIST cannot be included to meet the requirements for the doctoral degree completion except for the credits recognized by transfer credit evaluation (detailed explained in the section 7 below).

Course Division	Required credits (9 credits)		Elective credits (11 credits or more)	Total number of credits
	Required courses A*	Required courses B**		
Imd course (Intermediate)	—	S503 Innovation Theory and Methodology for Total Capability Development (1 credit) S501 Advanced Science and Technology Minor Research Project OR S502 Advanced Science and Technology Internship } (2 credits)	Possible to count	20 credits or more
Adv course (Advanced)	S601 Advanced Science and Technology Dissertation (6 credits)	—	4 credits or more excluding the required courses A must be obtained	

Appendix Table   Credit acquisition requirements according to course division

*A supervisor will give guidance on a dissertation.

**S503 is a course designed to strengthen the human resource and creativity. Advisers will give guidance on a minor research project and an internship.

Note: There are courses with special completion conditions which may not be possible to be counted as degree completion requirements. For details, check the note for the course list in the chapter entitled "Courses and Class Schedules".

<Example>

A case of a doctoral student pursuing a degree in Materials Science

1 Intermediate course
- S503 Innovation Theory and Methodology for Total Capability Development / Required courses B (1 credit)
- S501 Advanced Science and Technology Minor Research Project / Required courses B (2 credits)
- K213 Methodology for Systems Science (2 credits)
- I212 Analysis for Information Science (2 credits)

2 Advanced course
- S601 Advanced Science and Technology Dissertation / Required courses A (6 credits)
- M617 Molecular and Functionality Design of Polymers (2 credits)
- M618 Materials Design (2 credits)
- M619 Materials Morphology (2 credits)
- M622 Advanced Biomolecular Science (2 credits)

      Total   21 credits

4   Course-related procedures
4.1   Gakumu System and course syllabi
4.1.1   Gakumu System (Academic Affairs System)

JAIST uses the Gakumu System for all procedures related to course registration, grade checking, and so on. Make sure that you fully understand how to use the system, and that you do not have any problems with registration or other actions. If there are any points that you do not understand after reading the manual, contact the Educational Service Section (Kyoumu).

[Logging in to the Gakumu System]
  <JAIST top page → Education → Taking Courses → Gakumu System (Academic Affairs System)>
   Note that the user ID for login is the same one assigned at enrollment, and the password is the same as for JAIST Mail.

4.1.2 Syllabi

Syllabi can be viewed on the Gakumu System and on the JAIST website (Education → Taking Courses→ Syllabi). Copies of the syllabus booklet are not available.

4.2 Study Plan/Record and course registration

4.2.1 Study Plan/Record

The Study Plan/Record refers to the plans and records of academic work from student's enrollment to completion. You are expected to record the details of guidance from supervisors for later reviewing of your academic work. The entries should be checked carefully and be kept up to date. The Study Plan/Record is managed entirely through the Gakumu System. Check the section entitled "Study Plan/Record" in *HANDBOOK for Students* for details.

4.2.2 Course registration

Your course registration is properly planned by checking the class schedule and the course syllabi carefully. JAIST does not permit double registration of two courses that have overlapping times, even if only partially, nor will it allow you to repeat courses for credits you have already obtained.
Note that Ishikawa Campus students must take courses held at the Ishikawa Campus, and students in the program for Working Professionals in Tokyo must take courses held at the Tokyo Satellite. You must also register online for non-credit courses in order to attend as credited courses.
Course registration is done through the Gakumu System. Check the system manual for how to register for courses online (JAIST top page → Education → Taking Courses → Gakumu System (Academic Affairs System) → student manual → Course Registration/Grades).
All the academic activities should be planned with the advice of your supervisor. Register online for courses through the Gakumu System during the designated period for each term after consultation with your supervisor. You can add, change, and cancel courses freely during the designated registration period but only during the period and no course can be added/removed after the registration period ends. <u>You are responsible for reviewing your registration carefully, correcting any discrepancies and making sure the course registration is properly done</u>. Confirm the course registration period for each term on the academic calendar.
Students will be notified regarding intensive courses and other irregular courses once the schedules have been set.

4.2.3 Maximum course registration credits

At JAIST, an approximate maximum number of course registration credits is set as shown below in order to ensure the proper number of hours for academic work related to the registered courses. The following maximum numbers are only rough indications, and do not limit your course registration, but you are recommended to plan your course registration based on this maximum. This only affects Ishikawa Campus students.
  (1) Approximate maximum course registration credits
     10 credits each term
  (2) Target courses
     All courses except for the following:
      - Required courses (Required courses A and B)
      - Courses offered by Global Communication Center
      - Summer and winter intensive courses

4.3 Repeating a course in the same year

The repeating of courses in the same academic year is handled according to the following.

(1) Students who have exceeded the standard enrollment period for the master's/doctoral program completion

Course repeating is approved without conditions upon application by a student

(2) Students who are within the standard enrollment period

Course repeating is approved only when approved by the school upon application by the student.

If you wish to repeat a course, you must submit an Application for Repeating Courses available on the web page (JAIST top page → Education → Taking Courses → Course Registration (On-campus use only)) to Kyoumu within one week of the start of the course registration period for the term when the relevant course will be held. Course registration for the repeated course will be handled by Kyoumu. Note that taking a course with the same course number but in a different language (e.g. K211 and K211E) is considered repeating a course and requires submission of an application form.

Repeating non-credited courses, S101 Innovation Theory and Methodology for Social Competencies, S102 Innovation Theory and Methodology for Creativity, and S503 Innovation Theory and Methodology for Total Capability Development does not require any application. You can register online for these courses to repeat through the Gakumu System during the course registration period.

5 Examinations, grade assessments, etc.

(1) A final exam will generally be given to complete a course. When exams are difficult to be given, research reports or similar tasks will be assigned for grade assessment.

(2) Grades are assessed by the result of a final examination and student's achievement using a 100 point scale with 60 points or higher being considered "Passing", and 59 points or less being considered "Failing" based on the view point, method, and criteria listed in the syllabus. Courses which are difficult to score with points will be assessed as either "Pass" or "Fail". The specified credits will be awarded to those who receive a "Passing" evaluation.

(3) Credits that have already been obtained cannot be cancelled in order to improve grades.

(4) Grades can be confirmed using the Gakumu System around 2 weeks after the end of each term for Ishikawa Campus students, and once notification for grade reports has been received from Kyoumu for students in the program for Working Professionals in Tokyo. Notify any questions regarding grade assessments to Kyoumu.

(5) If there are any improprieties related to the taking of classes or examinations, all credits for that semester will be withdrawn.

(6) JAIST may calculate an objective academic performance index based on (1) and (2) so that it might be used for certain procedures that JAIST deems as necessary.

6 Course evaluations

To help improve class quality, JAIST asks you to provide an evaluation for each course at the end of the course you attend. The results are notified to the course instructors after grades are reported.

7 Recognition of credits obtained prior to admission

If you wish to have the credits you obtained before admission recognized must submit an application form available on the JAIST website (JAIST top page → Education →Academic Procedures → Request for Evaluation of Transfer Credit) to the president (via Kyoumu) after obtaining approval from your supervisor within 2 weeks of enrollment. If you apply for credit transfer for courses taken at another graduate school, the official transcript and a syllabus showing details of the courses must also be submitted.

Assessment of the courses that are recognized will be as "T (transferred)." These recognized courses can be included in the degree completion requirements. By taking the course at JAIST, you will be graded by a score as percentage for the course. Once recognized, it cannot be changed.

No credits from the K1xx/I1xx/M1xx courses, M281, M282, M 283, M284 and M285 will be recognized in the doctoral program. The following are the details.

(1) Credits obtained at other graduate institutes

The maximum number of 8 credits can be recognized and considered equivalent to the K/I/Mxxx courses after evaluation by the faculty.

(2) Credits obtained in the master's program at JAIST

Among the K/I/Mxxx courses (including E413, not including "Required courses") completed in the master's program, credits which exceed 10, up to 8 credits are transferable and may be recognized as a completed Intermediate course or Advanced course in the doctoral program.

(3) Credits obtained as a JAIST non-degree seeking student.

All obtained credits of the courses which match the courses offered in the year of the program you enter as a degree seeking student will be recognized in the master's program.

All obtained credits of the courses except for those from the K1xx/I1xx/M1xx courses, M281, M282, M 283, M284 and M285 which match the courses offered in the year of the program you enter as a degree seeking student will be recognized in the doctoral program.

(4) Other

Inquire at Kyoumu about transferring credits for transfer students or readmitted students.

8 Taking courses at other graduate institutes through the course interchange agreement

To promote exchange and cooperation with the graduate institutes listed in the Appendix Table (hereafter referred to as "Partner Institutes") and to enhance our educational content, JAIST has implemented a course interchange agreement whereby each other's courses can be taken by students. After checking the syllabi of our Partner Institutes, students who wish to take courses there should discuss this with their supervisor and follow the procedures. When applying, you must confirm the class schedule so that you only select courses that you can attend. For the first six months after enrollment, courses at JAIST have priority and you are not allowed to take courses at the partner institutes.

(1) Application fees, admission fees, and tuition fees

Students will be classified as "non-degree seeking students from a partner institute" and thus will not have to pay any fees for application, admission, or tuition except the tuition fees for the School of Graduate Studies at the Open University of Japan.

(2) Courses and credits

Courses that you can take at Partner Institutes (except the Open University of Japan) must be ones that can be beneficial for your research and that do not cover topics in the courses offered at JAIST. See the Appendix Table below. During your enrollment at JAIST, you can take up to 5 courses (10 credits) including recognized credits obtained previously at another graduate institute.

Permission for taking courses and the way JAIST will handle the obtained credits are determined at a faculty meeting after receiving your application. Credits obtained from the courses taken at the Open University of Japan will, in principle, only be recognized as course credits for the Optional/Global Communication/Global Liberal Arts courses.

(3) Application procedure

If you wish to take courses at a Partner Institute, consult with your supervisor and then carry out the procedure within the specified period. The class schedules, syllabi, and procedures for Partner Institutes will be notified as appropriate.

Partner Institutes	Courses available
Graduate School of Natural Science and Technology, Kanazawa University	Courses taught by full-time faculty members of Partner Institutes. (Laboratory work, practices, exercises, research projects, etc. are not included.)
Graduate School of Engineering, Kanazawa Institute of Technology	Only for master's students.
Graduate School of Arts and Sciences, the Open University of Japan	All the graduate school courses Only for master's students.
School of Multidisciplinary Sciences, the Graduate University for Advanced Studies	Courses announced by Kyoumu
Graduate School of Global Information and Telecommunication Studies, Waseda University	

Appendix Table

VII. Matters related to study and research supervision

1 Study and research supervision

Since its founding, JAIST has used a supervisory system whereby, in addition to a research theme related to a major field of study (Major Research Project), you are required to take on a secondary research theme (Minor Research Project) to give them some fundamental concepts, knowledge, and abilities from different research fields.

Furthermore, you can choose to study at other educational or research institutes in Japan or overseas as a part of a major research project, and undertake internships at companies in place of a minor research project, helping you create a career that allows your specialist skills to benefit society.

1.1 Major research projects

A major research project is a research project based on the research topic shared with the supervisor and students pursue by receiving guidance from the supervisor and establish research achievements. It is called either S201 Science and Technology Thesis (8 credits), S202 Science and Technology Project Report (2 credits) or S203 Science and Technology Survey for Doctoral Research Plan (2 credits) which are required elective courses in the master's program, S601 Advanced Science and Technology Dissertation (6 credits) which is a required course in the doctoral program.

Only SD program and 5D program students can select S203 Science and Technology Survey for Doctoral Research Plan. Thus, students in the Working Professionals program in Tokyo cannot select S203 Science and Technology Survey for Doctoral Research Plan.

1.2 Minor research projects

For a minor research project, research is conducted receiving guidance from an advisor to acquire basic concepts, knowledge, abilities, etc., of neighboring or related fields different from the major research project, which will give students an opportunity to broaden their viewpoint. A minor research project is called S401 Science and Technology Minor Research Project (2 credits), a required elective course in the master's program, and S501 Advanced Science and Technology Minor Research Project (2 credits), a required elective course in the doctoral program.

1.3 Internship

An internship is a research activity which can be recognized as a 2 credit course substituted for a minor research project. Students who wish to acquire practical research development ability in an industry can select S402 Science and Technology Internship (2 credits), a required elective course in the master's program and S502 Advanced Science and Technology Internship (2 credits), a required elective course in the doctoral program.

Students must select either a minor research project or an internship during the specified period. Students in the Working Professionals program in Tokyo cannot choose an internship.

2 Multiple supervisory system

JAIST has a multiple supervisory system in which one student has 3 faculty members assigned so that students can receive comprehensive supervision and advice for both academic work and daily life in general with various issues students might face. JAIST faculty members are here to help you to develop characteristics that suit the ideal person JAIST strives to educate.

The system uses a supervisor, a second supervisor, and an advisor for Minor Research Project/Internship. Each faculty member plays the following roles. The period of determining each supervisor will be explained later.

(1) Supervisor
    (a) Plays the main role in supervising a students' academic work and research.
    (b) Provides supervision for the research topic (Major Research Project) related to the student's research field, and for writing a thesis/dissertation.
    (c) Provides guidance for the student's life at the university, and for their career path and career formation.

(d) Determines how to resolve various problems the student may face through collaboration with a second supervisor and other related parties.
(2) Second supervisor
   (a) Provides guidance for a student's academic work and research, and gives advice from a different perspective than the supervisor.
   (b) Provides guidance and advice for the student's life at the university, and for their career path and career formation from a different perspective than the supervisor.
   (c) Works to resolve various problems the student may face through collaboration with the supervisor when necessary.
(3) Advisor for Minor Research Project/Internship
   (a) Faculty member from a related field outside the major research theme that provides supervision for a secondary research topic (minor research project or internship).
   (b) Provides advice for various academic issues the student may have from a different perspective than the supervisor and second supervisor (including liaising with the internship location).

3   Research guidance in the master's program

Unless otherwise noted, the following items are the same for the Ishikawa Campus, the program for Working Professionals in Tokyo, and each Educational Program.

3.1   Temporary lab assignments and formal lab assignments

All students are temporarily assigned to a laboratory upon enrollment (temporary assignment). You will be formally assigned to a lab (formal lab assignment) 3 months after that. During the first 3 months, you will be encouraged to visit labs of interest and to take courses to decide which lab you wish to join.

The procedure for applying for a formal lab assignment will be notified separately. For students in the SD program, it is possible to receive a formal lab assignment to their desired laboratory immediately upon enrollment.

The second supervisor is determined the month after the formal lab assignment is determined.

If you wish to change to another laboratory for some reason after receiving a formal lab assignment, you must contact Kyoumu (the Educational Service Section).

3.2   Major research project

(1) In the master's program, students can choose to work on writing a thesis (a master's thesis), or conducting a research project (a master's project report) or conducting a survey (Survey for Doctoral Research Plan) to complete the program. In order to choose Survey for Doctoral Research Plan you must be in the SD or 5D program. You must notify Kyoumu your intention the same time you submit a form for choosing an educational program after the formal lab assignment. See the section 3.5 below for details regarding the Ph.D. qualifying examination for those who select a Survey for Doctoral Research Plan.

   The selection of either a thesis, project report or Survey must be made under guidance of the supervisor and a research proposal must be submitted before the submission deadline shown below to the dean (via Kyoumu). If the submission of a research proposal for master's thesis is delayed, completion will be delayed.

(2) Submission deadlines for research proposal for master's thesis
   The following are the submission deadlines for each educational program.
   M and 5D: End of the first year (the end of March for students who enrolled in April, and end of September for students who enrolled in October)
   Ma: One year before the planned date of completion (2 years and 3 months, 2 years and 6 months, 2 years and 9 months, or 3 years after enrollment)
   SD: Within 6 months after enrollment (End of September of the first year students who enrolled in April, and end of March of the first year for students who enrolled in October)

   For students who use the extended study period for completion, it should be submitted at least one year prior to a planned date of completion.

(3) Submission requirements for research proposal
Students at Ishikawa Campus must meet all of the following requirements.
   (i) Completion of S101 Innovation Theory and Methodology for Social Competencies and S102 Innovation Theory and Methodology for Creativity
   (ii) 6 credits (3 courses) or more obtained from the Basic courses.
   (iii) 10 credits (5 courses) or more including (ii), but excluding the Required courses B and the Optional courses.
   (iv) The research plan should have sufficient contents.
Students in the program for Working Professionals in Tokyo must meet all of the following requirements.
   (i) 6 credits (3 courses) or more obtained from the Basic courses.
   (ii) 10 credits (5 courses) or more including (i), but excluding the Required courses B and the Optional courses.
   (iii) The research plan should have sufficient contents.
(4) Time for beginning research
   You can formally begin a major research project after a research proposal is accepted and approved by your three advisers.
(5) Research period
   At least one year (7 months for those who select the Survey for Doctoral Research Plan) is required to spend to complete a major research project. Therefore, if the research proposal for master's thesis is not accepted by the deadline mentioned in the above (2), it will not be possible to complete the program within the standard completion period for master's/doctoral program.
(6) Notes
   - As you must fulfill the requirement in (3) above before submission of a research proposal, you must check as early enough as possible and see whether the requirements are met. In addition, keep in mind that an advisor for Minor Research Project/Internship must be determined before you submit a research proposal (does not apply to the SD program students).
   - Bibliographic research related to the research project is required for writing a research proposal, and therefore, you are strongly encouraged to find a research topic as early as possible and start collecting related literature to read while consulting with your supervisor.
   - If you wish to change from writing a master's thesis to a research project after submitting a research proposal, contact Kyoumu to confirm the necessary procedure.

3.3 Minor research project

(1) Time for beginning research
   Students enrolled in April will be asked to submit names of their choice for the advisor for Minor Research Project/Internship in September and the advisor will be determined in October. You must start a minor research project by early December. Submit a research title to Kyoumu within one month of starting after consulting with the advisor. For students enrolled in October, the schedule is basically shifted by six months.
(2) Research period
   The standard research period for a minor research project is two months. Before application for conferment of degree (for those who select the Survey for Doctoral Research Plan, before the Ph.D. qualifying examination), achievements as of the end of the minor research project must be submitted to the advisor for Minor Research Project/Internship and the dean (via Kyoumu) to receive accreditation.
(3) Notes
   - It is also possible to conduct a minor research project as group work and receive guidance as a group or as individuals (group minor research). The following are the two cases.
      *A student recruits several other students with the same interests and finds an advisor for Minor Research Project/Internship.
      *An advisor proposes a group work topic for a minor research project and recruits members.
   Students earn credits after the advisor for Minor Research Project evaluates the reports written by each individual member. An additional report written as a group might be requested.

For more details about group minor research projects, there will be separate notification.

3.4 Internship
(1) Internships generally include high-level research and study at a company (approximately at least 2 weeks).
(2) If you wish an internship, consult with your supervisor and determine an advisor for Internship at least one month prior to the start of the internship. You must also contact the Career Support Section for procedures beforehand.
(3) An internship and submission of an achievement report must completed before the application for conferment of degree (or a Ph.D. qualifying examination for those who select the Survey for Doctoral Research Plan). An achievement report must be submitted to the advisor for Internship with evaluation documents from the host company.

3.5 Ph.D. qualifying examination
(1) If you wish to select a Survey for Doctoral Research Plan, you must plan a doctoral research for the doctoral program, prepare and conduct a survey, and take the Ph.D. qualifying examination. You are expected to aspire to be a highly effective researcher and to exercise advanced research skills with firm fundamental knowledge acquired through a consistent five-year doctoral education. The following are the guidelines for the Ph.D qualifying examination.
(2) The preliminary examination
   You must take a preliminary exam and receive an evaluation.
(3) The final examination and requirements
   Those who received the preliminary exam must take the final examination (Ph.D. qualifying examination) conducted twice a year in April and October (students enrolled in April must take the exam 18 months later in October in the second year, those enrolled in October, in April in the second year). The exam will test fundamental understanding and ability for a doctoral research, and English proficiency. You must earn 32 credits or more not including S203 Science and Technology Survey for Doctoral Research and submit a report of the Survey for Doctoral Research Plan to your supervisor and the dean (via Kyoumu) before the final exam.
   If you decide not to continue on to the doctoral program after passing the final examination, your educational program will be changed to the M program.
   If you fail the examination, you can select one of the following.
   A. To take the exam again (the second time) six months after the first examination.
      This means the master's program cannot be completed within two years (the standard completion period) and the program will be changed from the 5D program to the M program. In addition, those who registered for the Fostering ICT Global Leader Program will no longer be registered in the program (Hereafter, ICT program. See the chapter entitled "Study Programs" for details of the ICT program.)
   B. To change from taking the Ph.D. qualifying exam to conducting a research project.
      If you pass an oral defense for a project report and the exam in February (for those enrolled in April), it may be possible to complete the master's program in two years and continue on to the doctoral program at JAIST. You remain in the 5D program, but those who registered for the ICT program will be no longer be registered.
(4) Changing from the Survey for Doctoral Research Plan to a master's thesis or a research project
   If you decide not to pursue the Ph.D. qualifying exam and wish to finish the program in two years, you can choose to work on a thesis or a project report instead of a Survey following the instructions below. Note that those who registered for the ICT program will no longer be registered in the program when you decide to change.
   A. Before submission of a research proposal (within 12 months from enrollment)
      You can choose either a master's thesis or project report and submit a proposal before the designated submission deadline.
   B. After submission of a research proposal and before the preliminary exam (before October in the second year for students enrolled in April)
      Possible to change to a research project.

C. When the final exam is failed
   Possible to change to a research project.

Students who wish for B or C must confirm the necessary procedure with the Educational Service Section (Kyoumu). You will be able to remain in the 5D program if you complete the master's program in 2 years after the change, but in the doctoral program you will not be allowed in the ICT program.

3.6 Degree conferment schedule for the master's program

The standard schedule for those enrolled in April to complete the program in two years is below. For students enrolled in October, the schedule is shifted by 6 months. The schedule shows only some main items. You must check the detailed information in other pages of this guide and other announcements and notifications made by JAIST.

○ **For students selected a master's thesis/research project**

Month	First Year	Second Year
April	- Temporary lab assignment - Course taking in Term 1-1/Term I: 　Innovation Theory and Methodology for Social Competencies 　Innovation Theory and Methodology for Creativity	
May		
June	- Laboratory inquiry/Degree inquiry - Formal lab assignment - Educational program (Mα, 5D) inquiry (Ishikawa students only)	
July	- Determination of Second Supervisor - Determination of educational program (Mα, 5D)　(Ishikawa students only)	
August		
September	- Minor research inquiry	
October	- Determination of Advisor for Minor Research Project/Internship - Start Minor Research Project (By early December) and complete before degree application	
November		
December		
January		- Application submission for conferment of degree
February		- Submission of the master's thesis/research project report - Defense of thesis/project report
March	- Submission of research proposal	- Degree conferment

[Main tasks and time by completion time]

	March completion	June completion	September completion	December completion
Submission of research proposal	Within one year of enrollment (Within 6 months for SD program students)			
Minor research project or internship	Complete before application for conferment of degree			
Submission of application for conferment of degree	Late January of the 2nd year	Late April of the 2nd year	Late June of the 2nd year	Late October of the 2nd year
Submission of master's thesis/research project report	Early February	Early May	Early August	Early November
Thesis/report defense	February	May	August	November
Conferment of degree	March	June	September	December

Note: SD program students can complete only in September. March/June completion is possible for fast-track degree completion.

○ For students selected Survey for Doctoral Research Plan

Month	First Year	Second Year

April	- Temporary lab assignment
	- Course taking in Term 1-1/Term I:
	   Innovation Theory and Methodology for
	   Social Competencies
	   Innovation Theory and Methodology for
	   Creativity	

May		

June	- Laboratory inquiry/Degree inquiry
	- Formal lab assignment
	- Educational program (Mα, 5D) inquiry
	  (Ishikawa students only): Select 5D
	   Notify selection of Survey for Doctoral
	   Research Plan	

July	- Determination of second supervisor - Determination of educational program (5D) (Ishikawa students only)	
August		- Application for receiving Ph.D. qualifying examination
September	- Minor research inquiry	- Preliminary examination (Complete before the Ph.D. qualifying examination)

October	- Determination of Advisor for Minor Research
	  Project/Internship
	- Start Minor Research Project (By early
	  December) and complete before Ph.D.
	  qualifying examination
		- Submission of a report for the Survey for
		  Doctoral Research Plan
		- Ph.D. qualifying examination

November		
December		
January		- Application of Submission for degree conferment
February		
March	- Submission of research proposal	- Conferment of degree

[Main tasks and time by completion time]

	March completion	September completion
Submission of research proposal	Within one year of enrollment (Within 6 months for SD program students)	
Minor research projects or Internship	Complete before the Ph.D. qualifying examination	
Preliminary examination	Complete before the Ph.D. qualifying examination	
Submission of a report on Survey for Doctoral Research Plan report	Early October	Early April
Ph.D. qualifying examination	October	April
Application submission of conferment of degree	Late January	Late June
Conferment of degree	March	September

Note: SD program students can complete only in September.

4　Research guidance for the doctoral program

<u>Unless otherwise noted, the following items are the same for the Ishikawa Campus, the program for Working Professionals in Tokyo, and each Educational Programs.</u>

4.1　Formal lab assignment

Students in the 5D and SD programs will be assigned to the laboratory which they were assigned in the master's program. The 3D program students will be assigned upon enrollment to the laboratory after consultation with the proposed supervisor prior to enrollment. The second supervisor is determined in the month of enrollment.

If you wish to change to another laboratory after receiving a formal lab assignment, contact Kyoumu (the Educational Service Section).

4.2　Major research project

(1) After consulting with the supervisor, students submit a research proposal for a doctoral dissertation to the dean (via Kyoumu) by the specified deadline mentioned below.

(2) Submission deadlines for research proposal

　　3D/5D program: Within one year of enrollment in the doctoral program.

　　SD program: Within six months of enrollment in the doctoral program.

　　The above submission deadlines do not apply to students who use the extended study period for completion, but it is recommended they submit a research proposal as early as possible to make sure of completion within the designated period.

(3) Submission requirements for research proposal

　　The research plan have sufficient contents.

(4) Time for beginning research

　　Research begins after a research proposal is accepted and approved by the three advisors.

(5) Dissertation outline

　　After gaining the approval of all three advisors, you can submit a dissertation outline to Kyoumu at least 6 months before application for a degree.

(6) Fast-track degree completion

　　Students who wish for fast-track degree completion should first consult with their supervisor and set an earlier outline submission time. Then report to the dean via the supervisor of their plan to apply for fast-track degree completion.

(7) Notes

　　- Keep in mind that an advisor for Minor Research Project/Internship must be determined before you submit a research proposal.

　　- The 3D students who have not decided a research theme prior to enrollment should choose one as early as possible. They should consult with their supervisor to choose a theme and conduct a bibliographic review while fulfilling course requirements. Many reviews on the research theme are indispensable before a good research proposal can be written.

4.3　Minor research project

(1) Time for beginning research

　　A minor research project should start as soon as possible after your advisor for Minor Research Project/Internship is determined when you submit a research title for a minor research project to Kyoumu by the end of February in the first year if enrolled in April (by the end of August in the first year for the SD program students). You must first ask a proposed advisor for a minor research to agree with the research theme and accept to be your advisor. For students enrolled in October, the schedule is basically shifted by six months.

(2) Research period

　　The standard research period for a minor research project is six months. Before application submission of the preliminary defense, achievements as of the end of the minor research project must be submitted to the advisor for Minor Research Project/Internship and the dean (via Kyoumu) to receive accreditation.

(3) Notes
- As doctoral students are expected to present their research results at conferences and to publish articles in as many occasions as possible to accrue research achievements, you are encouraged to present your minor research project report at those occasions and submit it as an article for publication in refereed academic journals.
- It is also possible to conduct a minor research project as group work and receive guidance as a group or as individuals (group minor research). The following are the two cases.
    *A student recruits several other students with the same interests and finds an advisor for Minor Research Project/Internship.
    *An advisor proposes a group work topic for a minor research project and recruits members. Students earn credits after the advisor for Minor Research Project evaluates the reports written by each individual member. An additional report written as a group might be requested. For more details about group minor research projects, there will be separate notification.

4.4 Internship

(1) Internships generally include high-level research and study at a company for at least 3 months (or total duration of shorter internships must be at least 3 months) .

(2) If you wish an internship, consult with your supervisor and submit a proposal for an internship to the dean (via Kyoumu) by the end of February in the first year if enrolled in April (by the end of August in the first year if you are in the SD program) so that an Advisor for Internship will be determined. You also must contact the Career Support Section for the procedures beforehand. For students enrolled in October, the schedule is basically shifted by six months.

(3) All the internship(s) must be completed and an achievement report with evaluation documents from the host company(s) must be submitted to the advisor for internship before submitting a preliminary defense application.

4.5 Degree conferment schedule for the doctoral program

The standard schedule for those enrolled in April to complete a program in three years is shown below. For students enrolled in October, the schedule is shifted by 6 months. The schedule shows only some main information. You must check the detailed information in the related pages of this guide and announcements and notifications made by JAIST.

Month	First Year	Second Year	Third Year
April	- Formal lab assignment - Determination of second supervisor - Course taking in Term 1-1/Term I: Innovation Theory and Methodology for Total Capability Development		
May	[Determination of Advisor for Minor Research Project/Internship and start of minor research project between here and the end of February.] Complete before preliminary defense application.		
June			
July			- Submission of dissertation outline
August			
September			
October			- Submission of preliminary defense application
November			
December			- Preliminary defense
January			- Submission of application for conferment of degree - Submission of doctoral dissertation
February			- Final defense and examination
March	- Submission of research proposal		- Conferment of degree

[Main tasks and time by completion time]

	March completion	June completion	September completion	December completion
Submission of research proposal	Within one year of enrollment (Within 6 months for SD program students)			
Submission of dissertation outline	Early July of 3rd year	Early October of 3rd year	Early January of 3rd year	Early April of 3rd year
Minor research projects or Internship	Complete before application for preliminary defense			
Submission of application for preliminary defense	Early October	Early January	Early April	Early July
Preliminary defense	December	March	June	September
Submission of application for degree/dissertation/abstract	Early January	Early April	Early July	Early October
Formal hearing/ final defense and final examination	February	May	August	November
Conferment of degree	March	June	September	December

Note: SD program students can complete only in March. June/September/December completion is for fast-track degree completion.

5 Research guidance at other graduate institutes

(1) Receiving guidance for a major research project at other graduate institutions
Under the guidance of the supervisor, you can conduct part of a major research project at another graduate institute elsewhere.

(2) Receiving guidance for a minor research project at other graduate institutes.
If the dean recognizes a synergetic effect for fostering human resources in the research field, you can conduct a minor research project at another graduate institute outside JAIST with a JAIST faculty member as an advisor for Minor Research Project

(3) Research period
A research guidance period at other graduate institutes should be no longer than one year for the master's program and 18 months for the doctoral program.

(4) Procedures
If you wish to receive research guidance at another graduate institute outside JAIST, you must submit an "Entrustment of Research Guidance Outside JAIST" form at least 2 months prior to the start of research to the president (via Kyoumu) through your supervisor. SD program students are required to conduct either (1) or (2) above or an internship detailed in 4.4 above.

VIII. Matters related to conferment of degree

The conferment of a degree is done on dates specified by JAIST in the months of March, June, September, and December.

1 Degree defense for the master's program

The procedures related to a defense and a final examination are laid out in the "Degree Regulations" and the "Bylaws Related to the Defense for Granting the Master's Degree," and other arrangements. Students will be asked about a type of degree they plan to earn at the time a laboratory inquiry will be conducted for a formal lab assignment. It is possible to change the type of degree by notifying us your intention by March in the first year before submitting a research proposal.

1.1 Application for conferment of degree

If you are expected to meet the degree completion requirements except for the Required course A and wish to apply for a degree conferment, first you must carefully read the *Application Guide for the Award of Master's Degrees*. Then with your supervisor's approval, submit an Application for Conferment of Degree and the necessary documents to the president (via Kyoumu).

The deadline for submitting the application for conferment of degree will be 2 months before the scheduled completion month. For those wishing to graduate in September, the deadline will be 3 months before by the date specified by JAIST.

1.2 Submission of master's thesis or research project report

Degree applicants with a master's thesis or a project report must submit their master's thesis or research project report by the date specified by JAIST to the President (via Kyoumu) after obtaining the approval of their supervisor, and then distribute copies to the examination committee including the supervisor. Note that names of the examination committee will be announced accordingly along with the thesis presentation schedule. Degree applicants will undergo a private thesis defense and final examination once they have publically presented their thesis/report.

Those with the Survey for Doctoral Research Plan must check VII.3.5 in this guide and announcements made by JAIST regarding this matter.

1.3 Conferment of degree

The decision of degree conferment will be made by the president after a deliberation by the degree awarding committee. Successful candidates will be announced on the bulletin board next to the automatic certificate issuing machine (email notification for students in the Working Professionals program in Tokyo).

2 Degree defense for the doctoral program

The procedures related to a defense and a final examination are laid out in the "Degree Regulations" and the "Bylaws Related to the Defense for Granting the Master's Degree," and other arrangements. Students are asked about a type of degree they plan to earn at enrollment. It is possible to change the type of degree by notifying us your intention by March in the first year before submitting a research proposal.

2.1 Dissertation outline

After gaining the approval of all three advisors, a dissertation outline must be submitted to the Kyoumu at least 6 months before an application for a degree.

Students wishing for fast-track degree completion should first consult with their supervisor and set an earlier outline submission time. Then notify the dean via their supervisor of their plan to apply for fast-track degree completion.

2.2 Preliminary defense

If you have obtained all the required credits other than the Required course A, with your supervisor's approval, you must submit an application for the doctoral dissertation preliminary defense to the dean (via Kyoumu) 3 months before your degree application. Your supervisor will carry out the

procedures for holding a preliminary defense based on this request. You must provide drafts of your dissertation to each prospective examination committee members 2 weeks before the preliminary defense. Names of the examination committee will be announced accordingly along with the preliminary defense schedule.

2.3 Application for conferment of degree and conferment of degree

Those who pass the preliminary defense must carefully read the *Application Guide for the Award of Doctoral Degrees*. Then with the approval of all three supervisors submit an Application for Conferment of Degree with the necessary documents to the president (via Kyoumu) by the designated date. Degree applicants will first present their work publically at a formal hearing and then they will undergo a private defense of the dissertation and their final examination.

The decision of degree conferment will be made by the president after a deliberation by the degree awarding committee. Successful candidates will e announced on the bulletin board next to the automatic certificate issuing machine (email notification for students in the Working Professionals program in Tokyo). Please note that the successful candidates must check the necessary procedures in the *Application Guide for Awarding Doctoral Degrees* and must ensure them done before the conferment of degree.

IX　Education and Training Programs offered by Global Communication Center

1　The Outline of Global Communication Center (GCC)

Japan has become increasingly affected by the trend of globalization. Many corporations now focus on overseas operations. The objectives of postgraduate education today should place great emphasis not only on fostering highly specialized researchers and engineers of advanced science and technology, but also on the development of individuals who can exercise leadership globally with a broad perspective. It is absolutely imperative for global leaders to acquire advanced and practical communication ability. GCC at JAIST prepares students for their future activities on the global stage by providing carefully designed education and training programs for all the students to improve their English communication ability and for international students to master necessary level of Japanese language proficiency.

We consider standard language proficiency tests as one of the means to measure the improvement in language acquisition. All the students are expected to have achieved 600 points or above in TOEIC test by the time of graduation. TOEIC scores are utilized to help them decide which level of English courses to take. For example, students with a TOEIC score of 499 points or below would take Interaction Seminars (E011, E021) and those with a score above 500 points and below 599 points Introduction to Technical English (E111, E112, E113). International students who need Japanese language proficiency for employment in Japan are expected to achieve Level B1 of the JF Japanese Language Education Standard.

2　Global Communication Center Education Programs

For anyone who wishes to take an active role in the globalizing world, technical communication skills are indispensable. To develop the skills, GCC offers systematic technical English communication education program (courses numbered as Exxx) and technical Japanese language education program (courses numbered as Jxxx) covering from basic to advanced levels. In addition, there are courses of intercultural understanding and special communication skills to reinforce language acquisition (courses numbered as Gxxx).

Technical English communication education program consists of twelve courses in four levels from Interaction Seminar to Advanced Technical English aiming at improving students' communication skills from basic to technical communication in the field of science and technology. Technical Japanese language education program serves international students with nine courses in four levels from introductory to advanced to improve their Japanese language ability from basic to communication for business or the field of science and technology. In addition, to reinforce the language education and develop adaptability to a culturally diverse global society, Global Communication for Building Collaboration, Skills in Language Expressions, and Japan Studies are offered.

For details of each course, refer to the chapter entitled "Courses and Class Schedules" and the course syllabi.

Students must take a language course adequate to the level of their current language ability.

3　Global Communication Center Training Programs
3.1　TOEIC IP

For students to measure their level of achievement in English study, TOEIC IP are carried out on campus. Ishikawa Campus students must take their first TOEIC IP when they enter JAIST and their second TOEIC 18 months later. (When necessary, students can take the tests on the different dates.) Since JAIST aims at having all the graduates carry 600 points or above in TOEIC, any student whose score of the second TOEIC IP has not reached the target needs to take a next TOEIC IP.

Students in the program for Working Professionals in Tokyo can take any scheduled TOEIC IP based on their need.

Test schedule
On the Ishikawa Campus
1. **TOEIC IP** only for students enrolled in April, 2016.
   Thursday, April 7   09:30 ~ 12:00
2. **TOEIC IP**
   Friday, August 5   15: 30 ~ 18:00
3. **TOEIC IP**
   October (To be announced)
4. **TOEIC IP**
   Friday, February 3, 2017   15: 30 ~ 18:00

3.2   TOEIC Preparation Training Workshops

To prepare for the TOEIC IP scheduled four times at Ishikawa Campus, GCC offers TOEIC Preparation Training Workshops four to eight times a year.

3.3   Japanese Language Proficiency Test (JLPT) Preparation Training Workshops

To prepare for the JAPT held in July and December, GCC offers JLPT Preparation Workshops twice a year.

3.4   Summer and Winter English Intensive Seminars

There are four tree-day English Intensive Seminars (held in August, September, February and March) intended for students with the TOEIC IP score of 600 or below. The seminars help students obtain profound interest and positive attitude in studying English through 24 hours of intensive discussions, presentations and conversations. The seminars in August, September, and February are designed for Japanese students and the seminar in March for international students.

3.5   Summer Japanese Intensive Seminar

There is a three-day Japanese Intensive Seminar in September intended for international students with N1 or N2 level of JLPT. The seminar helps students obtain Japanese language ability to prepare for employment at a Japanese corporation through 24 hours of intensive discussions, presentations and conversations.

3.6   Global Leadership Training Workshops

To contribute to producing intellectually tough global leaders, GCC offers workshops intended for students who wish to study abroad with a special focus on India. Two workshops per week in the sixth class period will be held year round starting in July.

X. Systems in place
1   Extended study period for completion
If students whose study time at JAIST is limited by job conflicts or other issues and finds it difficult to complete the study within the standard enrollment period, they may be allowed to spend a certain additional amount of time to complete. Students who wish to extend their study period must check the JAIST website (Education → Academic Procedures → Extended Study Period for Completion) and apply before the designated deadline.

2   Progression within JAIST
Those students who complete a master's program at JAIST and wish to continue onto the doctoral program must check the Application Guide and apply for the Internal Entrance Examination.

3   Finding employments
(1) Guidance and supervision for finding employments and other career formation matters will be done at periods set by JAIST.
(2) School recommendations for employment can only be given if you:
   i) are expected to satisfy required course credits for degree completion.
   ii) have been approved by your supervisor.
   iii) have had your research proposal for a master's thesis/project report or a survey for the doctoral research plan accepted.
   iv) have taken the SPI (Synthetic Personality Inventory) examination twice or more at JAIST.
      You do not have to meet iv) if your Japanese is not fluent enough to take the SPI exam but a professor in charge of career assessment approves upon your supervisor's request.

4   Study and training benefit plans
Check the details in the relevant pages with the Japanese-language version of *Degree Completion Guide 2016-2017*.

Courses and Class Schedules

The courses for Working Professionals in Tokyo offered at the Tokyo Satellite are conducted mainly in Japanese and Japanese language proficiency is required to attend them. See the chapter entitled "授業科目・授業時間割 (Courses and Class Schedules)" in the Japanese language edition for details of them.

Courses and Class Schedules

1　Overview

At the Ishikawa Campus, a course may be offered in Japanese and English within the same academic year. In the program for Working Professionals in Tokyo, education programs which target working adults who are already on the front lines of research and business are offered mainly conducted in Japanese.

Each course has its course number which has either K (Knowledge Science course group), I (Information Science course group), M (Materials Science course group) etc. preceding three digits. The letter E at the end of the course number indicated the course is conducted in English (K/I/MxxxE). The N/E/J/G/L/Bxxx courses are not offered in the program for Working Professionals in Tokyo.

1.1　Courses

Tables shown in the section 2 below list the courses, language, terms and instructors. The number of credits is 2 unless otherwise indicated in the "Note" row. Check the syllabi for details about the courses.

(1) The J, E, EJ codes in the language row indicate the language of instruction: J indicates the course is conducted in Japanese; E, English; EJ in both English and Japanese. If a course has multiple instructors, either "," or "•" are used between the names. "," indicates each instructor teaches the course and "•" indicates the course is taught by all the instructors in turns (course in relay). See the faculty profiles page on the web for more information about the course instructors(JAIST top page → Research → Faculty Profiles).

(2) The course divisions of each courses corresponding to the degree of choice are shown in the rows of degree kinds (KS: Knowledge science, IS: Information science, MS: Material science). The following are the abbreviations for each course divisions. For details, check VI.2 Course divisions.
- "Opt": The Optional course
- "GC": The Global Communication course
- "GLA": The Global Liberal Arts course
- "Intr": The Introductory course
- "Bsc": The Basic course
- "Tech": The Technical course
- "Imd": The Intermediate course
- "Adv": The Advanced course

<Example>

I211 Mathematical Logic was completed by a student who is in the master's program pursuing:
a master's degree in Knowledge Science –I211 will be treated as the Technical course (Tech)
a master's degree in Information Science –I211 will be treated as the Basic course (Bsc)
a master's degree in Materials Science –I211 will be treated as the Global Liberal Arts course (GLA)

I211 Mathematical Logic was completed by a student who is in the doctoral program pursuing:
a doctoral degree in Knowledge Science –I211 will be treated as the Intermediate course (Imd)
a doctoral degree in Information Science –I211 will be treated as the Intermediate course (Imd)
a doctoral degree in Materials Science –I211 will be treated as the Optional course (Opt)

1.2　Class schedules

At the Ishikawa Campus, each course is held twice a week with the exception of intensive courses. KS/IS/MS courses are held in the morning (1st and 2nd period), and 3rd period is for the office hours for the 1st period class on that day. Students can ask questions or discuss matters with the instructor during the office hours and the time can be used for exercises, exams etc. Afternoons (4th and 5th periods) are for holding other courses. Class schedules with the assigned rooms will be displayed on the bulletin board next to the automatic certificate issuing machine and on the JAIST website (Education → Taking Courses → Class Schedule). You must check the schedule before

the start of classes each term.

At the Tokyo Satellite, classes are held in the evening during weekdays and on Saturdays and Sundays (including holidays).

The KS courses are mainly given as a one-week intensive from Monday through Saturday.

The IS courses (except for courses conducted at National Institute of Informatics: I4xxG) meet
- 4 times through Friday evening, Saturday and Sunday for 4 weeks.
- twice a week or 4 times every 2 weeks for 2 months.
- 8 times on 2 weekends as intensive.

2 Courses for 2016-2017 (Ishikawa Campus)

2.1 Required courses（Sxxx courses）

○ For the master's program

Course Number	Master's Degree			Doctoral Degree			Course Title	Language	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
Required courses A												
S201	Bsc	Bsc	Bsc	/	/	/	Science and Technology Thesis	/	/	/	Supervisor	8 credits, Required elective course
S202	Bsc	Bsc	Bsc				Science and Technology Project Report	/	/	/	Supervisor	2 credits, Required elective course
S203	Bsc	Bsc	Bsc				Science and Technology Survey for Doctoral Research Plan	/	/	/	Supervisor	2 credits, Required elective course
Required courses B												
S101	GLA	GLA	GLA	/	/	/	Innovation Theory and Methodology for Social Competencies	J / E	1-1	2-1	Kohda,etc.	1 credit, Required course
S102	Intr	Intr	Intr				Innovation Theory and Methodology for Creativity	J / E	1-1	2-1	Kohda,etc.	1 credit, Required course
S401	Tech	Tech	Tech				Science and Technology Minor Research Project	/	/	/	Advisor for Minor Research Project	2 credits, Required elective course
S402	Tech	Tech	Tech	/	/	/	Science and Technology Internship	/	/	/	Advisor for Internship	2 credits, Required elective course

Note 1: S101 and S102 are simultaneously offered in both Japanese and English (in separate rooms).
Note 2: Students enrolled before April 2016 cannot take S101 and S102.

○ For the doctoral program

Course Number	Master's Degree			Doctoral Degree			Course Title	Language	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
Required courses A												
S601	/	/	/	Adv	Adv	Adv	Advanced Science and Technology Dissertation	/	/	/	Supervisor	6 credits, Required course
Required courses B												
S501	/	/	/	Imd	Imd	Imd	Advanced Science and Technology Minor Research Project	/	/	/	Advisor for Minor Research Project	2 credits, Required elective course
S502	/	/	/	Imd	Imd	Imd	Advanced Science and Technology Internship	/	/	/	Advisor for Internship	2 credits, Required elective course
S503	/	/	/	Imd	Imd	Imd	Innovation Theory and Methodology for Total Capability Development	J / E	1-1	2-1	Kohda,etc.	1 credit, Required course

Note 1: S503 is simultaneously offered in both Japanese and English (in separate rooms).
Note 2: Students enrolled before April 2016 cannot take S503.

2.2 Knowledge Science courses （Kxxx courses）

〇 K1xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
K111	Intr	GLA	GLA	Opt	Opt	Opt	Introduction to Management	J	1-1		Shirahada	
								E		2-1	Zelaya	
K114	Intr	GLA	GLA	Opt	Opt	Opt	Introduction to Social Research Methods	J	1-2		Masuda	
K121	Intr	GLA	GLA	Opt	Opt	Opt	Introduction to Cognitive Science	J	1-2		Hidaka	
K124	Intr	GLA	GLA	Opt	Opt	Opt	Advanced Project Management - Basics	J	Summer		Miura	
								E		Winter		

〇 K2xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
K211	Bsc	GLA	GLA	Adv	Imd	Opt	Methodology for the Social Sciences	J	1-1		Shikida・Umemoto	
								E		2-1	Umemoto	
K213	Bsc	GLA	GLA	Adv	Imd	Imd	Methodology for Systems Science	J	1-1		Nakamori	
								E		2-2	Nakamori・Huynh	
K214	Bsc	GLA	GLA	Adv	Imd	Opt	Methodology for Knowledge Media	J	1-2		Yuizono	
								E		2-2	Kanai	
K228	Bsc	GLA	GLA	Adv	Imd	Imd	Introduction to Knowledge Science	J	1-1		Hashimoto・Dam	
								E		2-1	Dam・Hashimoto・Huynh	
K229	Bsc	GLA	GLA	Adv	Imd	Opt	Innovation Design	J	1-2		Nagai・Yuizono・Miyata	
								E		2-2		
K236	Bsc	GLA	Intr	Adv	Imd	Opt	Basis of Data Analytics	EJ	1-2		Ho・Dam	

Note 1: Students enrolled before April 2013 who have completed K225 cannot take K214.
Note 2: Students enrolled before April 2016 who have completed K230 cannot take K229.

○ K4xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Language	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
K411	Tech	GLA	GLA	Imd	Opt	Opt	Theory of Knowledge Management	J		2-1	Hirata・T.Hayashi	
								E		2-2	Umemoto・Zelaya	
K412	Bsc	GLA	GLA	Adv	Opt	Opt	The Knowledge Society	J	1-2		Ito	
K413	Tech	GLA	GLA	Imd	Opt	Opt	Comparative Study of Knowledge Institutions	J	*	*	Nagata	Offered in alternate years
K414	Bsc	GLA	GLA	Adv	Opt	Opt	Complex Systems Analysis	J		2-2	Hashimoto	
K417	Bsc	GLA	Intr	Adv	Opt	Opt	Data Analytics	EJ		2-1	Ho・Dam	
K418	Bsc	GLA	GLA	Adv	Opt	Opt	Representation of Knowledge	J		2-1	Yuizono	
K420	Bsc	GLA	GLA	Adv	Opt	Opt	Research & Development Management	J		2-2	Kosaka	
K421	Bsc	GLA	GLA	Adv	Opt	Opt	Essence of Systems Methodologies	E	1-1		T.Yoshida	
								J		2-1		
K427	Bsc	GLA	GLA	Adv	Opt	Opt	Theory on Creative Process in Design	EJ	1-1		Nagai	Offered in alternate years
K433	Tech	GLA	GLA	Imd	Opt	Opt	Practice of Management of Technology Innovations	J		2-1	Kondo	
K444	Bsc	GLA	GLA	Adv	Opt	Opt	Design Cognition	EJ	*	*	Nagai	Offered in alternate years
K447	Tech	GLA	GLA	Imd	Opt	Opt	Advanced Project Management - Project and Program Management	E	Summer		H.Tanaka	
								EJ		Winter		
K464	Bsc	GLA	GLA	Adv	Opt	Opt	Cognitive Science	EJ		2-1	Fujinami	
K469	Bsc	GLA	GLA	Adv	Opt	Opt	Knowledge Creation Support Systems	J	1-1		Nishimoto	
K470	Bsc	GLA	GLA	Adv	Opt	Opt	Introduction to Knowledge Creation	J	1-1		Kunifuji・Yamaura	
K471	Bsc	GLA	GLA	Adv	Opt	Opt	Media Creation	J	1-1		Miyata・Ura	
K472	Bsc	GLA	GLA	Adv	Opt	Opt	Media Interaction	J	1-2		Nishimoto	
K473	Bsc	GLA	GLA	Adv	Opt	Opt	Management of Innovation	J	1-2		Uchihira	
K479	Bsc	GLA	GLA	Adv	Opt	Opt	Service Management	J		2-2	Shirahada	
K480	Bsc	GLA	GLA	Adv	Opt	Opt	Methodology for Regional Revitalization	J	Summer		Kunifuji・Yamaura・Shirahada	
K482	Bsc	GLA	GLA	Adv	Opt	Opt	Community Management Strategy		*	*	To be announced	To be announced
K483	Bsc	GLA	GLA	Adv	Opt	Opt	Community System Management		*	*	To be announced	To be announced
K484	Bsc	GLA	GLA	Adv	Opt	Opt	Public Philosophy for Community Management		*	*	To be announced	To be announced
K485	Bsc	GLA	GLA	Adv	Opt	Opt	Public Economics for Community Management		*	*	To be announced	To be announced
K486	Tech	GLA	GLA	Imd	Opt	Opt	Business Management & Entrepreneurship	J	Summer		Yanagishita	
								E		Winter		

Note 1: * indicates the course is not offered in the 2016 academic year.

Note 2: When students enrolled before April 2016 take K486, it will be treated as B211. Those who have completed B211 cannot take K486.

○ **K6xx courses**

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 / 1-2	2-1 / 2-2		
K611	Bsc	GLA	GLA	Adv	Opt	Opt	Next-Generation Management of Technology	E	*	*	Kohda	Offered in alternate years
K612	Bsc	GLA	GLA	Adv	Opt	Opt	Next-Generation Knowledge Management	E	1-2		Umemoto	Offered in alternate years
K613	Bsc	GLA	GLA	Adv	Opt	Opt	Social-Technical Complex Systems	E	*	*	Huynh	Offered in alternate years
K619	Bsc	GLA	Tech	Adv	Opt	Imd	Advanced Data Analytics	E		2-2	Ho・Dam	Offered in alternate years
K626	Bsc	GLA	GLA	Adv	Opt	Opt	Advanced Topics in Media Design	E		2-1	Miyata・Nagai・Nishimoto・Kanai・Miyashita・Koizumi	Offered in alternate years

Note : * indicates the course is not offered in the 2016 academic year.

２.３ Information Science courses （Ixxx courses）

○ I1xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
I111	Intr	Intr	GLA	Opt	Opt	Opt	Algorithms and Data Structures	J	1-1		Uehara	
I112	Opt	Opt	Opt	Opt	Opt	Opt	Basics of Computer Systems	J	1-1		Yoshitaka	
I114	Intr	Intr	GLA	Opt	Opt	Opt	Fundamental Mathematics for Information Science	J	1-2		Tojo・Sano	
I115	Intr	Intr	GLA	Opt	Opt	Opt	Digital Logic and Computer Design	J	1-1		Inoguchi・K.Tanaka	
I116	Intr	Intr	Intr	Opt	Opt	Opt	Fundamentals of Programming	J	1-2		Terauchi・T.Asano	
I118	Intr	Intr	GLA	Opt	Opt	Opt	Graphs and Automata	J	1-1		Ogawa	
I119	Intr	Intr	Intr	Opt	Opt	Opt	Statistics for Data Analytics	J	1-1		Akagi・[Le]・[Morikawa]	
I120	Intr	Intr	GLA	Opt	Opt	Opt	Fundamentals of Logic and Mathematics	J	1-1		Ishihara・Nemoto	

Note 1: Instructors in brackets [ ] are in charge of the office hours.
Note 2: Follwoing relates only to students enrolled in the School of Knowledge Science before April 2016.
・I115 will be treated as K123. Those who have completed K123 cannot take I115.
・I116 will be treated as K119. Those who have completed K119 cannot take I116.
・I119 will be treated as K112. Those who have completed either K112 or K116 cannot take I119.
・I120 will be treated as K115. Those who have completed K115 cannot take I120.
No Application for Taking Courses from Other Schools is necessary to take the above courses.
Note 3: Students enrolled in the School of Information Science before April 2016 who have completed I117 cannot take I116.

○ I2xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
I211	Tech	Bsc	GLA	Imd	Imd	Opt	Mathematical Logic	E	1-1		Ishihara・Nemoto	
								J		2-1	Ogawa・Yokoyama	
I212	Tech	Bsc	GLA	Imd	Imd	Imd	Analysis for Information Science	J	1-1		Kotani	
								E		2-1	Dang	
I213	Tech	Bsc	GLA	Imd	Imd	Imd	Discrete Signal Processing	J	1-2		F.Asano	
								E		2-2	Chong	
I214	Tech	Bsc	GLA	Imd	Imd	Opt	System Optimization	J	1-1		M.Kaneko・Hiraishi	
								E		2-1		
I216	Tech	Bsc	GLA	Imd	Imd	Opt	Computational Complexity and Discrete Mathematics	J	1-1		Uehara・Omote	
								E		2-1	Uehara	
I217	Tech	Bsc	GLA	Imd	Imd	Opt	Functional Programming	J	1-2		Ogata	
								E		2-1	Hirokawa	

I218	Tech	Bsc	GLA	Imd	Imd	Opt	Computer Architecture	J	1-1		Inoguchi	
								E		2-1	K.Tanaka	
I219	Tech	Bsc	GLA	Imd	Imd	Opt	Software Design Methodology	J	1-2		Aoki	
								E		2-2	Ogata	
I223	Tech	Bsc	GLA	Imd	Imd	Opt	Natural Language Processing I	E	1-2		Nguyen	
								J		2-1	Shirai	
I225	Tech	Bsc	GLA	Imd	Imd	Imd	Statistical Signal Processing	E	1-1		H.Tanaka	
								J		2-1	Unoki	
I226	Tech	Bsc	GLA	Imd	Imd	Opt	Computer Networks	J	1-2		Tan	
								E		2-2	Lim	
I232	Tech	Bsc	GLA	Imd	Imd	Imd	Information Theory	J	1-2		Matsumoto･Kurkoski	
								E		2-2	Kurkoski･Matsumoto	
I233	Tech	Bsc	GLA	Imd	Imd	Opt	Operating Systems	J	1-1		Shinoda	
								E		2-1	Beuran	
I234	Tech	Bsc	GLA	Imd	Imd	Opt	Foundation of Software Environment	E	1-2		M.Suzuki	
								J		2-1	Terauchi	
I235	Tech	Bsc	GLA	Imd	Imd	Opt	Game Informatics	J	1-1		K.Ikeda･Iida･[Viennot]	
								E		2-1	Iida	
I236	Tech	Bsc	GLA	Imd	Imd	Opt	Logical Inference and Knowledge Representation	J	1-1		Tojo･Sano	
								E		2-2	Nguyen	

Note 1: Instructors in brackets [ ] are in charge of the office hours.
Note 2: Students enrolled before April 2013 who have completed I215 cannot take I235 nor I236.

○ I4xx courses

| Course Number | Master's Degree | | | Doctoral Degree | | | Course Title | Lan-guage | Course Term | | Instructor(s) | Note |
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
I411	Tech	Tech	GLA	Opt	Adv	Opt	Pattern Analysis and Recognition	J	1-2		Kotani	Offered in alternate years
I413	Tech	Tech	GLA	Opt	Adv	Opt	Theoretical Computer Science	J	*	*	Ishihara	Offered in alternate years
I414	Tech	Tech	GLA	Opt	Adv	Opt	Natural Language Processing II	J		2-2	Shirai	Offered in alternate years
I416	Tech	Tech	GLA	Opt	Adv	Opt	Parallel Processing	J	1-2		Inoguchi	Offered in alternate years
I419	Tech	Tech	GLA	Opt	Adv	Opt	Image Information Science	J	*	*	Yoshitaka	Offered in alternate years
I427	Tech	Tech	GLA	Opt	Adv	Opt	System Control Theory	J	*	*	F.Asano	Offered in alternate years
I431	Tech	Tech	GLA	Opt	Adv	Opt	Theory of Algorithms and Computational Geometry	J		2-1	Uehara	Offered in alternate years
I432	Tech	Tech	GLA	Opt	Adv	Opt	Theory of Discrete-State Systems	J		2-1	Hiraishi	Offered in alternate years

Course Number	Master's Degree			Doctoral Degree			Course Title	Language	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
I435	Tech	Tech	GLA	Opt	Adv	Opt	Software Architecture	J	*	*	M.Suzuki	Offered in alternate years
I437	Tech	Tech	GLA	Opt	Adv	Opt	Coding Theory	J		2-1	Matsumoto·Kurkoski	Offered in alternate years
I438	Tech	Tech	GLA	Opt	Adv	Opt	Exercises on Graph Theory	J	*	*	M.Kaneko	Offered in alternate years
I439	Tech	Tech	GLA	Opt	Adv	Opt	Speech Signal Processing	J	*	*	Akagi·Dang	Offered in alternate years
I440	Tech	Tech	GLA	Opt	Adv	Opt	Enhanced Operating Systems	J	*	*	K.Tanaka	Offered in alternate years
I441	Tech	Tech	GLA	Opt	Adv	Opt	Advanced Computer Networks	J	*	*	Shinoda	Offered in alternate years
I442	Tech	Tech	GLA	Opt	Adv	Opt	Advanced System Software Laboratory	J	1-2		Chinen	
I443	Tech	Tech	GLA	Opt	Adv	Opt	Foundation of Software Verification	J		2-1	Aoki	Offered in alternate years
I444	Tech	Tech	GLA	Opt	Adv	Opt	Embedded Software Engineering	J	Summer		Kishi	
I445	Tech	Tech	GLA	Opt	Adv	Opt	Distributed Systems	J	Summer		Matsutsuka·Maruhashi	
I448	Tech	Tech	GLA	Opt	Adv	Opt	Distance Learning System	J	*	*	S.Hasegawa	Offered in alternate years
I450	Tech	Tech	GLA	Opt	Adv	Opt	Network Design Laboratory	J		2-2	Tan·Chinen	
I455	Tech	Tech	GLA	Opt	Adv	Opt	Information Security Application	J	1-2		Omote	Offered in alternate years
I465	Tech	Tech	GLA	Opt	Adv	Opt	Information Security	J	*	*	Miyaji·Omote	Offered in alternate years
I467	Tech	Tech	GLA	Opt	Adv	Opt	Processor Design Laboratory	J		2-2	Inoguchi·K.Tanaka	Offered in alternate years
I468	Tech	Tech	Tech	Opt	Adv	Imd	Modeling of Dynamics	J	1-2		Maezono·[Hongo]	Offered in alternate years
I469	Tech	Tech	GLA	Opt	Adv	Opt	Advanced Algorithms for Computational Geometry	J	*	*	Uehara	Offered in alternate years

Note 1: Instructors in brackets [ ] are in charge of the office hours.
Note 2: * indicates the course is not offered in the 2016 academic year.
Note 3: When students enrolled before April 2013 take I465, it will be treated as I461S. Those who have completed I461S cannot take I465.

○ **Specialized Technical courses for Highly-Dependable and Smart Embedded Systems Program**

Course Number	Master's Degree			Doctoral Degree			Course Title	Language	Course Term 1-1 1-2	Course Term 2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
Progressive courses												
I473	Tech	Tech	GLA	Opt	Imd	Opt	Hardware/Software Codesign	J	Summer		Wakabayashi	
I478	Tech	Tech	GLA	Opt	Imd	Opt	IT Project Management	J	Summer		K.Okada	
Practical courses												
I481	Tech	Tech	GLA	Opt	Imd	Opt	Software Development Laboratory for Highly Dependable Embedded Systems	J		2-1	M.Suzuki	
I482	Tech	Tech	GLA	Opt	Imd	Opt	Software Process Design for Highly Dependable Embedded Systems	J		2-2	M.Suzuki·Aoki	
I483	Tech	Tech	GLA	Opt	Imd	Opt	Smart Embedded System Development	J	1-2		T.Okada	

Note 1: When students enrolled before April 2014 take I481, it will be treated as I480. Those who have completed I480 cannot take I481.
Note 2: When students enrolled before April 2014 take I482, it will be treated as I479. Those who have completed I479 cannot take I482.

○ Specialized Technical courses for Information Security Program

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
Progressive courses												
I465S	Tech	Tech	GLA	Opt	Imd	Opt	Literacy in Information Security Management	J	1-1 &1-2	2-1 &2-2	Miyaji・Futa・Arai・Otsuka・Takemori	
I466S	Tech	Tech	GLA	Opt	Imd	Opt	Advanced Information Security Theory and Application	J	1-1 &1-2		Miyaji・Futa	
I469S	Tech	Tech	GLA	Opt	Imd	Opt	Law and Management of Information Security	J				☆
I470S	Tech	Tech	GLA	Opt	Imd	Opt	Information Security Technology	J				☆
Practical courses												
I471S	Tech	Tech	GLA	Opt	Imd	Opt	Project-based Learning of Information Security Practice	J	1-1 &1-2		Miyaji・Futa・Omote	
I478S	Tech	Tech	GLA	Opt	Imd	Opt	Project-based Learning of Network Security	J				☆
I479S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning A	J				☆ 1 credit
I480S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning B	J				☆ 1 credit
I481S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning C	J				☆ 1 credit
I482S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning D	J				☆ 1 credit
I483S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning E	J				☆ 1 credit
I484S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning F	J				☆ 1 credit
I485S	Tech	Tech	GLA	Opt	Imd	Opt	Exercise in Security Project-Based Learning G	J				☆ 1 credit

Note 1: Instructors in brackets [ ] are in charge of the office hours.
Note 2: ☆ indicates the course is offered at other graduate schools.
Note 3: Students in the Information Security Program have priority to register for the above courses. Those who are not in the Program may not take the courses.
Note 4: The class schedule of I465S, I466S and I471S will be irregular. Check the class schedule for detailed schedule.
Note 5: I466S can be taken only by those who take I471S in the same term.
Note 6: Students enrolled before April 2014 who have completed I475S cannot take I482S.
Note 7: Only students who completed I479S and I480S, and either one of I481S or I471S can take I482S and I483S.
Note 8: Only students who completed all of I479S, I480S and I482S and either one of I481S or I471S can take I484S.

○ Specialized Technical courses for Fostering ICT Global Leader Program

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
I466	Tech	Tech	GLA	Opt	Adv	Opt	Introduction to International Standardization	J		2-1 &2-2	Somemura,etc.	

Note: The class schedule of the course will be irregular. Check the class schedule for detailed schedule.

〇 I6xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
I613	Tech	Tech	GLA	Opt	Adv	Opt	Algebraic Formal Methods	E	*	*	Futatsugi・Ogata・Gaina・M.Nakamura	Offered in alternate years
I615	Tech	Tech	GLA	Opt	Adv	Opt	Robotics	E		2-1	Chong	Offered in alternate years
I620	Tech	Tech	GLA	Opt	Adv	Opt	Foundation of VLSI Design	E	1-2		M.Kaneko	Offered in alternate years
I645	Tech	Tech	GLA	Opt	Adv	Opt	Human Perceptual Systems and its Models	E		2-2	Unoki	Offered in alternate years
I649	Tech	Tech	GLA	Opt	Adv	Opt	Wireless Sensor Networks	E	1-2		Lim	Offered in alternate years
I655	Tech	Tech	Tech	Opt	Adv	Imd	Modern Quantum and Neural Computation	E	*	*	H.Tanaka・Maezono	Offered in alternate years
I656	Tech	Tech	GLA	Opt	Adv	Opt	Logical Decision Procedures	E	*	*	Hirokawa	Offered in alternate years

Note: * indicates the course is not offered in the 2016 academic year.

〇 Irregular courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
I456	Tech	Tech	GLA	Opt	Adv	Opt	Information Science Laboratory I					1 credit
I457	Tech	Tech	GLA	Opt	Adv	Opt	Information Science Laboratory II					1 credit
I458	Tech	Tech	GLA	Opt	Adv	Opt	Software Development Laboratory I					1 credit, Offered in alternate years
I459	Tech	Tech	GLA	Opt	Adv	Opt	Software Development Laboratory II					1 credit
I628	Tech	Tech	GLA	Opt	Adv	Opt	Information Processing Theory					Offered in alternate years

Note 1: I456 and I457 are seminars offered by invited lecturers. Students can attend them without registration. 1 credit can be given by attending 7 of the seminars and submitting a report for each seminar attended to the corresponding host faculty member. Check the details in the syllabi or the JAIST website.

Note 2: The Semiconductor Technology Academic Research Center (STARC) assists I458 and I459. These are a 1-week seminar. Check the details in the syllabi or the JAIST website.

2.4　Materials Science courses 　（Mxxx courses）

○　M1xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
M111A	Intr	GLA	Intr	Opt	Opt	Opt	Introduction to Physics A	J	1-1		Horita	
M111B	Intr	GLA	Intr	Opt	Opt	Opt	Introduction to Physics B	J	1-1		Mizutani	
M112	Intr	GLA	Intr	Opt	Opt	Opt	Introduction to Chemistry	J	1-1		Taniike・Matsumura	
M113	Intr	GLA	Intr	Opt	Opt	Opt	Introduction to Bioscience	J	1-1		Takagi・Shimokawa	

Note 1: M111B is designed mainly for students from outside of the laboratories in the Applied Physics Area. Either M111A or M111B (not both) can be used to fulfill the degree requirement.

Note 2: Students who plan to join the lab in the Applied Physics Area can take M111B but the credits cannot be used to satisfy the submission requirements for research proposal and the degree requirements.

○　M2xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
M211	Tech	GLA	Bsc	Imd	Imd	Imd	Quantum Mechanics	J	1-1	2-1	Iwasaki, Murata	
M212	Tech	GLA	Bsc	Imd	Imd	Imd	Statistical Mechanics	J		2-1	Shimoda	
M213	Tech	GLA	Bsc	Imd	Imd	Imd	Electromagnetic Theory	J	1-2		Tomitori	
M221	Tech	GLA	Bsc	Imd	Imd	Imd	Organic Chemistry	J	1-1		Matsumi	
M222	Tech	GLA	Bsc	Imd	Imd	Imd	Computational Material Design	J	1-2		Shimoda・Dam	
M223	Tech	GLA	Bsc	Imd	Imd	Imd	Properties of Organic Materials	J	1-1		Nagao	
M224	Tech	GLA	Bsc	Imd	Imd	Imd	Inorganic Materials Chemistry	J	1-2		Maenosono	
M225	Tech	GLA	Bsc	Imd	Imd	Imd	Instrumental Analytical Chemistry	J		2-1	Shinohara	
M231	Tech	GLA	Bsc	Imd	Imd	Imd	Bioorganic Chemistry	J	1-1	2-1	Fujimoto・Hohsaka	
M232	Tech	GLA	Bsc	Imd	Imd	Imd	Biophysics and Biophysical Chemistry	J	1-2		Hamada	
M243	Tech	GLA	Bsc	Imd	Imd	Imd	Solid State Physics I	J	1-2		Yukiko Takamura	
M245	Tech	GLA	Bsc	Imd	Imd	Imd	Mathematics for Condensed Matter Science and Technology	J	1-1	2-1	Mizuta, Koyano	
M251	Tech	GLA	Bsc	Imd	Imd	Imd	Chemistry of Catalyst and Catalysis	J	1-1		Ebitani	
M254	Tech	GLA	Bsc	Imd	Imd	Imd	Polymer Chemistry I	J	1-2		T.Kaneko	
M261	Tech	GLA	Bsc	Imd	Imd	Imd	Functional Biomolecules	J	1-2		Tsutsui	
M262	Tech	GLA	Bsc	Imd	Imd	Imd	Biomaterial Sensing	J		2-1	Yuzuru Takamura	
M281	Tech	GLA	Bsc	Opt	Opt	Opt	Solid State Physics and its Application to Electronics I	E		2-2	Mizuta・Muraka・An	
M282	Tech	GLA	Bsc	Opt	Opt	Opt	New Materials Design and Synthesis	E		2-1	M.Yamaguchi・Matsumi・Jiang	
M283	Tech	GLA	Bsc	Opt	Opt	Opt	Biofunction and Organization	E		2-2	Takagi・Tsukahara・Yuzuru Takamura・Ohki	

Course Number	Tech	GLA	Bsc	Opt	Opt	Opt	Solid State Physics and its Application to Electronics II	E	1-1		Oshima・T.Suzuki・Ohdaira	
M284	Tech	GLA	Bsc	Opt	Opt	Opt	Solid State Physics and its Application to Electronics II	E	1-1		Oshima・T.Suzuki・Ohdaira	
M285	Tech	GLA	Bsc	Opt	Opt	Opt	Bioscience and Biotechnology	E	1-1		T.Yamaguchi・Hamada・Fujimoto・Tsutsui・Hohsaka	

Note1: M2xx courses conducted in Japanese cover the contents of M281, M282, M283, M284 and M285. Students cannot use credits obtained from both of the Basic courses conducted in English and ones in Japanese to satisfy the submission requirements for research proposal and the requirements for the Basic courses. (When students wish to complete their degree of Materials Science only with the Mxxx courses offered in English, M281, M282, M283, M284 and M285 can be counted as the submission requirements for research proposal and the Basic courses to satisfy the degree requirements.)

Note2: Students enrolled before April 2016 who have completed M281 cannot take M284.

○ M4xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
M413	Tech	GLA	Bsc	Opt	Opt	Imd	Functional Nanomaterials	E	1-1		Maenosono・Nagao・Taniike・Mott	
M414	Tech	GLA	Tech	Opt	Opt	Imd	Device Physics	J		2-1	Tokumitsu	
M415	Tech	GLA	Tech	Opt	Opt	Imd	Medical Biomaterials	J	1-2		Tsukahara・H.Suzuki	
M420	Tech	GLA	Tech	Opt	Opt	Imd	Solid State Physics II	J		2-1	Akabori	
M421	Tech	GLA	Tech	Opt	Opt	Imd	Electronics	J	1-2		T.Suzuki	
M423	Tech	GLA	Tech	Opt	Opt	Imd	Functional Protein Device	J	1-2		Hiratsuka	
M424	Tech	GLA	Tech	Opt	Opt	Imd	Polymer Chemistry II	J		2-1	M.Yamaguchi・Matsumura	

Note: Students enrolled before April 2016 who have completed M252 cannot take M424.

○ M6xx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
M611	Tech	GLA	Tech	Opt	Opt	Adv	Electronic Structures of Solids and Surfaces	E	*	*	Tomitori・Mizutani・Yukiko Takamura・Fleurence	Offered in alternate years
M612	Tech	GLA	Tech	Opt	Opt	Adv	Optical Properties of Solids	E	1-1		Mizutani・Khuat・Murata・Koyano	Offered in alternate years
M613	Tech	GLA	Tech	Opt	Opt	Adv	Quantum Phenomena in Condensed Matter	E		2-1 intensive	Iwasaki・Mizuta	Offered in alternate years
M614	Tech	GLA	Tech	Opt	Opt	Adv	Advanced Device Physics	E	*	*	Ohdaira	Offered in alternate years
M615	Tech	GLA	Tech	Opt	Opt	Adv	Advanced Biofunctions	E	*	*	Takagi・Yuzuru Takamura	Offered in alternate years
M616	Tech	GLA	Tech	Opt	Opt	Adv	Advanced Biomaterials	E	*	*	Hiratsuka・Tsutsui・Hamada・K.Nagai	Offered in alternate years
M617	Tech	GLA	Tech	Opt	Opt	Adv	Molecular and Functionality Design of Polymers	E	1-2		M.Yamaguchi・Shinohara・T.Kaneko	Offered in alternate years
M618	Tech	GLA	Tech	Opt	Opt	Adv	Materials Design	E	*	*	Ebitani・Matsumura・Maenosono	Offered in alternate years
M619	Tech	GLA	Tech	Opt	Opt	Adv	Materials Morphology	E		2-2 intensive	Taniike・Matsumi・Vedarajan	Offered in alternate years
M620	Tech	GLA	Tech	Opt	Opt	Adv	Electronic Properties of Condensed Matter	E	*	*	Murata・Sakai・Koyano・An	Offered in alternate years
M622	Tech	GLA	Tech	Opt	Opt	Adv	Advanced Biomolecular Science	E	1-1		Ohki・Osaka	Offered in alternate years

Note: * indicates the course is not offered in the 2016 academic year.

○ Irregular courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
M431	Tech	GLA	Tech	Opt	Opt	Imd	Evaluation of Properties of Materials					
M432	Tech	GLA	Tech	Opt	Opt	Imd	Evaluation of Functions of Materials					

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						

2.5 Courses offered by Center for Nano Materials and Technology （Nxxx courses）

○ Specialized Technical courses in Nano Materials Technology Program

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
N001	Intr	GLA	Intr	Opt	Opt	Opt	Fabrication of Nano-Devices with Training Course	J		2-1	T.Suzuki・Akabori	
N002	Intr	GLA	Intr	Opt	Opt	Opt	Study on Nanobiotechnology with Training Course	J		2-1	Tsukahara・Yuzuru Takamura・H.Suzuki・Phan	
N003	Intr	GLA	Intr	Opt	Opt	Opt	Analysis of Nano-Materials with Training Course	J		2-1	Ohki・Osaka	
N004	Intr	GLA	Intr	Opt	Opt	Opt	Structural Analysis of Solids on Nano-Scale with Training Course	J		2-1	Maenosono・Mott・Tomitori	
N005	Intr	GLA	Intr	Opt	Opt	Opt	Material Analysis with Training Course	J	*	*	To be announced	To be announced

Note: * indicates the course is not offered in the 2016 academic year.

2.6 Courses offered by Global Communication Center （E/J/Gxxx courses）

〇 Exxx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
E011	/	/	/	/	/	/	Interaction Seminar 1	E	1-1 1-2	2-1 2-2	Hinchey	Non-credit
E021	/	/	/	/	/	/	Interaction Seminar 2	E	1-1 1-2	2-1 2-2	Hinchey	Non-credit
E111	Opt	Opt	Opt	Opt	Opt	Opt	Basic Technical Communication 1	E	1-1 1-2	2-1 2-2	Holden	
E112	Opt	Opt	Opt	Opt	Opt	Opt	Basic Technical Communication 2	E	1-1	2-1	Holden	
E113	Opt	Opt	Opt	Opt	Opt	Opt	Basic Technical Communication 3	E	1-1 1-2	2-1 2-2	Blake	
E211	GC	GC	GC	Opt	Opt	Opt	Intermediate Technical Communication 1	E	1-1 1-2	2-1 2-2	Ambassah	
E212	GC	GC	GC	Opt	Opt	Opt	Intermediate Technical Communication 2	E	1-2	2-2	Holden	
E213	GC	GC	GC	Opt	Opt	Opt	Scientific Discussions 1	E	1-1	2-1	Blake, Terrillon	
E411	GC	GC	GC	Opt	Opt	Opt	Advanced Technical Communication 1	E	1-1	2-1	Ambassah, Terrillon	
E412	GC	GC	GC	Opt	Opt	Opt	Advanced Technical Communication 2	E	1-2	2-2	Ambassah, Terrillon	
E413	Tech	GC	GC	Imd	Opt	Opt	Scientific Discussions 2	E	1-2	2-2	Blake, Terrillon	
E422	GC	GC	GC	Opt	Opt	Opt	Seminar for Practical English	E				1 credit, Offered as necessary

〇 Jxxx courses

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term		Instructor(s)	Note
	KS	IS	MS	KS	IS	MS			1-1 1-2	2-1 2-2		
J001	/	/	/	/	/	/	KANJI Special Training Seminar	J	1-2	2-2	Honda	Non-credit
J011	/	/	/	/	/	/	Introductory Technical Japanese 1	J	1-1	2-1	Tsutsui	Non-credit
J012	/	/	/	/	/	/	Introductory Technical Japanese 2	J	1-2	2-2	Tsutsui	Non-credit
J111	Opt	Opt	Opt	Opt	Opt	Opt	Basic Technical Japanese 1	J	1-1	2-1	M.Yamaguchi	
J112	Opt	Opt	Opt	Opt	Opt	Opt	Basic Technical Japanese 2	J	1-2	2-2	M.Yamaguchi	
J211	GC	GC	GC	Opt	Opt	Opt	Intermediate Technical Japanese 1	J	1-1	2-1	Horiguchi	
J212	GC	GC	GC	Opt	Opt	Opt	Intermediate Technical Japanese 2	J	1-2	2-2	Horiguchi	
J411	GC	GC	GC	Opt	Opt	Opt	Advanced Technical Japanese 1	J	1-1	2-1	Honda	
J412	GC	GC	GC	Opt	Opt	Opt	Advanced Technical Japanese 2	J	1-2	2-2	Honda	

○ **Gxxx courses**

Course Number	Master's Degree			Doctoral Degree			Course Title	Lan-guage	Course Term 1-1 1-2	2-1 2-2	Instructor(s)	Note
	KS	IS	MS	KS	IS	MS						
G211	GC	GC	GC	Opt	Opt	Opt	Global Communication for Collaboration Building	E	1-2	2-2	Kawanishi	
G212	GC	GC	GC	Opt	Opt	Opt	Writing and Presentation Skills	J	1-1	2-1	Tsuji	
G213	GC	GC	GC	Opt	Opt	Opt	Japan Studies	E	1-1	2-1	Kawanishi	

Course Number	Master's Degree			Doctoral Degree								
	KS	IS	MS	KS	IS	MS						

２.７ Individual courses （L/Bxxx courses）

○ Lxxx courses

科目番号	学位(修士)			学位(博士)			授 業 科 目 名	使用言語	開講時期		担 当 者	備考
	知識	情報	マテ	知識	情報	マテ			第1学期 (4-9月)	第2学期 (10-3月)		
L212	GLA	GLA	GLA	Opt	Opt	Opt	History and Philosophy of Science	E	1-1		Mizumoto	
								J		2-1		
L221	GLA	GLA	GLA	Opt	Opt	Opt	Ethical Issues in Science	J	Summer		Higashijima	
								E		Winter		
L222	GLA	GLA	GLA	Opt	Opt	Opt	Introduction to Management of Technology and Intellectual Property Rights	J	Summer		Hirata, Matsushita	
								E		Winter	Kawamura, Mitani	
L223	GLA	GLA	GLA	Opt	Opt	Opt	Media Theory	E	Summer		Merklejn	
								J		Winter	Mizukoshi	
L224	GLA	GLA	GLA				Introduction to Science and Technology in Global Perspective	J	Summer		Ebitani,etc.	1 credit
L225	GLA	GLA	GLA				Seminar on Science and Technology after Off-Campus Study				Ebitani	1 credit, Offered as necessary
L226				Imd	Imd	Imd	Introduction to Advanced Science and Technology in Global Perspective	J	Summer		Ebitani,etc.	1 credit
L227				Imd	Imd	Imd	Seminar on Advanced Science and Technology after Off-Campus Study				Ebitani	1 credit, Offered as necessary

○ Bxxx科目

科目番号	学位(修士)			学位(博士)			授 業 科 目 名	使用言語	開講時期		担 当 者	備考
	知識	情報	マテ	知識	情報	マテ			第1学期 (4-9月)	第2学期 (10-3月)		
B213	GLA	GLA	GLA	Opt	Opt	Opt	Career Awareness Development	J			Kohda,etc.	1 credit, Offered as necessary

3 Class schedules for 2016-2017 (Ishikawa Campus)

Term 1-1（April 12 – June 3）1st - 3rd periods

	1 9：00－10：40	2 10：50－12：30	3
Mon.	K470　Introduction to Knowledge Creation（Kunifuji・Yamaura） L212E　History and Philosophy of Science（Mizumoto） I118　Graphs and Automata（Ogawa） I211E　Mathematical Logic（Ishihara・Nemoto） I212　Analysis for Information Science（Kotani） M221　Organic Chemistry（Matsumi） M245　Mathematics for Condensed Matter Science and Technology（Mizuta） M622E　Advanced Biomolecular Science（Ohki・Osaka）	K228　Introduction to Knowledge Science（Hashimoto・Dam） K421E　Essence of Systems Methodologies（T.Yoshida） I112　Basics of Computer Systems（Yoshitaka） I214　System Optimization（M.Kaneko・Hiraishi） I216　Computational Complexity and Discrete Mathematics（Uehara・Omote） M113　Introduction to Bioscience（Takagi・Shimokawa） M231　Bioorganic Chemistry（Fujimoto・Hohsaka） M284E　Solid State Physics and its Application to Electronics II（Oshima・T.Suzuki・Ohdaira）	
Tue.	K213　Methodology for Systems Science（Nakamori） K471　Media Creation（Miyata・Ura） I115　Digital Logic and Computer Design（Inoguchi・K.Tanaka） I235　Game Informatics（K.Ikeda・Iida・[Viennot]） I236　Logical Inference and Knowledge Representation（Tojo・Sano） M111A　Introduction to Physics A（Horita） M111B　Introduction to Physics B（Mizutani） M413E　Functional Nanomaterials（Maenosono・Nagao・Taniike・Mott）	K111　Introduction to Management（Shirahada） K469　Knowledge Creation Support Systems（Nishimoto） I111　Algorithms and Data Structures（Uehara） I120　Fundamentals of Logic and Mathematics（Ishihara・Nemoto） I225E　Statistical Signal Processing（H.Tanaka） M211　Quantum Mechanics（Iwasaki） M223　Properties of Organic Materials（Nagao） M285E　Bioscience and Biotechnology（T.Yamaguchi・Hamada・Fujimoto・Tsutsui・Hohsaka）	Office Hours（13：30－15：10）
Wed.	K211　Methodology for the Social Sciences（Shikida・Umemoto） K427EJ　Theory on Creative Process in Design（Nagai） I119　Statistics for Data Analytics（Akagi・[Le]・[Morikawa]） I218　Computer Architecture（Inoguchi） I233　Operating Systems（Shinoda） M112　Introduction to Chemistry（Taniike・Matsumura） M251　Chemistry of Catalyst and Catalysis（Ebitani） M612E　Optical Properties of Solids（Mizutani・Khuat・Murata・Koyano）	K470　Introduction to Knowledge Creation（Kunifuji・Yamaura） L212E　History and Philosophy of Science（Mizumoto） I118　Graphs and Automata（Ogawa） I211E　Mathematical Logic（Ishihara・Nemoto） I212　Analysis for Information Science（Kotani） M221　Organic Chemistry（Matsumi） M245　Mathematics for Condensed Matter Science and Technology（Mizuta） M622E　Advanced Biomolecular Science（Ohki・Osaka）	
Thu.	K228　Introduction to Knowledge Science（Hashimoto・Dam） K421E　Essence of Systems Methodologies（T.Yoshida） I112　Basics of Computer Systems（Yoshitaka） I214　System Optimization（M.Kaneko・Hiraishi） I216　Computational Complexity and Discrete Mathematics（Uehara・Omote） M113　Introduction to Bioscience（Takagi・Shimokawa） M231　Bioorganic Chemistry（Fujimoto・Hohsaka） M284E　Solid State Physics and its Application to Electronics II（Oshima・T.Suzuki・Ohdaira）	K213　Methodology for Systems Science（Nakamori） K471　Media Creation（Miyata・Ura） I115　Digital Logic and Computer Design（Inoguchi・K.Tanaka） I235　Game Informatics（K.Ikeda・Iida・[Viennot]） I236　Logical Inference and Knowledge Representation（Tojo・Sano） M111A　Introduction to Physics A（Horita） M111B　Introduction to Physics B（Mizutani） M413E　Functional Nanomaterials（Maenosono・Nagao・Taniike・Mott）	
Fri.	K111　Introduction to Management（Shirahada） K469　Knowledge Creation Support Systems（Nishimoto） I111　Algorithms and Data Structures（Uehara） I120　Fundamentals of Logic and Mathematics（Ishihara・Nemoto） I225E　Statistical Signal Processing（H.Tanaka） M211　Quantum Mechanics（Iwasaki） M223　Properties of Organic Materials（Nagao） M285E　Bioscience and Biotechnology（T.Yamaguchi・Hamada・Fujimoto・Tsutsui・Hohsaka）	K211　Methodology for the Social Sciences（Shikida・Umemoto） K427EJ　Theory on Creative Process in Design（Nagai） I119　Statistics for Data Analytics（Akagi・[Le]・[Morikawa]） I218　Computer Architecture（Inoguchi） I233　Operating Systems（Shinoda） M112　Introduction to Chemistry（Taniike・Matsumura） M251　Chemistry of Catalyst and Catalysis（Ebitani） M612E　Optical Properties of Solids（Mizutani・Khuat・Murata・Koyano）	

Irregular class schedule:

I465S　Literacy in Information Security Management（Miyaji・Futa・Arai・Otsuka・Takemori）
　　Dates to be announced (Tuesday afternoons in Terms 1-1, 1-2, 2-1 and 2-2)
I466S　Advanced Information Security Theory and Application（Miyaji・Futa）
　　Dates to be announced (Friday afternoons in Terms 1-1 and 1-2)
I471S　Project-based Learning of Information Security Practice（Miyaji・Futa・Omote）
　　Dates to be announced (Friday afternoons in Terms 1-1 and 1-2)

NOTE:
The class schedule of the courses with the assigned lecture rooms will be posted on the notice board next to the automatic certificate issuing machine before each term begins. It can also be viewed on the JAIST website (Education → Taking Courses → Class Schedule).

Class schedule for 2016-2017（Ishikawa Campus）

Term 1-1（April 12 – June 3）4th - 5th periods

	4 15:20－17:00	5 17:10－18:50
Mon.	E011A Interaction Seminar 1（Hinchey） E111A Basic Technical Communication 1（Holden） E113A Basic Technical Communication 3（Blake） E211A Intermediate Technical Communication 1（Ambassah） J111 Basic Technical Japanese 1（M.Yamaguchi） G212 Writing and Presentation Skills（Tsuji）	E011B Interaction Seminar 1（Hinchey） E111B Basic Technical Communication 1（Holden） E113B Basic Technical Communication 3（Blake） E211B Intermediate Technical Communication 1（Ambassah） G213E Japan Studies（Kawanishi）
Tue.	E021A Interaction Seminar 2（Hinchey） E112A Basic Technical Communication 2（Holden） E213A Scientific Discussions 1（Blake） E411A Advanced Technical Communication 1（Ambassah） J011A Introductory Technical Japanese 1（Tsutsui） J211 Intermediate Technical Japanese 1（Horiguchi） J411 Advanced Technical Japanese 1（Honda）	E021B Interaction Seminar 2（Hinchey） E112B Basic Technical Communication 2（Holden） E213B Scientific Discussions 1（Blake） E411B Advanced Technical Communication 1（Terrillon） J011B Introductory Technical Japanese 1（Tsutsui）
Wed.	E011A Interaction Seminar 1（Hinchey） E111A Basic Technical Communication 1（Holden） E113A Basic Technical Communication 3（Blake） E211A Intermediate Technical Communication 1（Ambassah） J111 Basic Technical Japanese 1（M.Yamaguchi） G212 Writing and Presentation Skills（Tsuji）	E011B Interaction Seminar 1（Hinchey） E111B Basic Technical Communication 1（Holden） E113B Basic Technical Communication 3（Blake） E211B Intermediate Technical Communication 1（Ambassah） G213E Japan Studies（Kawanishi）
Thu.	E021A Interaction Seminar 2（Hinchey） E112A Basic Technical Communication 2（Holden） E213A Scientific Discussions 1（Blake） E411A Advanced Technical Communication 1（Ambassah） J011A Introductory Technical Japanese 1（Tsutsui） J211 Intermediate Technical Japanese 1（Horiguchi） J411 Advanced Technical Japanese 1（Honda）	E021B Interaction Seminar 2（Hinchey） E112B Basic Technical Communication 2（Holden） E213B Scientific Discussions 1（Blake） E411B Advanced Technical Communication 1（Terrillon） J011B Introductory Technical Japanese 1（Tsutsui）
Fri.	S101 Innovation Theory and Methodology for Social Competencies（Kohda,etc.） S102 Innovation Theory and Methodology for Creativity（Kohda,etc.） 　　　　* S102 will follow when S101 ends after 7 class meetings. S503 Innovation Theory and Methodology for Total Capability Development（Kohda,etc.）	S101 Innovation Theory and Methodology for Social Competencies（Kohda,etc.） S102 Innovation Theory and Methodology for Creativity（Kohda,etc.） 　　　　* S102 will follow when S101 ends after 7 class meetings. S503 Innovation Theory and Methodology for Total Capability Development（Kohda,etc.）

Class schedule for 2016-2017 (Ishikawa Campus)

Term 1-2 (June 9 – July 28) 1st - 3rd periods

> **NOTE:**
> **Thursday, July 28 will follow the MONDAY schedule.**

	1 9:00－10:40	2 10:50－12:30	3
Mon.	K121 Introduction to Cognitive Science （Hidaka） K214 Methodology for Knowledge Media （Yuizono） I213 Discrete Signal Processing （F.Asano） I416 Parallel Processing （Inoguchi） I455 Information Security Application （Omote） I649E Wireless Sensor Networks （Lim） M222 Computational Material Design （Shimoda・Dam） M254 Polymer Chemistry I （T.Kaneko）	K114 Introduction to Social Research Methods （Masuda） I116 Fundamentals of Programming （Terauchi・T.Asano） I232 Information Theory （Matsumoto・Kurkoski） I442 Advanced System Software Laboratory （Chinen） I620E Foundation of VLSI Design （M.Kaneko） M232 Biophysics and Biophysical Chemistry （Hamada） M421 Electronics （T.Suzuki）	
Tue.	K229 Innovation Design （Nagai・Yuizono・Miyata） K612E Next-Generation Knowledge Management （Umemoto） I217 Functional Programming （Ogata） I219 Software Design Methodology （Aoki） I483 Smart Embedded System Development （T.Okada） M213 Electromagnetic Theory （Tomitori） M261 Functional Biomolecules （Tsutsui） M617E Molecular and Functionality Design of Polymers （M.Yamaguchi・Shinohara・T.Kaneko）	K236EJ Basis of Data Analytics （Ho・Dam） K412 The Knowledge Society （Ito） I114 Fundamental Mathematics for Information Science （Tojo・Sano） I234E Foundation of Software Environment （M.Suzuki） I411 Pattern Analysis and Recognition （Kotani） M243 Solid State Physics I （Yukiko Takamura） M423 Functional Protein Device （Hiratsuka）	
Wed.	K472 Media Interaction （Nishimoto） K473 Management of Innovation （Uchihira） I223E Natural Language Processing I （Nguyen） I226 Computer Networks （Tan） I468 Modeling of Dynamics （Maezono・[Hongo]） M224 Inorganic Materials Chemistry （Maenosono） M415 Medical Biomaterials （Tsukahara・H.Suzuki） E413 Scientific Discussions 2 （Blake）	K121 Introduction to Cognitive Science （Hidaka） K214 Methodology for Knowledge Media （Yuizono） I213 Discrete Signal Processing （F.Asano） I416 Parallel Processing （Inoguchi） I455 Information Security Application （Omote） I649E Wireless Sensor Networks （Lim） M222 Computational Material Design （Shimoda・Dam） M254 Polymer Chemistry I （T.Kaneko）	Office Hours (13:30 － 15:10)
Thu.	K114 Introduction to Social Research Methods （Masuda） I116 Fundamentals of Programming （Terauchi・T.Asano） I232 Information Theory （Matsumoto・Kurkoski） I442 Advanced System Software Laboratory （Chinen） I620E Foundation of VLSI Design （M.Kaneko） M232 Biophysics and Biophysical Chemistry （Hamada） M421 Electronics （T.Suzuki）	K229 Innovation Design （Nagai・Yuizono・Miyata） K612E Next-Generation Knowledge Management （Umemoto） I217 Functional Programming （Ogata） I219 Software Design Methodology （Aoki） I483 Smart Embedded System Development （T.Okada） M213 Electromagnetic Theory （Tomitori） M261 Functional Biomolecules （Tsutsui） M617E Molecular and Functionality Design of Polymers （M.Yamaguchi・Shinohara・T.Kaneko）	
Fri.	K236EJ Basis of Data Analytics （Ho・Dam） K412 The Knowledge Society （Ito） I114 Fundamental Mathematics for Information Science （Tojo・Sano） I234E Foundation of Software Environment （M.Suzuki） I411 Pattern Analysis and Recognition （Kotani） M243 Solid State Physics I （Yukiko Takamura） M423 Functional Protein Device （Hiratsuka）	K472 Media Interaction （Nishimoto） K473 Management of Innovation （Uchihira） I223E Natural Language Processing I （Nguyen） I226 Computer Networks （Tan） I468 Modeling of Dynamics （Maezono・[Hongo]） M224 Inorganic Materials Chemistry （Maenosono） M415 Medical Biomaterials （Tsukahara・H.Suzuki） E413 Scientific Discussions 2 （Blake）	

Irregular class schedule:

I465S Literacy in Information Security Management （Miyaji・Futa・Arai・Otsuka・Takemori）
   Dates to be announced (Tuesday afternoons in Terms 1-1, 1-2, 2-1 and 2-2)
I466S Advanced Information Security Theory and Application （Miyaji・Futa）
   Dates to be announced (Friday afternoons in Terms 1-1 and 1-2)
I471S Project-based Learning of Information Security Practice （Miyaji・Futa・Omote）
   Dates to be announced (Friday afternoons in Terms 1-1 and 1-2)

NOTE:
   The class schedule of the courses with the assigned lecture rooms will be posted on the notice board next to the automatic certificate issuing machine before each term begins. It can also be viewed on the JAIST website (Education → Taking Courses → Class Schedule).

Class schedule for 2016-2017 (Ishikawa Campus)

Term 1-2 (June 9 – July 28) 4th - 5th periods

	4 15:20－17:00	5 17:10－18:50
Mon.	E011A Interaction Seminar 1 （Hinchey） E111A Basic Technical Communication 1 （Holden） E113A Basic Technical Communication 3 （Blake） E211A Intermediate Technical Communication 1 （Ambassah） J001 KANJI Special Training Seminar （Honda） J112 Basic Technical Japanese 2 （M.Yamaguchi） G211E Global Communication for Collaboration Building （Kawanishi）	E011B Interaction Seminar 1 （Hinchey） E111B Basic Technical Communication 1 （Holden） E113B Basic Technical Communication 3 （Blake） E211B Intermediate Technical Communication 1 （Ambassah）
Tue.	E021A Interaction Seminar 2 （Hinchey） E212A Intermediate Technical Communication 2 （Holden） E412A Advanced Technical Communication 2 （Ambassah） J012A Introductory Technical Japanese 2 （Tsutsui） J212 Intermediate Technical Japanese 2 （Horiguchi） J412 Advanced Technical Japanese 2 （Honda）	E021B Interaction Seminar 2 （Hinchey） E212B Intermediate Technical Communication 2 （Holden） E412B Advanced Technical Communication 2 （Terrillon） J012B Introductory Technical Japanese 2 （Tsutsui）
Wed.	E011A Interaction Seminar 1 （Hinchey） E111A Basic Technical Communication 1 （Holden） E113A Basic Technical Communication 3 （Blake） E211A Intermediate Technical Communication 1 （Ambassah） J001 KANJI Special Training Seminar （Honda） J112 Basic Technical Japanese 2 （M.Yamaguchi） G211E Global Communication for Collaboration Building （Kawanishi）	E011B Interaction Seminar 1 （Hinchey） E111B Basic Technical Communication 1 （Holden） E113B Basic Technical Communication 3 （Blake） E211B Intermediate Technical Communication 1 （Ambassah）
Thu.	E021A Interaction Seminar 2 （Hinchey） E212A Intermediate Technical Communication 2 （Holden） E412A Advanced Technical Communication 2 （Ambassah） J012A Introductory Technical Japanese 2 （Tsutsui） J212 Intermediate Technical Japanese 2 （Horiguchi） J412 Advanced Technical Japanese 2 （Honda）	E021B Interaction Seminar 2 （Hinchey） E212B Intermediate Technical Communication 2 （Holden） E412B Advanced Technical Communication 2 （Terrillon） J012B Introductory Technical Japanese 2 （Tsutsui）
Fri.		

Class schedule for 2016-2017 (Ishikawa Campus)

Term 2-1 (October 12 – December 1) 1st - 3rd periods

	1 9:00－10:40	2 10:50－12:30	3
Mon.	K111E Introduction to Management (Zelaya) K411 Theory of Knowledge Management (Hirata・T.Hayashi) K418 Representation of Knowledge (Yuizono) I212E Analysis for Information Science (Dang) I214E System Optimization (M.Kaneko・Hiraishi) I225 Statistical Signal Processing (Unoki) M211 Quantum Mechanics (Murata) M282E New Materials Design and Synthesis (M.Yamaguchi・Matsumi・Jiang)	K228E Introduction to Knowledge Science (Dam・Hashimoto・Huynh) K421 Essence of Systems Methodologies (T.Yoshida) I211 Mathematical Logic (Ogawa・Yokoyama) I216E Computational Complexity and Discrete Mathematics (Uehara) I437 Coding Theory (Matsumoto・Kurkoski) I481 Software Development Laboratory for Highly Dependable Embedded Systems (M.Suzuki) M262 Biomaterial Sensing (Yuzuru Takamura) M420 Solid State Physics II (Akabori)	
Tue.	K626E Advanced Topics in Media Design (Miyata・Nagai・Nishimoto・Kanai・Miyashita・Koizumi) L212 History and Philosophy of Science (Mizumoto) I218E Computer Architecture (K.Tanaka) I233E Operating Systems (Beuran) I432 Theory of Discrete-State Systems (Hiraishi) I443 Foundation of Software Verification (Aoki) M225 Instrumental Analytical Chemistry (Shinohara) M245 Mathematics for Condensed Matter Science and Technology (Koyano)	K211E Methodology for the Social Sciences (Umemoto) K464EJ Cognitive Science (Fujinami) I223 Natural Language Processing I (Shirai) I235E Game Informatics (Iida) I615E Robotics (Chong) M212 Statistical Mechanics (Shimoda) M231 Bioorganic Chemistry (Fujimoto・Hohsaka)	
Wed.	K417EJ Data Analytics (Ho・Dam) K433 Practice of Management of Technology Innovations (Kondo) I217E Functional Programming (Hirokawa) I234 Foundation of Software Environment (Terauchi) I431 Theory of Algorithms and Computational Geometry (Uehara) M414 Device Physics (Tokumitsu) M424 Polymer Chemistry II (M.Yamaguchi・Matsumura)	K111E Introduction to Management (Zelaya) K411 Theory of Knowledge Management (Hirata・T.Hayashi) K418 Representation of Knowledge (Yuizono) I212E Analysis for Information Science (Dang) I214E System Optimization (M.Kaneko・Hiraishi) I225 Statistical Signal Processing (Unoki) M211 Quantum Mechanics (Murata) M282E New Materials Design and Synthesis (M.Yamaguchi・Matsumi・Jiang)	Office Hours (13:30 － 15:10)
Thu.	K228E Introduction to Knowledge Science (Dam・Hashimoto・Huynh) K421 Essence of Systems Methodologies (T.Yoshida) I211 Mathematical Logic (Ogawa・Yokoyama) I216E Computational Complexity and Discrete Mathematics (Uehara) I437 Coding Theory (Matsumoto・Kurkoski) I481 Software Development Laboratory for Highly Dependable Embedded Systems (M.Suzuki) M262 Biomaterial Sensing (Yuzuru Takamura) M420 Solid State Physics II (Akabori)	K626E Advanced Topics in Media Design (Miyata・Nagai・Nishimoto・Kanai・Miyashita・Koizumi) L212 History and Philosophy of Science (Mizumoto) I218E Computer Architecture (K.Tanaka) I233E Operating Systems (Beuran) I432 Theory of Discrete-State Systems (Hiraishi) I443 Foundation of Software Verification (Aoki) M225 Instrumental Analytical Chemistry (Shinohara) M245 Mathematics for Condensed Matter Science and Technology (Koyano)	
Fri.	K211E Methodology for the Social Sciences (Umemoto) K464EJ Cognitive Science (Fujinami) I223 Natural Language Processing I (Shirai) I235E Game Informatics (Iida) I615E Robotics (Chong) M212 Statistical Mechanics (Shimoda) M231 Bioorganic Chemistry (Fujimoto・Hohsaka)	K417EJ Data Analytics (Ho・Dam) K433 Practice of Management of Technology Innovations (Kondo) I217E Functional Programming (Hirokawa) I234 Foundation of Software Environment (Terauchi) I431 Theory of Algorithms and Computational Geometry (Uehara) M414 Device Physics (Tokumitsu) M424 Polymer Chemistry II (M.Yamaguchi・Matsumura)	

Irregular class schedule:

I465S Literacy in Information Security Management (Miyaji・Futa・Arai・Otsuka・Takemori)
   Dates to be announced (Tuesday afternoons in Terms 1-1, 1-2, 2-1 and 2-2)
I466 Introduction to International Standardization (Somemura, etc.)
   5th period of every Friday in Terms 2-1 and 2-2
M613E Quantum Phenomena in Condensed Matter (Iwasaki・Mizuta)
   Dates to be announced

NOTE:
The class schedule of the courses with the assigned lecture rooms will be posted on the notice board next to the automatic certificate issuing machine before each term begins. It can also be viewed on the JAIST website (Education → Taking Courses → Class Schedule).

Class schedule for 2016-2017 (Ishikawa Campus)

Term 2-1 (October 12 – December 1) 4th - 5th periods

	4 15:20－17:00	5 17:10－18:50
Mon.	N001　Fabrication of Nano-Devices with Training Course（T.Suzuki・Akabori） E021A　Interaction Seminar 2（Hinchey） E112A　Basic Technical Communication 2（Holden） E213A　Scientific Discussions 1（Terrillon） E411A　Advanced Technical Communication 1（Ambassah） J111　　Basic Technical Japanese 1（M.Yamaguchi） G212　Writing and Presentation Skills（Tsuji）	N001　Fabrication of Nano-Devices with Training Course（T.Suzuki・Akabori） E021B　Interaction Seminar 2（Hinchey） E112B　Basic Technical Communication 2（Holden） E213B　Scientific Discussions 1（Blake） E411B　Advanced Technical Communication 1（Terrillon） G213E　Japan Studies（Kawanishi）
Tue.	N002　Study on Nanobiotechnology with Training Course（Tsukahara・Yuzuru Takamura・H.Suzuki・Phan） E011A　Interaction Seminar 1（Hinchey） E111A　Basic Technical Communication 1（Holden） E113A　Basic Technical Communication 3（Blake） E211A　Intermediate Technical Communication 1（Ambassah） J011A　Introductory Technical Japanese 1（Tsutsui） J211　　Intermediate Technical Japanese 1（Horiguchi） J411　　Advanced Technical Japanese 1（Honda）	N002　Study on Nanobiotechnology with Training Course（Tsukahara・Yuzuru Takamura・H.Suzuki・Phan） E011B　Interaction Seminar 1（Hinchey） E111B　Basic Technical Communication 1（Holden） E113B　Basic Technical Communication 3（Blake） E211B　Intermediate Technical Communication 1（Ambassah） J011B　Introductory Technical Japanese 1（Tsutsui）
Wed.	N003　Analysis of Nano-Materials with Training Course（Ohki・Osaka） E021A　Interaction Seminar 2（Hinchey） E112A　Basic Technical Communication 2（Holden） E213A　Scientific Discussions 1（Terrillon） E411A　Advanced Technical Communication 1（Ambassah） J111　　Basic Technical Japanese 1（M.Yamaguchi） G212　Writing and Presentation Skills（Tsuji）	N003　Analysis of Nano-Materials with Training Course（Ohki・Osaka） E021B　Interaction Seminar 2（Hinchey） E112B　Basic Technical Communication 2（Holden） E213B　Scientific Discussions 1（Blake） E411B　Advanced Technical Communication 1（Terrillon） G213E　Japan Studies（Kawanishi）
Thu.	N004　Structural Analysis of Solids on Nano-Scale with Training Course（Maenosono・Mott・Tomitori・Sasahara） E011A　Interaction Seminar 1（Hinchey） E111A　Basic Technical Communication 1（Holden） E113A　Basic Technical Communication 3（Blake） E211A　Intermediate Technical Communication 1（Ambassah） J011A　Introductory Technical Japanese 1（Tsutsui） J211　　Intermediate Technical Japanese 1（Horiguchi） J411　　Advanced Technical Japanese 1（Honda）	N004　Structural Analysis of Solids on Nano-Scale with Training Course（Maenosono・Mott・Tomitori） E011B　Interaction Seminar 1（Hinchey） E111B　Basic Technical Communication 1（Holden） E113B　Basic Technical Communication 3（Blake） E211B　Intermediate Technical Communication 1（Ambassah） J011B　Introductory Technical Japanese 1（Tsutsui）
Fri.	S101　Innovation Theory and Methodology for Social Competencies（Kohda,etc.） S102　Innovation Theory and Methodology for Creativity（Kohda,etc.） 　　　　* S102 will follow when S101 ends after 7 class meetings. S503　Innovation Theory and Methodology for Total Capability Development（Kohda,etc.）	S101　Innovation Theory and Methodology for Social Competencies（Kohda,etc.） S102　Innovation Theory and Methodology for Creativity（Kohda,etc.） 　　　　* S102 will follow when S101 ends after 7 class meetings. S503　Innovation Theory and Methodology for Total Capability Development（Kohda,etc.） I466　　Introduction to International Standardization（Somemura,etc.）

Class schedule for 2016-2017（Ishikawa Campus）

Term 2-2（December 6 – February 6）1st - 3rd periods

> **NOTE:**
> **Thursday, February 2 will follow the MONDAY schedule.**

	1 **9：00－10：40**	2 **10：50－12：30**	3
Mon.	K479　Service Management（Shirahada） K619E　Advanced Data Analytics（Ho・Dam） I232E　Information Theory（Kurkoski・Matsumoto） I450　Network Design Laboratory（Tan・Chinen） M283E　Biofunction and Organization（Takagi・Tsukahara・Yuzuru Takamura・Ohki）	K213E　Methodology for Systems Science（Nakamori・Huynh） I213E　Discrete Signal Processing（Chong） I482　Software Process Design for Highly Dependable Embedded Systems（M.Suzuki・Aoki）	
Tue.	K214E　Methodology for Knowledge Media（Kanai） I219E　Software Design Methodology（Ogata） I414　Natural Language Processing II（Shirai）	K229E　Innovation Design（Nagai・Yuizono・Miyata） K420　Research & Development Management（Kosaka） I236E　Logical Inference and Knowledge Representation（Nguyen） I467　Processor Design Laboratory（Inoguchi・K.Tanaka） M281E　Solid State Physics and its Application to Electronics I（Mizuta・Muraka・An）	
Wed.	K411E　Theory of Knowledge Management（Umemoto・Zelaya） K414　Complex Systems Analysis（Hashimoto） I226E　Computer Networks（Lim） I645E　Human Perceptual Systems and its Models（Unoki） E413　Scientific Discussions 2（Terrillon）	K479　Service Management（Shirahada） K619E　Advanced Data Analytics（Ho・Dam） I232E　Information Theory（Kurkoski・Matsumoto） I450　Network Design Laboratory（Tan・Chinen） M283E　Biofunction and Organization（Takagi・Tsukahara・Yuzuru Takamura・Ohki）	Office Hours （13：30 － 15：10）
Thu.	K213E　Methodology for Systems Science（Nakamori・Huynh） I213E　Discrete Signal Processing（Chong） I482　Software Process Design for Highly Dependable Embedded Systems（M.Suzuki・Aoki）	K214E　Methodology for Knowledge Media（Kanai） I219E　Software Design Methodology（Ogata） I414　Natural Language Processing II（Shirai）	
Fri.	K229E　Innovation Design（Nagai・Yuizono・Miyata） K420　Research & Development Management（Kosaka） I236E　Logical Inference and Knowledge Representation（Nguyen） I467　Processor Design Laboratory（Inoguchi・K.Tanaka） M281E　Solid State Physics and its Application to Electronics I（Mizuta・Muraka・An）	K411E　Theory of Knowledge Management（Umemoto・Zelaya） K414　Complex Systems Analysis（Hashimoto） I226E　Computer Networks（Lim） I645E　Human Perceptual Systems and its Models（Unoki） E413　Scientific Discussions 2（Terrillon）	

Irregular class schedule:

I465S　Literacy in Information Security Management（Miyaji・Futa・Arai・Otsuka・Takemori）
　　Dates to be announced (Tuesday afternoons in Terms 1-1, 1-2, 2-1 and 2-2)
I466　Introduction to International Standardization（Somemura,etc.）
　　5th period of every Friday in Terms 2-1 and 2-2
M619E　Materials Morphology（Taniike・Matsumi・Vedarajan）
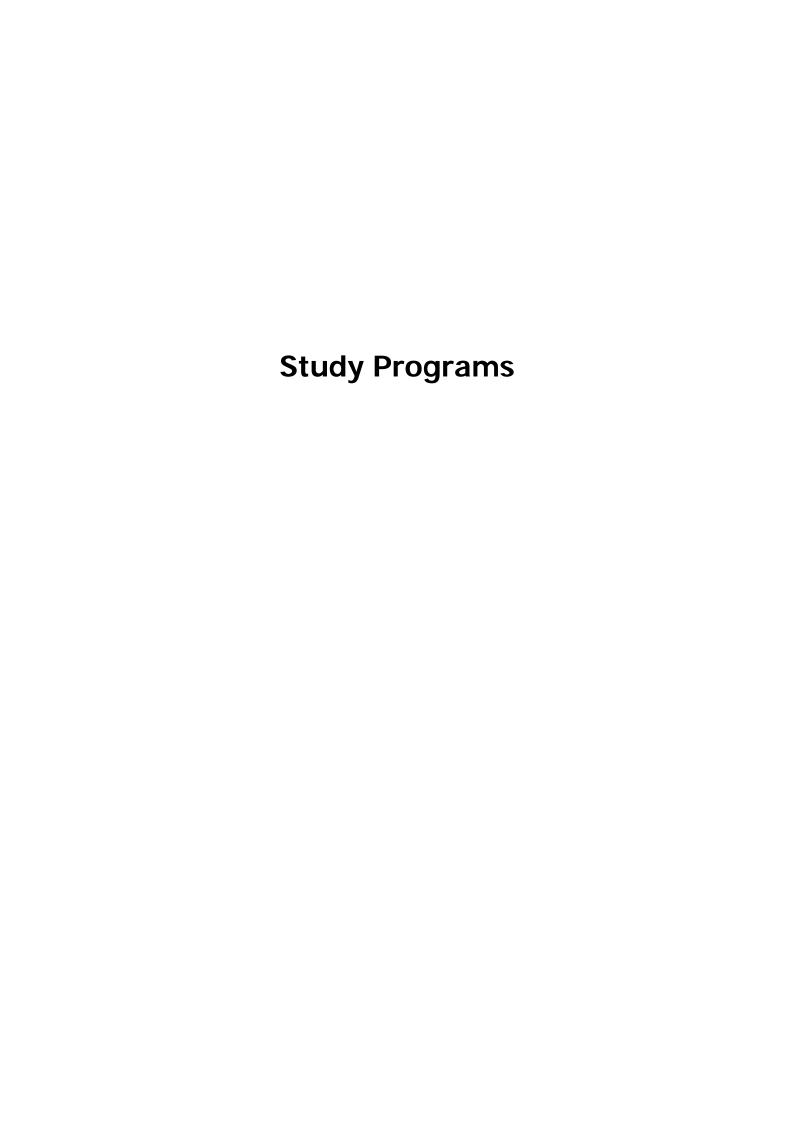　　Dates to be announced

NOTE:
The class schedule of the courses with the assigned lecture rooms will be posted on the notice board next to the automatic certificate issuing machine before each term begins. It can also be viewed on the JAIST website (Education → Taking Courses → Class Schedule).

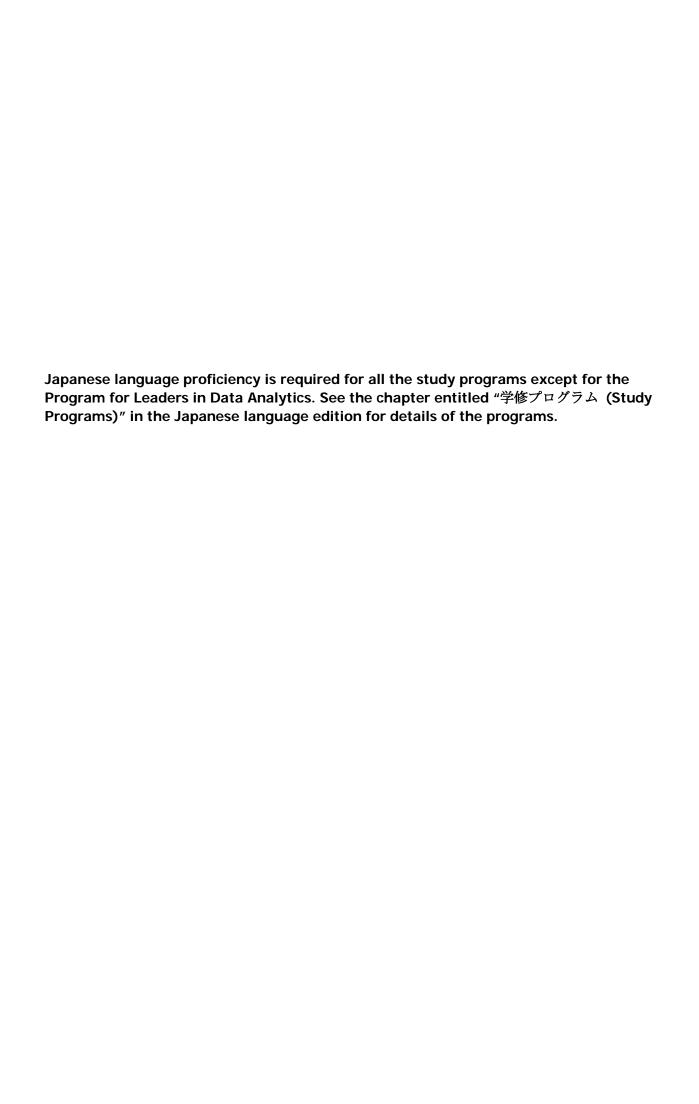# Class schedule for 2016-2017（Ishikawa Campus）

Term 2-2（December 6 – February 6）4th - 5th periods

	4 15:20－17:00	5 17:10－18:50
Mon.	E021A Interaction Seminar 2（Hinchey） E212A Intermediate Technical Communication 2（Holden） E412A Advanced Technical Communication 2（Ambassah） J001 KANJI Special Training Seminar（Honda） J112 Basic Technical Japanese 2（M.Yamaguchi） G211E Global Communication for Collaboration Building（Kawanishi）	E021B Interaction Seminar 2（Hinchey） E212B Intermediate Technical Communication 2（Holden） E412B Advanced Technical Communication 2（Terrillon）
Tue.	E011A Interaction Seminar 1（Hinchey） E111A Basic Technical Communication 1（Holden） E113A Basic Technical Communication 3（Blake） E211A Intermediate Technical Communication 1（Ambassah） J012A Introductory Technical Japanese 2（Tsutsui） J212 Intermediate Technical Japanese 2（Horiguchi） J412 Advanced Technical Japanese 2（Honda）	E011B Interaction Seminar 1（Hinchey） E111B Basic Technical Communication 1（Holden） E113B Basic Technical Communication 3（Blake） E211B Intermediate Technical Communication 1（Ambassah） J012B Introductory Technical Japanese 2（Tsutsui）
Wed.	E021A Interaction Semina 2（Hinchey） E212A Intermediate Technical Communication 2（Holden） E412A Advanced Technical Communication 2（Ambassah） J001 KANJI Special Training Seminar（Honda） J112 Basic Technical Japanese 2（M.Yamaguchi） G211E Global Communication for Collaboration Building（Kawanishi）	E021B Interaction Semina 2（Hinchey） E212B Intermediate Technical Communication 2（Holden） E412B Advanced Technical Communication 2（Terrillon）
Thu.	E011A Interaction Seminar 1（Hinchey） E111A Basic Technical Communication 1（Holden） E113A Basic Technical Communication 3（Blake） E211A Intermediate Technical Communication 1（Ambassah） J012A Introductory Technical Japanese 2（Tsutsui） J212 Intermediate Technical Japanese 2（Horiguchi） J412 Advanced Technical Japanese 2（Honda）	E011B Interaction Seminar 1（Hinchey） E111B Basic Technical Communication 1（Holden） E113B Basic Technical Communication 3（Blake） E211B Intermediate Technical Communication 1（Ambassah） J012B Introductory Technical Japanese 2（Tsutsui）
Fri.		I466 Introduction to International Standardization（Somemura, etc.）

Study Programs

Japanese language proficiency is required for all the study programs except for the Program for Leaders in Data Analytics. See the chapter entitled "学修プログラム (Study Programs)" in the Japanese language edition for details of the programs.

Study Programs

1 Overview

JAIST offers several study programs listed below of which you can choose one according to your study interests. A certificate of completion will be granted to those who complete the required program work.

	Course	Study Program
Ishikawa	Master's Program	◇ Education Program for Leaders in Data Analytics ◇ Highly-Dependable and Smart Embedded Systems Program* ◇ Information Security Program* ◇ Fostering ICT Global Leader Program* ◇ Nano Material Technology Program*
	Doctoral Program	◇ Education Program for leaders in data analytics ◇ Fostering ICT Global Leader Program* ◇ Nano Material Technology Program*
Tokyo	Master's Program	◇ Management of Technology (MOT) Program* ◇ Management of Service (MOS) Program* ◇ Medical Service Science (MSS) Program* ◇ Advanced Information Science Program*
	Doctoral Program	◇ Advanced Knowledge Science Program* ◇ Advanced Information Technologies Program*

*Japanese language proficiency is required to apply.

1.1 Program details

For Ishikawa students: Study Programs are <u>optional</u>. Note that the Fostering ICT Global Leader Program is for the students in the 5D program only and if you choose it, you must be in the 5D program.

For Tokyo students: One of the study programs must be selected (<u>required</u>).

1.2 Application procedures

Students who wish to take one of the programs must submit an application to the Educational Service Section (Kyoumu) by mid-April for those enrolled in April and by mid-October for those in October. Application must be approved at a faculty meeting. Decision will be made after screening the application. Applicants may be asked to take a written or an oral examination depending on a program, if necessary. Details are explained at the orientation and/or before screening.

Students can select only one study program during each of the master's and doctoral program except for the Nano Materials Technology Program can be chosen with another program. You cannot change programs once it's decided. If students at Ishikawa campus wish to leave the program, Kyoumu must be notified.

The Specialized Technical courses for the programs might be offered differently and separately from the regular courses and there might be prerequisites. You must check the syllabi, class schedule etc. for details.

1.3 Program Completion Certificate

A certificate of completion of the program will be granted at the degree conferment to those who complete the required program work. If you satisfy all the degree completion requirements without completion of the study program requirements, you will be able to complete the master's/doctoral program. A certificate of completion of the Fostering ICT Global Leader Program will be given upon completion of the doctoral program since the program is only for the 5D program students.

2 Study Programs (Ishikawa campus)

◇ Education Program for Leaders in Data Analytics

Data-driven approach is playing more important role in most sciences and in solving social problems, and educating leaders with more knowledge and skill of data processing is necessary. In order to meet such social needs, we supply an education program specialized in data analytics based on knowledge science.

This program aims at producing excellent industry-ready talents in various organizations, such as business enterprises, think-tanks, public agencies, NPOs, NGOs, and research institutes, through cultivating abilities to comprehend social and business needs, to solve various social problems with making full use of data in collaboration with specialists, and to coordinate such collaborative works.

● Program completion requirements
Students must satisfy the following requirements.

(1) Master's students must complete 3 courses (6 credits) or more from the Table below.
(2) Doctoral students must complete the following 3 courses, K236, K417 and K619.

Course Number	Course Title	Credit
I119	Statistics for Data Analytics	2
K236	Basis of Data Analytics	2
K417	Data Analytics	2
K619	Advanced Data Analytics	2

Appendix Table