2021
Innovative Global Program
Academic Guide

Contents

Founding Spirit / Purposes / Diploma Policy / Curriculum Policy

Founding Spirit

Nurturing engineers who learn from society and contribute to society

SIT's predecessor school was founded by Shiro Arimoto in 1927. Since those early days, SIT has remained committed to a practical approach in educating and nurturing engineers. Its founding philosophy is firmly rooted in this legacy.

Shiro Arimoto advocated "education in which the various aspects of modern culture are incorporated in the curriculum to help students learn the significance of contributing actively to society." SIT's practical approach to education has enabled it to nurture engineers with the practical knowledge and skills necessary to support a technology-oriented country. This, together with its ability to produce outstanding engineers possessed of both a strong sense of ethics and comprehensive knowledge, has underpinned SIT's long-term contribution to progress and development in society at large.

Up to the present day, the education SIT provides based on its founding philosophy has continued to result in competent professionals; its graduates are widely regarded as capable and dependable engineers.

Purposes

The Institute, pursuant to the provisions of the Basic Act on Education and the School Education Act, aims to conduct in-depth, academically-focused engineering research contributing to global culture, together with broad general academic education and specialized education in engineering, and cultivate the character of its students, enable them to master scientific principles and improve their physical condition, and thus cultivate outstanding engineers.

Diploma Policy

SIT will grant a degree to students who are capable of resolving various global issues to realize a sustainable society by utilizing basic science and engineering knowledge as well as broad range of knowledge in the area of specialist field; possess abilities befitting of scientists and engineers that contribute to the society as stated in the founding philosophy; and satisfy the academic requirements for graduation.

(Goals of Education)

1. Recognize the diversity of the world and society, and can act as scientists and engineers with high ethics.
2. Specify problems, recognizes knowledge and skills required for solving the problems, voluntarily masters the lacking knowledge and skills, and resolves the problem considering the social and economic constraints by utilizing basic science and specialist knowledge.
3. Communicate with relevant parties and work in as team.

Curriculum Policy

SIT systematically organizes core common courses for all SIT students and common basic courses and specialist courses for each college, comprising of lectures, seminars, experiments and exercises for acquisition of knowledge, skills, abilities and attitude stated in the Diploma Policy. Goals of education will be achieved by conducting education methods that promote voluntary and pro-active study and research by students, evaluating the results from multiple aspects, and encouraging review by the students. Core common courses are established as courses that allows all students to achieve the founding spirit and Diploma Policy.

College of Engineering
Diploma Policy / Curriculum Policy

Diploma Policy

College of Engineering will grant a degree to students who study engineering by building on their solid academic base; possess the capacity to become a creative professional that can contribute to the society; participate in engineer education program based on international perspectives to acquire broader expertise; and satisfy the academic requirements for graduation.

(Goals of Education)

1. Build the foundation for generous personality and basic academic skills with the curiosity to investigate problems beyond the specialist field.
2. Systematically understand the nature of engineering, acquire problem solving abilities, and communicate with relevant parties to work in a team.
3. Solve problems by identifying a solution that takes multiple approaches, constraints, and social impact into consideration.
4. Through world class engineer education and broad international experience, understand the diversity of the world and society, and can act as scientists and engineers with high ethics.

Curriculum Policy

To achieve the goals stated in the Diploma Policy, College of Engineering reviewed the over-emphasis on covering wider area of knowledge and technical details of creation often seen in many engineering universities. Our educational policy focuses on the following three stages:

First stage is to investigate "for what" engineering and technology is used in each field of engineering. This requires examination of history to evaluate the achievements and failures accumulated by humanity.

The second stage is to investigate "why." Each stage in society has its own requirements: needs, desires, and concrete demands. An engineer shall not accept these demands without question. An education to equip students with knowledge and skills that can be applied to tackle and examine the tasks critically is indispensable.

The third stage is to learn "how to create" and to improve one's creativity based on it. Drawing from the educational policy, the College of Engineering's curriculum consists of common courses and specialist courses with the following five objectives:

1. Systematic learning to cultivate broad education
   Establish necessary academic abilities to master specialist education in engineering
2. Development of creativity
   Enhance motivation to tackle unexplored areas
3. Systematic learning of engineering knowledge
   Systematic acquisition of basic knowledge and logical thinking in engineering
4. Co-existence with others
   Collaboration, harmony, and co-existence with diverse cultures and environments
5. Establishing SIT's historical uniqueness
   Maintain autonomy and enhance mutual trust among members of SIT

Courses are designed based on these objectives and sets learning/educational goals. Credits are awarded when the result meets required level.

1 Student Status

1 What is Student Status?

- You obtain “student status” once you pass the Institute’s entrance examination, carry out the prescribed enrollment procedures, and are issued with a “student ID card.” Having the status of a “student” means you are entitled to receive education and undertake research at the Institute.
- “Active enrollment” means that you are actively undertaking your studies in a semester in which you have student status.
- Please conduct yourself with pride and self-awareness in your status as a student of Shibaura Institute of Technology.

Item	Details
Standard completion term	The term required to complete one of the undergraduate education programs at the Institute is 4 years.
Maximum term of enrollment	You can be enrolled at the Institute for a maximum of 8 years.
Graduation	Graduation means completion of academic curriculum and termination of your status as a student. Upon graduation you are awarded a bachelor’s degree.

2 Changes in Student Status

- You need to undertake the prescribed procedures if any of the following apply.

Item		Details
Repeating a Year	**What is Repeating a Year?**	**(1) If you wish to repeat voluntarily because your credit record is poor:** Discuss your plans with your class coordinator, and lodge a Request to Repeat by early March. (You will not be allowed to repeat unless you lodge this request.) **(2) If you are courses to a bar on advancement at the end of your second year:** You are barred from advancing, so you will automatically repeat. There is no need to lodge a request. **(3) If you do not satisfy the graduation requirements at the end of your fourth year:** You are barred from graduating, so you will automatically repeat. There is no need to lodge a request.
Leave of Absence	**What is Leave of Absence?**	This is when you do not engage in your studies for a specified period (of 2 months or more) owing to illness, injury, or other unavoidable grounds. When taking leave of absence, you need to lodge a Leave of Absence Request. **(1) Consult with your class coordinator.** **(2) In cases of illness or injury, attach a doctor’s certificate when lodging your request.**
	Term	In principle, leave of absence is taken for a maximum of one year, in the following terms: **Spring semester leave of absence:** April 1 – September 30 **Fall semester leave of absence:** October 1 – March 31 of the following year **Full year leave of absence:** April 1 – March 31 of the following year Leave of absence may also commence midway through a semester.

2 Changes in Student Status

Item		Details	
Leave of Absence	Request Deadlines	Spring semester and full year leave of absence: By early March Fall semester leave of absence: By early September	Please check Scomb for schedule details. If you need to take leave of absence from midway through the semester, please consult with the Student Affairs Section.
	Impact on Enrollment Term, etc.	Periods of leave of absence are counted toward the 8-year maximum term of enrollment. However, they are not counted toward your term of active enrollment.	
	Course Registration	You cannot complete course registration for a semester you are on leave of absence. If you take leave of absence from midway through the semester, your registration for that semester will be invalidated.	
	School Fees	If you lodge a request for leave of absence by the request deadline and are approved, you will be exempted from tuition for the semester of leave of absence.	
Resumption	What is Resumption?	Resumption means returning to active enrollment when a term of leave of absence expires.	
	Request Deadline	When your leave of absence is due to expire, the Institute will send you a Resumption Request. Please lodge this request by the date specified, which will be in early March if you wish to resume from spring semester and early September if you wish to resume from fall semester. If you do not lodge your request by these dates, your enrollment will be cancelled (pursuant to the General Regulations).	
	School Fees	You will be required to pay the school fees for the academic year in which you resume.	
Withdrawal	What is Withdrawal?	If you wish to withdraw for personal reasons	(1) Consult your class coordinator. (2) Lodge a Withdrawal Request and return your student ID card.
		If you are ordered to withdraw (pursuant to the General Regulations)	(1) Those who have contravened the entrants' pledge; (2) Those who have degraded student integrity with poor character or conduct and have no prospect of improvement; (3) Those with inferior academic performance and no prospect of completion; (4) Those who have consistently failed to attend class in the absence of legitimate grounds; or (5) Those who have disrupted order on campus or otherwise contravened their duties as a student.
	Request Deadline	You need to lodge a Withdrawal Request if you wish to withdraw. In principle, the date of withdrawal will be the final day of the semester in which you lodged your request. • Request to withdraw at the end of spring semester: Lodge by early September • Request to withdraw at the end of fall semester: Lodge by early March Please check Scomb for schedule details. This does not apply if you have been ordered to withdraw.	
	School Fees	If you do not pay your fees by the deadline, your enrollment will be cancelled (pursuant to the General Regulations).	

2 Changes in Student Status

Item		Details
Cancellation of Enrollment	What is Cancellation of Enrollment	The president shall cancel the enrollment of those who fall under any of the following items (pursuant to the General Regulations): (1) Those reported missing; (2) Those with school fee payments in arrears who fail to pay despite demands; (3) Those who have been enrolled for more than 8 years ; or (4) Those who fail to complete procedures for resumption, etc. following expiration of a leave of absence.
Suspension	What is Suspension?	Suspension will be ordered as a disciplinary action in the following cases (pursuant to the General Regulations): (1) Students who contravene these General Regulations. (2) Students who engage in conduct contrary to their duties as a student. Periods of suspension are not counted toward the term of active enrollment.
Internal College / Department Transfer	What is Internal College/ Department Transfer?	Internal college transfer means to transfer your enrollment to another college of the Institute. Internal department transfer means to transfer your enrollment to another department within the department in which you are enrolled. You must be enrolled in first year to gain approval to transfer to another department within the College of Engineering. Internal college/department transfer is course to a screening process (written examination, interview, etc.) prescribed by the department you wish to transfer to. Please note that your preferred college/department may not conduct screenings every academic year.
	Year Level	As a rule, you will transfer into second year.
	School Fees	You will be required to pay the school fees for the department and year level into which you transfer.
Re-entrance	What is Re-entrance?	If you have withdrawn from the Institute (except if ordered to withdraw) or have had your enrollment cancelled, you may request permission to re-enter the Institute, provided you are expected to graduate within a period of 8 years minus your term of active enrollment prior to withdrawal/cancellation.
	Request Deadline	Please lodge your request by December of the previous year if you wish to re-enter from spring semester, and by June of the current year if you wish to re-enter from fall semester. For details, please contact the Student Affairs Section.
	School Fees	You will be required to pay the school fees for the academic year in which you re-enter.

2 Classes and Credits

1 Classes

- Classes are operated in the following formats.

Lecture Courses	Courses taught in a lecture format, providing an organized assembly of knowledge to be covered in the department/faculty.
Non-Lecture Courses (experiential courses)	Courses that enable acquisition of knowledge through experience and cultivate students' abilities to form their own ideas through direct contact with phenomena and to create and plan for themselves. Class formats include seminars, design, drawing, experiment, exercise, and technical training.

2 Credits

- Credits are numerical representations of the volume of study required in a class course.
- You earn credits by taking courses in accordance with the curriculum and passing examinations.
- A standard class course shall comprise coursework requiring 45 hours of study per credit, and the following standards shall be used to calculate the number of credits per course depending on the teaching methods employed and taking account of educational efficacy and the amount of study required outside class.
  (1) For lecture and seminar classes, one credit shall be granted for 15 to 30 hours of class time.
  (2) For experiment, exercise, technical training and the like, one credit shall be granted for 30 to 45 hours of class time.
  (3) Notwithstanding the provisions of the preceding items, in the event that it is considered appropriate to confer credits based on evaluation of learning outcomes in class courses such as Graduation Thesis, Graduation Research, and Graduation Project, credits may be determined taking into account the volume of study, etc. required therefor.
- A lecture course worth 2 credits requires 90 hours of study. One lecture class is 100 minutes, so in addition to class time, you are expected to undertake preparations (pre-class study) and reviews (revision) on your own. Please observe the study hours noted in the syllabus.
- Classes proceed on the assumption that students have undertaken preparations (pre-class study), so please be sure to undertake the pre-class tasks provided in the syllabus before you attend class. Moreover, you should make an effort to further your understanding by reviewing (revising) the content of each class prior to attending the next class. Failing to attend makes it difficult to master learning content.

3 Types of Credits

- Credits are classified into the four types shown below and assigned to each year level.
- You can register for a course in or after the year level to which it is assigned.
- For details of credit types and year level allocations, please consult the applicable curriculum chart.

Required Courses	Courses which your department requires you to complete. You must earn the credits in these courses prior to graduation.
Required Elective Courses	A group of courses from which your department requires you to earn a specified number of credits prior to graduation.
Free Electives	Courses which you may select in accordance with your own interests and needs, but which will not be counted toward fulfilment of your graduation requirements.

4 Semesters

- The Institute uses a semester system in which the year is divided into two academic terms, and a quarter system in which it is divided into four academic terms. A semester lasts 14 weeks, and a quarter 7 weeks.
- When the timing is specified, the terms “spring semester” and “fall semester” are used. These are abbreviated to “1S” and “2S.”
- When the timing is specified, the terms “first quarter,” “second quarter,” “third quarter,” and “fourth quarter” are used. These are abbreviated to “1Q,” “2Q,” “3Q,” and “4Q.”

5 Class Times

1st Period	9:00 - 10:40
2nd Period	10:50 - 12:30
3rd Period	13:20 - 15:00
4th Period	15:10 - 16:50
5th Period	17:00 - 18:40
6th Period	18:50 - 20:30

- When you attend a class, please be sure to touch your student ID card on the card reader in the classroom to record your attendance. Attendance can be registered from 30 minutes prior to the start of class in the 1st and 3rd periods, and from 10 minutes prior to the start of class in other periods.

6 Class Cancellations

- A scheduled class may be cancelled on the judgment of the instructor in the event that the instructor is attending an academic conference, is ill, or for other reasons.
- Information on class cancellations is posted on bulletin boards as soon as it becomes known. You can also check this information on Scomb.
- Ad hoc class cancellations may also be made in cases such as typhoons and other natural disasters.

7 Make-up Classes

- In the event of a class cancellation as explained above, a make-up class will be held. Make-up classes may also be held at the instructor's discretion in the event that not all the scheduled material has been covered in regular classes.
- Make-up classes are held during regular teaching periods in principle. Make-up class schedules will be posted on bulletin boards. You can also check this information on Scomb.

8 Absence from Class

- In the event that you cannot attend a class for unavoidable reasons, you may submit a Report of Absence to the class instructor. If you require a Report of Absence, please apply at the Student Affairs Section, prepare a document that certifies the date and reasons for your absence (see below). When the Report of Absence is issued, submit it directly to your class instructor. However, it is up to the instructor to decide how to handle the Report.

Examples of certification documents:

Illness: Any one of the following: Doctor's certificate, certificate of hospital attendance + receipt, Certificate of Recovery from Infectious Disease (in cases of influenza and other infectious diseases) (the document should clearly state the diagnosis, date on which the illness began, number of days required for treatment, date of recovery, etc.)

Bereavement: Notice of (or thank you card for) funeral ceremonies (for a relative within three degrees of kinship)

Public transport delay: Certificate of delay

3 Course Progression

1 Course Registration

- At the Institute, you are free to select the courses you wish to take, with the exception of required courses.
  This means that you must take responsibility for planning your studies, deciding which subjects to take, and registering for those courses – including your required courses. This process is called "course registration."
- Please take care to ensure that you fulfil the requirements for embarking on your 4th-year Graduation Research, which is a required courses, and the requirements for graduation. You also need to avoid becoming courses to a bar on advancement to the next year level.
- Course registration is carried out via S*gsot during course registration periods scheduled before the start of classes in the spring and fall semesters. Course registration periods are announced on Scomb.
- For information on how to register, please contact to student Affairs Section (tgakusei@ow.shibaura-it.ac.jp)

2 Course Registration Workflow

(1) Drafting Your Schedule

- Attend department and year level specific guidance sessions held before the start of classes in April or in September to receive course advice, then create your own draft schedule based on the class timetable. For details of the timetable and the content of courses, refer to the syllabus search system on the Institute's website.
  Note: Class times are subject to change, so check the web timetable (timetable.sic.shibaura-it.ac.jp) for details of any changes.

- If you are a newly-enrolled student, check the guidance session schedule provided when you completed your enrollment procedures and obtain course advice at the departmental guidance session for new students. Current students should check Scomb.

(2) Course Orientations

- As a rule, orientations on the content of each course are conducted in the first class.

(3) Limits on Registration

- To ensure educational effectiveness, limits may be placed on the number of students who can register in institute common courses and liberal arts and foundation courses.
- In the event that the number of students wishing to register for such a course exceeds the limit, students will be selected by lottery.

Points to Note for Course Registration

- You must register for all the courses you plan to take, including required courses. Please be sure to check your courses registrations at the end of the course registration period. You will not be able to change your registrations after the confirmation period.
- In principle, the maximum number of credits you can register for per year is 49 (25 per semester) (excluding intensive courses).
- Register for year-round courses and first semester courses (including first and second quarter courses) in the first semester registration period, and second semester courses (including third and fourth quarter courses) in the second semester registration period.
- For intensive courses, register during the registration period for the applicable class period as shown on the Institute's website.
- You cannot register for courses assigned to year levels higher than the one in which you are currently enrolled.
- As a rule, you cannot register for two or more courses scheduled in the same period on the same day of the week (concurrent registration).
- Registering once again for a course that you have failed is known as "repeat registration." Repeat registration is not possible in courses you have already passed and received credit for.
- If you receive a fail grade (D or F) in a course, you cannot register for the same course within the same academic year (except for Graduation Research 1, 2).
- As a rule, you cannot complete course registration unless you have paid all school fees due for the immediately preceding semester.

3 Course Registration in Other Colleges or Departments

- Designed to provide access to a broad range of course fields, the system of course registration in other colleges/departments is used to register for class courses that provide content not offered in the college/department in which you are enrolled. If you wish to take a course in another college or department, you need to register at the Student Affairs Section rather than via S*gsot, taking into account the following matters:

(1) In the period between the first day of classes for the semester and the course registration deadline, get copy of the Request to Register for Course Offered in Another College/Department form for each course you wish to request.
(2) The permission of the faculty in charge of the course is required in order to register for a course offered in another college/department.
(3) Fill out the required sections of the Request form, and submit it yourself to the Student Affairs Section by the course registration deadline.
(4) The department in which you are enrolled will determine whether or not the course taken in another college/department can be counted toward your graduation requirements, and you will be informed of the outcome at a later date.
(5) You cannot cancel your registration in courses offered by another college/department.
(6) A maximum of 30 credits may be earned in courses offered by another college/department while you are actively enrolled.

4 Checking Your Course Registration

- The course you are registered for are shown on S*gsot. Please be sure to check that course names, instructors, days, times, and other details are recorded correctly.
- If you fail to perform this check and end up attending and taking examinations in a course for which you are not registered, your grade will be invalid. Similarly, all registered subjects will be graded as usual even if registered by mistake.
- You can modify (add or delete courses) during the course registration period.

5 External Credit Transfer System

- Up to 60 credits earned by a student of the College of Engineering externally at “another university or educational institution” (see note), either prior to enrolling or while enrolled at the Institute, may be transferred as credits at the Institute if it is deemed educationally beneficial. Students who have enrolled through systems of entrance for students with bachelor’s degrees, third-year entrance, internal college/department transfer, or re-entrance may have prior credits transferred as specified separately. Credits in all courses offered by the Open University of Japan are eligible for transfer.

  Note: “another university or educational institution” means a university, junior college, specialized course in a higher technical college, or other educational facility authorized by the Minister of Education, Culture, Sports, Science and Technology.

The External Credit Transfer System can be classified into types 1, 2 and 3 as shown below.

<table>
<tr><td>(1)
Credit Transfer on Application</td><td>Student plans and earns (or has earned) external credits independently

If you earn credits externally and wish to have them transferred to the Institute, please apply to the Student Affairs Section and complete the required procedures within the designated period. If you wish to transfer external credits that you earned prior to entering the Institute, this can only be done within a predetermined period at the time of entrance.</td></tr>
<tr><td>(2)
Credit Transfer by Agreement</td><td>Pre-specified credits are transferred to the College of Engineering based on a credit transfer agreement between the College and an external educational institution

The College has an agreement for credit transfer with partner institutions under the Agreement for Academic and Educational Exchange among Four Science and Engineering Universities in Tokyo outlined below.

Special Auditor System pursuant to Agreement for Academic and Educational Exchange among Four Science and Engineering Universities in Tokyo

• Shibaura Institute of Technology, Kogakuin University, Tokyo Denki University, and Tokyo City University have established a system for mutual credit transfer under the above agreement. Each of the institutions makes predetermined courses available to students of the other three institutions, and students who take courses available at other universities under the agreement are known as special auditors (the term used for students of other universities taking courses at Shibaura Institute of Technology; terminology may vary at other institutions).
• There are two periods each year in which students can apply to take courses available at the other institutions (spring semester: early April; fall semester: mid-September), which are announced on Scomb. If you wish to apply, please complete the application procedure at the Student Affairs Section within the prescribed period.
• For timetables, syllabus and other details for each institution, please check with the Student Affairs Section or the website of the applicable institution.
• Pursuant to your application, the Student Affairs Section will lodge a request for registration with the other institution. The other institution conducts screening and issues the result within 1-2 weeks.
• You should be sure to attend your preferred class at the other institution even before official permission is issued, and if anything is unclear, consult with the office in charge of educational affairs at the other institution.
• You will be exempt from entrance examination fees, entrance fees, and auditing fees at the other institution. However, you may be charged actual costs incurred for special activities such as experiment and exercise.
• Academic grades for the classes you take as a special auditor will be sent by the other institution to the Student Affairs Section. Please note that the department in which you are enrolled will determine whether or not the credits earned as a special auditor are to be counted toward your graduation requirements.</td></tr>
<tr><td>(3)
Study Abroad Credit Transfer</td><td>For students who have studied at an educational institution, etc. which has a study abroad agreement with Shibaura Institute of Technology

• The department in which you are enrolled will determine whether or not the credits earned in a program overseas are to be counted toward your graduation requirements. Please check the course allocation chart (non-department programs).</td></tr>
</table>

4 Examinations, Reports, etc.

- Methods of academic grade evaluation in each course may include quizzes, mid-term examinations, final examinations, reports, and presentations. Grade evaluation details are provided in the syllabus for each course.

1 Points to Note regarding Examinations

(1) Release of examination timetable	• As a rule, the instructor announces the timetable. For some courses examinations are held in venues and on days/periods different from regular classes.
(2) Designated seating	• The seating order is designated for mid-term and final examinations in some courses. Please sit in your designated seat. If there is no designated seating, follow the instructions of the invigilator.
(3) Presentation of student ID card	• Be sure to bring your student ID card to the examination venue and place it in a visible position on the aisle side of your desk. • **If you forget your student ID card, go to the Student Affairs Section to receive a student ID certificate.** • The student ID certificate is valid only on for the examination on the day of issue, so please return it to the Student Affairs Section promptly after the examination.
(4) Entry to the examination venue	• You will not be permitted to enter the examination venue after one-half of the examination time has elapsed.
(5) Permitted items	• The only items allowed on your desk during the examination are automatic pencils, pencils, ballpoint pens, erasers, and watches/clocks. • In the event that notes, printouts and other reference materials are permitted, they must be compiled and signed by you personally. • Calculators and the like can only be used if specifically authorized for the class concerned. • Items that are not permitted and those you do not need for the examination should be placed in your bag, which should be closed so that you cannot see inside. Failure to obey these rules may be considered “misconduct.”
(6) Invigilator’s directions	• Please follow the directions of the invigilator while in the examination venue. • Sharing writing implements with other students and other forms of borrowing/lending are strictly prohibited unless authorized by the invigilator. • Failure to obey the directions of the invigilator may be considered “misconduct.”
(7) Cellphones, smartphones, etc.	• In the examination venue, switch all cellphones, smartphones and other electronic communication devices to OFF and place them in your bag. • The use of cellphones, smartphones, etc. as calculators, dictionaries, and clocks is prohibited.

2 Make-up Examinations

- In the event that you are unable to sit for a final examination owing to injury, illness, or other unavoidable circumstances (legitimate grounds), please apply to faculty immediately. The faculty will decide whether to take a Make-up Examination. Students may be asked to submit a Report of absence if necessary.

3 Misconduct

- Students who engage in misconduct in the course of grade evaluation will be course to punishments such as **non-approval of credit for all courses registered for the semester in question and publication of the misconduct on campus.**

Examinations Quizzes Mid-term examinations Final examinations	**In addition to viewing others' answers, the following types of behavior are also considered to be misconduct. Be sure to avoid them at all costs.** (1) Bringing materials created for the purpose of misconduct into the examination venue and viewing them, or attempting to view them (simply bringing such materials with can be misconduct, even if you do not use them). (2) Viewing notes, textbooks, reference books, electronic communication devices, etc. that are not authorized for use in the examination. (3) Writing information that may be useful in the examination on desks, walls, electronic communication devices, etc., and making use of it. Or, making use of such information written by others for the purposes of your own answers. (4) Exchanging or borrowing materials covered by (1)-(3) above and using them in your answers. (5) Exchanging answers (including creating answers collaboratively) or appropriating or plagiarizing them. (6) Viewing others' answers or materials such as those covered by (1)-(3) above in the possession of others and using them in your own answers. (7) Having another person produce answers on your behalf. (8) Producing answers on another person's behalf. (9) Taking an answer sheet out of the examination venue, or attempting to do so. (10) Other conduct contrary to the purpose of the examination.
Essays, reports, productions and other submitted work	(1) Submitting an essay, report, productions, etc. produced by another person. (2) Plagiarizing published works or online information, or using large volumes of text without clearly stating the source thereof. (3) Other conduct contrary to the purpose of producing work for submission.

5 Grades

- Grades are evaluations of examination results and learning achievements pursuant to grade evaluation standards, and are communicated to students individually.
- Grades are posted on S*gsot.
- Grades are recorded in the “enrollment register” and stored at the Institute permanently. Please check your own grades carefully.
- “Academic transcripts” can be issued as necessary for purposes such as graduate job-hunting and graduate school entrance examinations.

1 Grading Standards and Recording in Grade Reports, etc.

- Grade reports use the following symbols.

Grade	Pass/Fail	Grade Point	Grading Standard
S	Pass	4	Numerical mark (out of 100): 90-100
A			Numerical mark: 80-89
B		3	Numerical mark: 70-79
C		2	Numerical mark: 60-69
D	Fail	1	Numerical mark: 50-59
F		0	Numerical mark: 0 -49
G	Currently Registered		
#	Unreported	Refer to the explanation in (3) Grade Inquiry Period.	
N	Transferred	For course credits earned at other universities or educational institutions and transferred at the time of entrance or while enrolled. *Not included in GPA calculations.	

- Academic transcripts show grades of S, A, B, C, and N.

2 Grade Report

- You will be notified of your grades for each semester by a Grade Report on S*gsot (in late August for spring semester, and mid-February for fall semester).

3 Grade Inquiry Period

- The Student Affairs Section handles inquiries concerning academic grades (the period in which inquiries are accepted will be announced on Scomb, etc.).
- You are deemed to have confirmed your grades unless you lodge an inquiry during the inquiry period. Grade inquiries are only accepted during the inquiry period (excluding courses with unreported grades).

4 GPA

- The Institute uses a GPA (Grade Point Average) system. GPA is an expression of your academic attainment in the form of a per-credit average of the grade points (GP) calculated in accordance with the grades you obtained in each of your registered courses. Refer to the table on the previous page for correspondence between Grade Point, numerical mark, and grade. Your Grade Report shows your GPA for each semester, your GPA calculated across all semesters (cumulative GPA), and number of credits registered. Repeat registration is possible in courses that you have failed. If you repeat a course and earn a higher grade than on previous attempts, your GP for the course will be updated. GPs are not updated for repeat registration of courses you have already passed.
- GPA is used in graduation requirements, awards for academic excellence, and identification of students with inferior academic performance. It is crucial for you to take responsibility for your own learning and engage seriously with the courses you have registered for in order to achieve better grades. Please use GPA as a guide for reflection on your own learning efforts and achievements. Moreover, requirements for graduation include a minimum GPA standard. If you fail a course, please re-register and work to achieve sound results in your studies.

- **GPA calculation method**

$$\text{GPA} = \frac{4 \times (\text{no. of credits with S/A grades}) + 3 \times (\text{no. of credits with B grades}) + 2 \times (\text{no. of credits with C grades}) + 1 \times (\text{no. of credits with D grades})}{\text{Number of credits registered}}$$

*GPA is calculated by reference to registered courses counting toward graduation requirements. However, courses graded N (credit transfer) are not included.
*GPA is expressed as a figure rounded to the first decimal place.

Innovative Global Program

Curriculum

Innovative Global Program
Diploma Policy / Curriculum Policy

Diploma Policy

Innovative Global Program aims to foster people capable of leading international teams to solve complex science and engineering problems throughout the world.

Innovative Global Program will grant a degree to students who are judged to have the following abilities and meet the academic requirements for graduation.

(A) Ability to possess broad view and knowledge, and skills in science and technology to work on various kinds of problems.
(B) Ability to understand, respect, and accept diversity in a global society, and cooperate with people from various backgrounds for international teamwork.
(C) Ability to make ethical decisions and practice ethically as an engineer who contributes to society.
(D) Ability to guide a team as a leader for the purpose of problem resolution.
(E) Ability to solve various problems in the world towards a sustainable society.

Curriculum Policy

To achieve the goals stated in the Diploma Policy, Innovative Global Program designs the curriculum, conducts educational activities, and evaluates the students' learning outcomes based on the following policies.

1. Throughout the four years, students are required to take Advanced Engineering Research Courses where to each student one supervisor and two advisers are assigned. Each student belongs to their supervisor's laboratory and learns through a research project under the guidance of their supervisor and the laboratory members. At the end of every semester, each student gives a presentation on their learning outcomes, and receives feedback from their supervisor and the two advisers. They also have opportunities to discuss their research with faculty members from various countries and research fields. Through these activities, students are expected to broaden their view and knowledge in science and technology, and develop the skills to solve various problems in society as well as the ability to respect diversity in a global society.
   (a) In their first year, students learn concrete skills for problem-solving from their laboratory members by working on a given research project.
   (b) In their second year, in every quarter, each student visits a different laboratory from their supervisor's laboratory and learns in the laboratory, enabling them to work on several different research fields to broaden their view.
   (c) In their third year, each student fixes their supervisor, decides their graduation thesis' topic, and starts to work on their graduation thesis. Working on their thesis topic with the laboratory members, students are expected to develop the ability to make ethical decisions and practice ethically as an engineer.
   (d) In their fourth year, each student forms a research team with junior students in their laboratory, completes their research projects in the team, and presents their research to scholars in their field at an international conference. Through these activities, students learn leadership and how to guide a team for problem-solving.

To support the research activities described in 1. above, the following are offered:

2. In their first year, students' interest in various fields of engineering is stimulated by Introduction to Advanced Engineering Courses where the cutting-edge research of almost all faculty members in the college of engineering is introduced.
3. During the first two years, students build their solid foundation of scientific knowledge, methodology, and practical skills by studying in Natural Sciences, Mathematics, and Computer Science courses needed to prepare for advanced research.
4. More advanced Specialized Courses are undertaken, mainly from second to third year, to acquire deeper knowledge and help students choose their graduation research project.

5. In Liberal Arts courses, focused on Communication, Social Science and Humanities, students learn to confirm the wider social significance of their own research, and gain motivation to tackle various social problems.

   Towards a seamless transition to postgraduate study at the Shibaura Institute of Technology such as that in Graduate School of Engineering and Science,
6. In their fourth year, students can undertake advanced specialized courses in graduate schools. Also, in their fourth year, students start their preparation to study abroad for a part of their postgraduate education.

1 Individuals aiming to foster

Individuals capable of leading international teams to solve complex science and engineering problems throughout the world.

2 Background and Motivation

As society continues its rapid globalization, worldwide technological innovation is occurring through the fusion of multiple science and engineering fields into new cutting-edge fields. In science and technology, we are facing many problems intractable without international research teamwork.

Such society and circumstances require leaders who are not just specialists, but possess broad knowledge and a global perspective, also capable of responding flexibly in interdisciplinary research that fuses different fields, and who are capable of leading international teams.

Innovative Global Program is launched with the aim of fostering such individuals.

3 Structure of the Curriculum

Based on the background and motivation in 2 above, we design the curriculum as follows:

(i) Students can major in the following fields and their fusions for specialized research:
Applied Chemistry, Biomedical Engineering, Civil Engineering, Computer Science, Electrical Engineering, Materials Science, Mathematics, Mechanical Engineering, Urban and Regional Planning.

(ii) Throughout the four years, each student works on their major through some research projects while receiving supervision and mentoring from their supervisor, advisers, and postgraduate students in the same laboratory in Advanced Engineering Research Courses.

(iii) In their first year, students have opportunities to broaden their interest in science and technology through Introduction to Advanced Engineering Courses, showcasing advanced research by the college of engineering faculty.

(iv) During the first two years, students develop their basic knowledge and skills in science and technology by studying in Natural Sciences, Mathematics, and Computer Science courses.

(v) From second to third year, more advanced Specialized Courses are offered to deepen their knowledge and help students choose their graduation research project.

(vi) In Liberal Arts courses, focused on Communication, Social Science and Humanities, students learn to communicate professionally, confirm the wider social significance of their own research, and gain motivation to tackle various social problems. Physical Education, Health, and Japanese language courses are also available.

4 Special features of the Curriculum

(I) Learning in English guided by multinational faculty members.

For future careers working in international teams, Innovative Global Program conducts education in English with multinational faculty members from various countries and research areas.

(II) Learning through research projects for four years.

Throughout the four years, each student works on some research projects under the guidance of their supervisor and their laboratory members. At the end of each semester, each student gives a presentation on their learning outcomes, and receives feedback from their supervisor and advisers. These activities enable students to gain proper research skills and deepen their understanding of what research is.

(III) Learning in various fields through working in several laboratories.

In their second year, students visit different laboratories of various disciplines to acquire knowledge of other fields. Students can gain a broad view on science and engineering while learning to solve problems using a variety of approaches characteristic of each field.

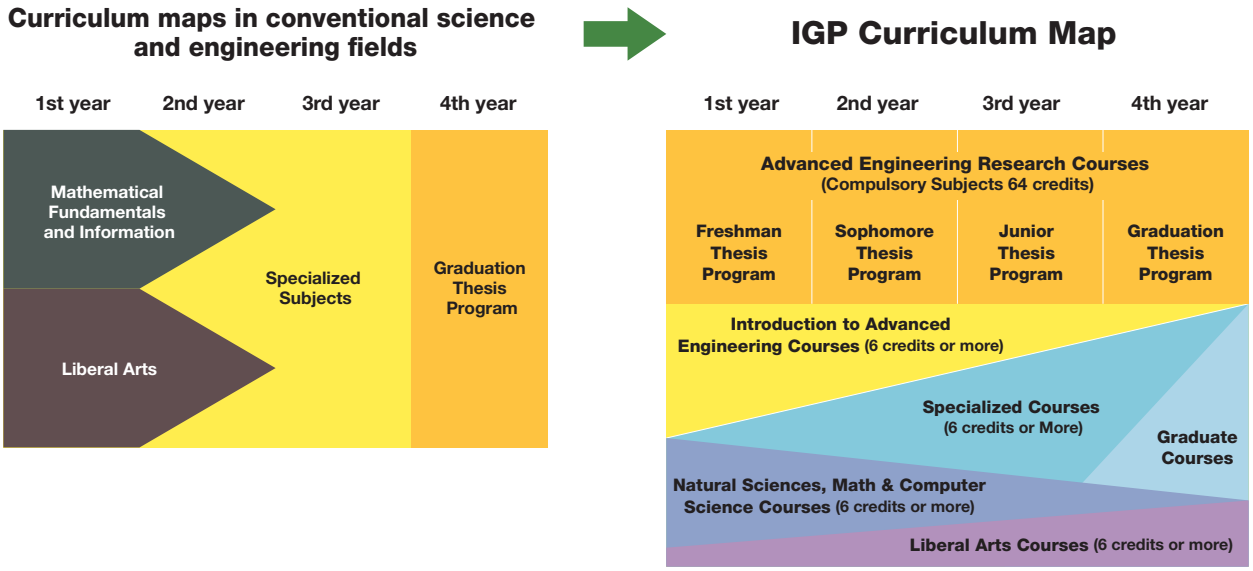
(IV) Designing a personalized curriculum guided by their supervisor.

Students can design their personalized curriculum under the guidance of their supervisor. Apart from Advanced Engineering Research Courses and the course “Engineering Ethics”, all the other courses are elective, enabling a tailored coursework meeting the students’ needs.

(V) Career path guidance and a seamless transition to postgraduate study.

To achieve a seamless transition to postgraduate education at the Shibaura Institute of Technology, in their fourth year, students prepare for overseas study for their postgraduate study. Students will also receive assistance tailored for their career paths such as graduate study at the Shibaura Institute of Technology or other universities, or employment in and outside Japan.

Table 1: Comparison between conventional curriculum and the curriculum of Innovative Global Program (IGP)



5 Academic and Educational Goals

Innovative Global Program sets up the following academic and educational goals based on the five abilities in the Diploma Policy that students are expected to achieve during their study:

A	Ability to possess broad view and knowledge, and skills in science and technology to work on various kinds of problems.	
	A-1	Students shall obtain basic and advanced knowledge and skills in mathematics, natural and computer sciences as well as presentation skills to communicate on their knowledge with scholars from various fields.
	A-2	To suitably lead an international team in the future, students will be able to consider and make decisions on issues in various kinds of problems by grasping what kind of problems are tackled to solve in what way in a wide range of fields in science and technology.
B	Ability to understand, respect, and accept diversity in a global society, and cooperate with people from various backgrounds for international teamwork.	
	B	Students will be able to cooperate well with people from various backgrounds and research fields on their research activities while understanding, respecting, and accepting the diversity in a global society for international teamwork.
C	Ability to make ethical decisions and practice ethically as an engineer who contributes to society.	
	C	Students shall develop their moral as an engineer on ethical issues regarding research in science and technology, and will be able to make ethical decisions and proceed their research based on their moral.
D	Ability to guide a team as a leader for the purpose of problem resolution.	
	D	For future careers as a leader in research and development projects in a company, research institute, or university, students will be able to form a research team to solve problems they are facing and guide the team to accomplish their goals.
E	Ability to solve various problems in the world towards a sustainable society.	
	E	Students can identify the importance of their research for society and can apply their knowledge and skills to solve various problems in the society.

6 Graduation requirements

The graduation requirements must be met for graduation and GPA of 2.0 or higher is required.

Graduation Requirements (Innovative Global Program)

Course category	Major Courses			Natural Science, Mathematics and Computer Science		Liberal Arts			Outside the department curriculum
	1	2	3	Basic Mathematics and Natural Science	Computer Science	Communication Social Science and Humanities	Physical Education and Health	University-wide Common Courses	
Number of credits	Required 64 credits	6 credits or more	6 credits or more	6 credits or more in total		6 credits or more, including 1 required credit in total			
Total credits	124 credits or more in total								

1 Advanced Engineering Research Courses
2 Introduction to Advanced Engineering Courses
3 Specialized Courses

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Legends:

- ◎Required Course, ○Required Elective Course
- Academic and educational goals
  - A-1: Broad knowledge: Broad knowledge and skills in science and technology.
  - A-2: Broad view: Broad view to work on problems in science and technology.
  - B: Diversity: The ability to understand, respect, and accept diversity, and to cooperate and collaborate in international teamwork.
  - C: Ethics: The ability to make ethical decisions and to practice ethically as an engineer who contributes to society.
  - D: Leadership: The ability to guide a team as a leader for the purpose of problem resolution.
  - E: Social responsibility: The ability to solve various problems in the world towards a sustainable society.

Major Courses

Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Specialized Courses	Advanced Engineering Research Courses	M0001000	Freshman thesis program I	6	1	Spring/ Fall	◎	3	Graduation Research	A-1,E
		M0005000	Freshman thesis program II	6	1	Spring/ Fall	◎	3	Graduation Research	A-1,E
		M0009000	Sophomore thesis program I	6	2	Spring/ Fall	◎	3	Graduation Research	A-2,E
		M0013000	Sophomore thesis program II	6	2	Spring/ Fall	◎	3	Graduation Research	A-2,E
		M0017000	Junior thesis program I	6	3	Spring/ Fall	◎	3	Graduation Research	C,E
		M0021000	Junior thesis program II	6	3	Spring/ Fall	◎	3	Graduation Research	C,E
		M0025000	Graduation thesis program I	6	4	Spring/ Fall	◎	3	Graduation Research	D,E
		M0029000	Graduation thesis program II	6	4	Spring/ Fall	◎	3	Graduation Research	D,E
		M0033000	Freshman lab seminar I	2	1	Spring/ Fall	◎	1	Graduation Research	A-2,B
		M0037000	Freshman lab seminar II	2	1	Spring/ Fall	◎	1	Graduation Research	A-2,B
		M0041000	Sophomore lab seminar I	2	2	Spring/ Fall	◎	1	Graduation Research	A-2,B
		M0045000	Sophomore lab seminar II	2	2	Spring/ Fall	◎	1	Graduation Research	A-2,B
		M0049000	Junior lab seminar I	2	3	Spring/ Fall	◎	1	Graduation Research	A-2,B
		M0053000	Junior lab seminar II	2	3	Spring/ Fall	◎	1	Graduation Research	A-2,B
		M0057000	Senior lab seminar I	2	4	Spring/ Fall	◎	1	Graduation Research	A-2,D
		M0061000	Senior lab seminar II	2	4	Spring/ Fall	◎	1	Graduation Research	A-2,D

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Major Courses										
Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Specialized Courses	Introduction to Advanced Engineering Courses	M0065000	Advanced Course on Mechanical Engineering	2	1	Spring	○	1	Lecture	A-2
		M0069000	Advanced Course on Engineering Science & Mechanics	2	1	Fall	○	1	Lecture	A-2
		M0077000	Introduction to Applied Chemistry	2	1	Spring	○	1	Lecture	A-2
		M0073000	Advanced Course on Materials Science and Engineering	2	1	Spring	○	1	Lecture	A-2
		M0081000	Introduction of Electrical Engineering Research	2	1	Fall	○	1	Lecture	A-2
		M0085000	Introduction to Advanced Electronics	2	1	Fall	○	1	Lecture	A-2
		M0089000	Introduction to Information and Communications Engineering	2	1	Spring	○	1	Lecture	A-2
		M0093000	Introduction to Computer Science and Engineering	2	1	Fall	○	1	Lecture	A-2
		M0097000	Lectures on Civil Engineering	2	1	Fall	○	1	Lecture	A-2
		M0101000	Introduction to Advanced Science and Technology	2	1	Fall	○	1	Lecture	A-2

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Major Courses										
Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Specialized Courses	Specialized Courses	M0173000	Practical Materialography	2	2	Spring	○	1	Lecture	A-1
		M0177000	Fundamentals of Inorganic Chemistry	2	2	Fall	○	1	Lecture	A-1
		M0181000	Fundamentals of Organic Chemistry	2	2	Fall	○	1	Lecture	A-1
		M0185000	Fundamentals of Analytical Chemistry	2	2	Spring	○	1	Lecture	A-1
		M0189000	Fundamentals of Physical Chemistry	2	2	Spring	○	1	Lecture	A-1
		M0193000	Biochemistry	2	2	Fall	○	1	Lecture	A-1
		M0197000	Materials Science	2	2	Fall	○	1	Lecture	A-1
		M0201000	Materials for Energy	2	2	Fall	○	1	Lecture	A-1
		M0205000	Solid State Chemistry	2	2	Spring	○	1	Lecture	A-1
		M0209000	Nanotechnology	2	2	Spring	○	1	Lecture	A-1
		M0213000	Polymer Chemistry	2	2	Spring	○	1	Lecture	A-1
		M0217000	Techniques of Analysis for Urban Planning Research	2	2	Fall	○	1	Lecture	A-1
		M0105000	Hydrodynamics	2	2	Spring	○	1	Lecture	A-1
		M0109000	Combustion Engineering	2	2	Spring	○	1	Lecture	A-1
		M0113000	Semiconductor Materials	2	2	Spring	○	1	Lecture	A-1
		M0117000	Applied Chemistry Laboratory	3	2	Spring	○	2	Experiment	A-1

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Major Courses										
Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Specialized Courses	Specialized Courses	M0121000	Applied Mathematics	2	2	Spring	○	2	Lecture	A-1
		M0125000	Experiments in electronic engineering course	2	2	Spring	○	2	Experiment	A-1
		M0129000	Seminar on Information and Communications Engineering	2	2	Fall	○	1	Seminar	A-1
		M0133000	Interaction Design	2	2	Spring	○	1	Lecture	A-1
		M0137000	Soil Mechanics	2	2	Spring	○	1	Lecture	A-1
		M0141000	Advanced Techniques for Materials Characterization	2	2	Fall	○	1	Lecture	A-1
		M0145000	Biophysics	4	2	Spring	○	2	Lecture	A-1
		M0149000	Introduction to Relativity	2	3	Fall	○	1	Lecture	A-1
		M0153000	Biophotonics	2	2	Fall	○	1	Lecture	A-1
		M0157000	Nanostructure Physics I	2	2	Fall	○	1	Lecture	A-1
		M0161000	Functional Materials	2	2	Fall	○	1	Lecture	A-1
		M0165000	Nanostructure Physics II	2	2	Spring	○	1	Lecture	A-1
		M0169000	Magnetism and Magnetic Materials	2	2	Spring	○	1	Lecture	A-1

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Natural Science, Mathematics and Computer Science										
Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Basic Mathematics and Natural Science	Physics	M2030000	Mathematical Methods in Physics and Engineering	2	1	Fall	○	1	Lecture	A-1
		M2041000	Physics: Electromagnetism	4	2	Fall	○	2	Lecture	A-1
		M2025000	Basic Physics	2	1	Fall	○	1	Lecture	A-1
		M2029000	Methodics in Physics	2	1	Fall	○	1	Lecture	A-1
		M2033000	Physics: Mechanics	2	1	Spring	○	1	Lecture	A-1
		M2037000	Physics: Thermodynamics	2	1	Spring	○	1	Lecture	A-1
		M2045000	Physics: Fluidodynamics, Oscillations and Waves	2	2	Fall	○	1	Lecture	A-1
		M2049000	Physics: Optics	2	2	Spring	○	1	Lecture	A-1
		M2053000	Materials Physics	2	2	Spring	○	1	Lecture	A-1
	Mathematics	M2001000	Pre-calculus	2	1	Fall	○	1	Lecture	A-1
		M2005000	Calculus I	4	1	Fall	○	2	Lecture	A-1
		M2009000	Calculus II	4	1	Spring	○	2	Lecture	A-1
		M2017000	Linear Algebra	4	1	Spring	○	2	Lecture	A-1
		M2013000	Calculus III	4	2	Fall	○	2	Lecture	A-1
		M2021000	Probability and Statistics	2	2	Spring	○	1	Lecture	A-1
	Chemistry	M2057000	Basic Chemistry	2	1	Fall	○	1	Lecture	A-1
		M2061000	General Chemistry A	2	1	Fall	○	1	Lecture	A-1
		M2065000	Instrumental Analysis	2	1	Spring	○	1	Lecture	A-1
		M2069000	General Chemistry B	2	1	Spring	○	1	Lecture	A-1

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Natural Science, Mathematics and Computer Science										
Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Computer Science	Computer Science	M2073000	Introduction to Multimedia technology	3	3	Fall	○	2	Lecture	A-1
		M2081000	Web design and programming	3	1	Spring	○	2	Lecture	A-1
		M2085000	Introduction to Computer Networks	3	1	Fall	○	2	Lecture	A-1
		M2089000	Information Literacy	2	1	Fall	○	1	Lecture	A-1
		M2093000	Introduction to Information Processing	2	1	Spring	○	1	Lecture	A-1
		M2077000	Introduction to Computer Programming (Python, R, C, Java)	2	1	Fall	○	1	Lecture	A-1

7 Course Distribution List, IGP, Enrolled in 2021 Spring

Liberal Arts										
Course	Course Group	Course Code	Name of Course	Number of Credits	Eligible Year	Terms of Classes are held	Types of Credits	Number of Classes per week	Types of Classes	Academic and educational goals
Communication, Social Science and Humanities	Communication, Social Science and Humanities	M3025000	Science and Religion in Japan	2	1	Spring	○	1	Lecture	B,E
		M3017000	Contemporary Society : Changes in Japanese Work Culture	2	1	Spring	○	1	Lecture	B,E
		M3021000	Career Design : Developing yourself for your future career	2	1	Spring	○	1	Lecture	B,E
		M3001000	Usage of Research Tools & Research Writing	2	1	Spring	○	1	Lecture	A-1
		M3005000	Academic English Writing for University Coursework	2	1	Fall	○	1	Lecture	A-1
		M3009000	Making Effective Presentations	2	1	Spring	○	1	Lecture	A-1
		M3013000	Diversity and Cultures of other countries	2	1	Fall	○	1	Lecture	B
		M3029000	Engineering Ethics	1	1	Spring	◎	1	Exercise	C
Physical Education and Health	Physical Education and Health	M3045000	Golf	2	1	Spring	○	1	Technical Training	E
		M3049000	Table tennis (Sports communication)	1	1	Fall	○	1	Technical Training	E
		M3053000	Soccer (Sports communication)	1	1	Fall	○	1	Technical Training	E
		M3033000	Biomechanics of human movement	2	1	Fall	○	1	Lecture	E
		M3037000	Volleyball (Technical)	1	1	Spring	○	1	Technical Training	E
		M3041000	Badminton (Technical)	1	1	Spring	○	1	Technical Training	E
University-wide Common Courses	University-wide Common Courses	M3057000	Japanese Language I	2	1	Fall	○	1	Lecture	B
		M3061000	Japanese Language II	2	1	Spring	○	1	Lecture	B
		M3065000	Japanese Language III	2	2	Fall	○	1	Lecture	B

8 Unique Courses

SDG Education Course

• Sustainable Development Goals (SDGs)

The sustainable development goals were adopted at the UN summit in 2015 as action plan to be implemented by 2030 globally for people, planet, and prosperity. In Japan as well as in other countries worldwide, the governments, municipalities, companies and universities are gearing up the SDG programs, and the universities are required to implement **education and research programs on SDGs**. Working on SDGs is the responsibility of the university, but at the same time, it contributes to "Fostering Engineers and Scientists who can Learn from and Contribute to the World," winning competitive funds for research and education, and ultimately enhancing the brand power of the university.

Goal 1. End poverty in all its forms everywhere
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3. Ensure healthy lives and promote well-being for all at all ages
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5. Achieve gender equality and empower all women and girls
Goal 6. Ensure availability and sustainable management of water and sanitation for all
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10. Reduce inequality within and among countries
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12. Ensure sustainable consumption and production patterns
Goal 13. Take urgent action to combat climate change and its impacts*
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

• Policy of SIT on SDGs

SIT works on SDG programs on a school-wide basis. SDGs encompass a wide range of disciplines. SIT already has organizations to promote gender equality, SGU programs and academic-industrial alliance, with each already following the PDCA cycle. As university, the administrative departments and teaching organizations are promoting activities on their own incorporating SDGs.

We will visualize the key indicators and progress statuses of SDGs as IR information to communicate to parties both within and outside SIT, which will also serve as guideline for relevant activities on a school-wide basis.

The "Environment Education Courses," which SIT promoted until fiscal 2019, are now upgraded to the "SDG Education Courses." **These Courses will have clear explanations on the syllabus what specific goals they correspond to**, thus increasing interest of the students in the SDGs and promoting the SDG programs of SIT.

SIT will show more clearly to the audiences both within and outside SIT the relationship of research and education activities of SIT with the SDGs, enhancing the SDG education and researches. SIT will **place the logo of the relevant goal on the cover page of the slide presentations and on the posters** of the graduation, master's and doctor's research.

References
Ministry of Foreign Affairs: https://www.mofa.go.jp/policy/oda/sdgs/index.html
United Nations: https://sdgs.un.org/2030agenda

Region-oriented Courses

• Project of "Center of Community (COC)" of Ministry of Education, Culture, Sports, Science and Technology and Region-oriented Courses

SIT has been chosen to participate in the "Project of Center of Community: Human Resources Development through 'Town Planning' activities and 'Designing & Manufacturing' activities" (one of the 52 successful applicants out of 319, or one of the 15 successful private university applicants out of 180).

The reason that the government is promoting the project is that, amidst the difficult circumstances that Japan is currently facing due to rapid aging of the society, fading local communities, progressing global borderlessness and intensifying global competition owing to rising emerging economies, it is urgently required to develop and promote distinctive projects initiated in various regions nationwide for creating social and industrial innovations. In such a context, the universities have a great responsibility of fostering human resources that can play the key role in renovating the society. An ideal university would be one where students learn solidly and grow the capabilities to forge the path proactively both for the society and for themselves, which would form the core for regional revitalization, and which would play the role of intellectual base for the society, among others.

SIT has the slogan "Fostering Engineers and Scientists Who Can Learn From and Contribute to the World" as its foundation spirit, and is vigorously promoting educational, research and social contribution activities on a school-wide basis. The objective of the project is just in line with the foundation spirit of SIT, depicting the ideal university, in our understanding, as "ground for practical training, which exists together with the region and which fosters students together with the region." We therefore applied for the project and were accepted.

Specifically, in the educational curriculum, SIT will establish "region-oriented courses" that cover and try to address regional issues. By making students study regional cases, these classes will serve as ground for many students to develop their abilities and skills as practical engineers.

• Definition of Region-oriented Courses

1. Region-oriented Class Course
A region-oriented class course mainly means a lecture in the classroom, taking up regional cases and issues.

2. PBL in Coordination with Region
A PBL in coordination with region mainly means hands-on practices such as fieldwork, with a plurality of project groups of students reviewing regional cases and issues.

3. Region-oriented Graduation, Master's and Doctor's Dissertation
A region-oriented dissertation means one that has regional cases and issues as.

Active-learning Courses

• Active-learning Courses A, B and C

Today, the performance indicator is changing substantially in terms of the main force and outcomes of university education: from “what is taught” to “what is learned.” This means that the universities are required to provide not only the traditional classroom lectures for students to acquire knowledge: they also must provide the intellectual training to the students to develop their abilities to utilize the knowledge they have learned.

The following is an excerpt from the May 2013 recommendation of the Education Rebuilding Implementation Council that was set up by the Japanese government.

In a society where more talented and varied human resources are required, the universities need to develop the environment where the education contents are enhanced and the students can thoroughly devote themselves to studying. (snip) The universities will need to seek transformation of the education quality-wise, for fostering human resources with abilities considered necessary for members of the work world such as “basic skills for working people” and “basic and versatile abilities,” including the abilities to identify issues, seek solutions, and deliver results. This will require classes with active participation and learning of students (active learning), interactive classes, etc.. Also, it is necessary for the universities to improve school-wide education management such as securing and increasing the time required for the students to learn including preparation and follow-up of classes, visualizing their learning outcomes, organizing the education processes and establishing systematic education. Finally, the universities are required to provide strict assessment of the achievements of the students. The government will concentrate its support to the universities conducting these programs, prompting them to disclose the relevant information. The companies and government alike value varied learning and experience of the students.

The Shibaura Institute of Technology was chosen for the “Acceleration Program for University Education Rebuilding” of the Ministry of Education, Culture, Sports, Science and Technology in FY 2014. In the program, under the spirit of foundation of SIT “Fostering engineers and scientists who can learn from and contribute to the world,” SIT sets the educational target of fostering “Engineers Capable of Contributing to the World (Society), Equipped with Comprehensive Problem Solving Abilities,” thus promoting proactive learning of the students and visualization of learning outcomes.

SIT is developing the environment for the students to learn enthusiastically through experiments, exercise, research and PBL (project/problem-based learning), and building structured and systematic educational program for four years of study at all the colleges. SIT will also promote introduction of the interactive system that coordinates with the learning management system (LMS) that enables us to promote active learning in lectures thereby motivate students to learn.

In order to further introduce and enhance the active learning, SIT established the categories “Active-learning Course A,” “Active-learning Course B” and “Active-learning Course C” in FY 2015 and added these descriptions on the syllabus, which are defined as follows:

Active-learning Course A:
The course consists mainly of lectures with active participation of the students;

Active-learning Course B:
Approximately half the lectures are those with active participation of the students;

Active-learning Course C:
The course has at least one time slot with active participation of the students.

Courses for Fostering Social and Vocational Self-reliance

Career Education of SIT and Courses for Fostering Social and Vocational Self-reliance

○ You all will one day graduate the university or complete graduate school to enter the world of work, playing various roles for living. The studies at the university are therefore preparation to be active in the society. Once you are in the world of work, there will be numerous turning points in your life, requiring you to make important decisions. In order to make good choices at the turning points, you will need to continue learning throughout your lifetime. It is therefore one of the major objectives of the university education to have you acquire the attitude to continue learning throughout your lifetime and to learn the method for doing so.

○ In order to develop the ability to be active in the society and to continue learning throughout lifetime, the curriculum for the specialized courses is designed to be systematic from the viewpoint of respective specialized fields. In the liberal arts and foundation courses, the curriculum is designed so that you can learn a wide range of courses from a different viewpoint, such as the framework of the world or society. Everyone, however, differs in things one want to do and dreams to realize in the future. The paths to the future, therefore, must be different from one to another. Accordingly, it is important for you to occasionally look back at what you have been learning in consideration of your future and to adjust your study plan. This is how to proceed with your learning **from the viewpoint of career**.

○ In order to help your learning from the viewpoint of career, the syllabus for each class course has indications concerning the thought of the faculty member in charge on fostering the abilities to be active in the society. The abilities that are necessary for you to be active in the society from the viewpoint of career is called **social and vocational self-reliance abilities**, which consist of the four abilities on Table 1. These four abilities also correspond to the basic abilities measured in the PROG test that you take regularly or as required. The syllabus indicates if fostering of any of these abilities are taken into consideration in the class course. Please use this information about the social and vocational self-reliance when looking back at what you have learned or adjusting your study plan from the viewpoint of career.

○ In the rapidly changing world today, it is necessary to train, in addition to the knowledge and skills in the specialized field, the “essential skills of a working adult” and “generic skills,” including “ability to step forward (ability to learn proactively, ability to execute, etc.),” “ability to think through (ability to identify and solve problems, etc.),” and “ability to collaborate with various people (ability to work in team, ability to communicate, ability to make presentation, etc.).” Recently, companies are giving more and more emphasis on these abilities when recruiting human resources.

○ By learning the “active learning courses” and “courses for fostering social and vocational self-reliance” of the career education found in the programs of SIT, you can learn the essential skills of a working adult and generic skills.

Relationship between Social and Vocational Self-reliance and PROG

Social and Vocational Self-reliance	PROG		Definition
Knowledge application abilities	Literacy	Collecting information	Ability to specify adequate information source from broad perspectives, collect/inspect the information with adequate method, and appropriately organize/ save the information for identifying and solving problems
		Analyzing information	Ability to organize/analyze facts/information objectively from many directions, without self-assumption/speculation, grasp hidden structure that integrates them and determine the essence
		Identifying problems	Ability to view the issue from diverse and broad perspectives, consider underlying mechanisms and causes, and identify problems that need to be solved
		Forming strategies	Ability to form strategies for problem solution processes, considering various conditions and constraints, imagining possible risks and countermeasures on the process
Teamwork skills	Competency	Relating with others	Ability to understand diversity and look from the other person's perspective to build trust and develop human relationship. Also ability to proactively build human relationship
		Collaborating with others	Ability to share information, motivate others to collaborate working on the problem, and guide others as leader to foster motivation of team members and junior fellows
		Managing team	Ability to express one's own opinions while respecting different opinions, constructively promote discussions and negotiations
Personal skills		Self-control	Ability to know one's own emotions and feelings in a stressful situation, studying the case positively to challenge difficulties
		Self-confidence	Ability to understand one's own identity including strengths and weaknesses, be confident of oneself and at the same time take opportunities to transform oneself
		Behavior control	Ability to outwork on the project tenaciously and responsibly while setting one's own rules and regulations, and continue working on a project that is considered necessary for oneself
Problem-solving skills		Identifying problems	Ability to collect information from adequate information source with adequate method from broad perspectives, view the issue from diverse and broad perspectives, consider underlying mechanisms and causes, and identify problems that need to be solved
		Planning solutions	Ability to form strategies for problem solution processes, considering various conditions and constraints, imagining possible risks and countermeasures on the process
		Implementing solutions	Ability to initiate action for achieving the objective, adjusting the overall moves in line with forecast to correct actions early

○ For example, the diagram below indicates that, by learning these courses, your essential skills of a working adult and generic skills will improve. We hope you students draw your learning plans and so that you not only acquire knowledge and skills but also develop essential skills of a working adult, referring to the curriculum map of your department.

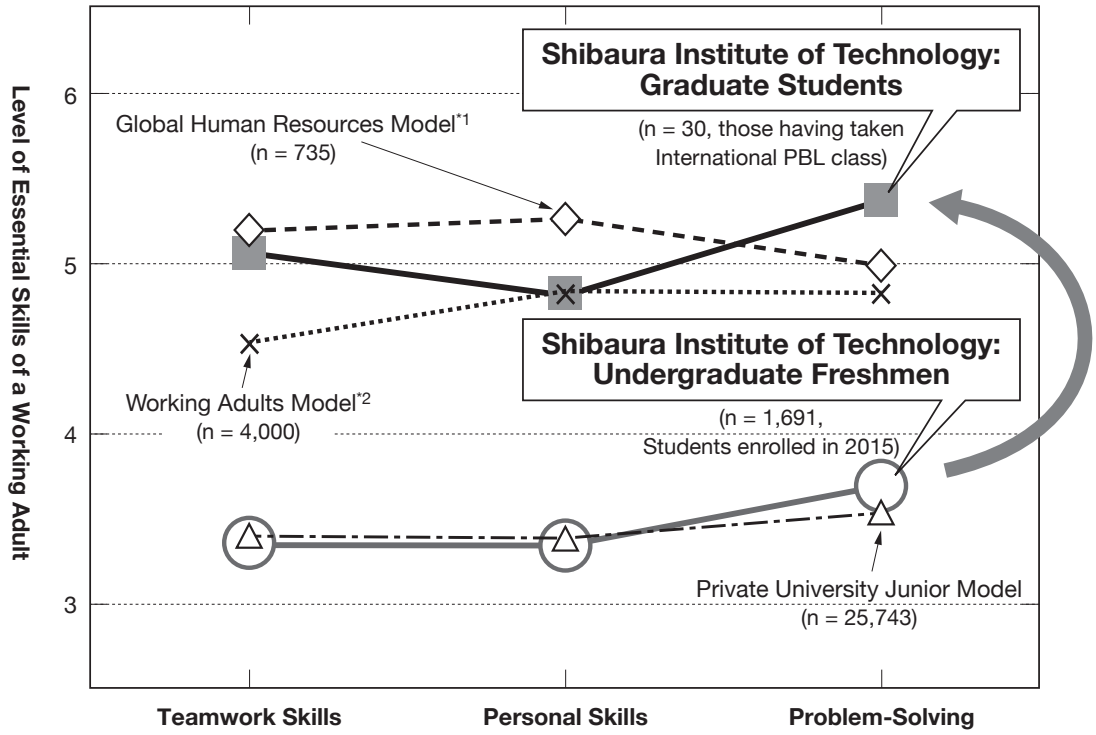


Diagram: Example of Improvement in Essential Skills of a Working Adult of Students Having Learned "Active Learning Courses" and "Class Courses for Fostering Social and Vocational Self-reliance"

*1 Global Human Resources Model: Japanese businesspersons aged between 25 and 49, who have an experience of managing foreigners in Asia for two or more years and who are satisfied with his/her management

*2 Working Adults Model: Young businesspersons in their late 20s or early 30s, who are section managers or are managing a team

Use of Shibaura Institute of Technology Student Support Tool S*gsot Portfolio

○ With S*gsot Portfolio, you can compare your PROG score with the model score for the industry you consider as a place of employment, which is the average score of your seniors at the time they got the informal job offer from an employer in the industry. This gives you an idea which abilities of the social and vocational self-reliance are satisfactory and which call for further enhancement.

○ There are immense possibilities. Please use the tool frequently to proactively build your career, facing the future.