

Department of **Transdisciplinary Science and Engineering**

3rd (2022B) and 4th (2021B) Year GSEP student orientation

April 4, 2024
GSEP Faculty
(Naoya Abe, GSEP Chair)

1

Welcome back to the campus!

Common requirement for graduation in Tokyo Institute of Technology

- · See Table 2 of "Study Guide".
- There is a critical change about the graduation requirement between 21B(new 4th year) students and 22B (new 3rd year) students).
- For 21B students, IRP is compulsory and Advanced Independent Research Project (A-IRP) is optional.
- For 22B students, both IRP and A-IRP are compulsory and students can start IRP only from April under the standard graduation procedure. A-IRP can be started only after student passes her /his IRP.

3

3

Common requirement for graduation in Tokyo Institute of Technology

 Liberal arts course group are amended for only GSEP students. Review the requirements through the following link:

https://www.titech.ac.jp/english/enrolled/life/resources/pdf/agreement.pdf

Lecture schedule in 2024 Spring Semester 2024 First Quarter Classes: April 6-May 27, May 30-June 1 Preparation period for classes April 4-April 5 May 2 Monday classes will be held May 25 No classes due to Homecoming Day Quarter-end exams and makeup classes for 1Q May 28-29, June 3-8 *Jun 4,5: Preparatory day for courses that hold weekly classes Second Quarter Classes: June 10-July 29 Quarter-end exams and makeup classes for 2Q July 30-August 6 *August 6: Preparatory day for courses that hold weekly classes Summer break: August 7-September 30

	es: October 3-November 21,23,25-27
October 2	Preparation period for classes
October 17	Monday classes will be held
November 2-5	No classes due to Tokyo Tech Festival
November 23	Saturday classes will be held
November 22,28- December 5	Quarter-end exams and makeup classes for 3Q *November 29, December 5: Preparatory day for courses that hold weekly classes
Winter break: Decen	nber 28-January 3, 2025
Classes in 2025:Janu	ary 4-February 3
	No classes will be held due to University Admission Common Test (大学入学共通テスト) and preparation
Classes in 2025:Janu	No classes will be held due to University Admission Common Test (大学入学共通テスト)

st Q	uarte	er 2024 (For GSEP 3rd	Year Students)				(Last updated Mar 22, 202
Tim	e	Mon	Tue	Wed	Thu	Fri	Intensive
8:50 9:40 10:30	2		Research Opportunity in Laboratories (TSE)[E]*** TSE Z 301 02		Oral Expression in English 9 LAEE 331 M-1436 (H119A) 1 credit	Project Management TSE CADA	Japanese 9 (G329)** LALIBOT-01 1 credit
10:45 11:35 12:25	4	Commmunication and network 15E A322 11-254 (124) 2 credits	Each liaboratory Zorecits (Absorptional aviolation aviolation time stots)		Communication and network TSE A322 I1-254 ()124) 2 credits	isnikawadai 4 room 602-05 2 credits	Advanced independent firecent Project 51c (15t) 15c 2571-02 1 crests
12:25 13:30	Lunch Break						
13:30 14:20 15:10	5	Trandisciplinary Engineering Experiment A[E]	Basic theory of regional and global environment 1 TSE A339 M-135 2 credits	English Speech Seminar 9 LAE.E371 W3-301 (W331) 1 credit		Basic theory of regional and global environment 1 TSE A335 M-135 2 credits	
15:25 16:15 17:05	7	TSEASS1-02 各研究室 1 credit				Special Lecture: Introduction to edit online course creation LAHH310 W9-322 (W931) 1 credit	
		Please refer to separate handout re Only students who are eligible to ap Course Registration Period	should try to take the similar course payding Japanese Language courses ply for early graduation can take this - Friday. April 19, 2024 13:00			Color Code TSE (Ecompulsory) TSE Basic Science & Tech. (Compulsory) Basic Science & Tech. English Bapaners Humanities & Social Science Breacth	

		202 . (. 0., 002.	3rd Year Students)		4.0		(Last updated Mar 22, 202
Time	е		Tue	Wed	Thu	Fri	Intensive
8:50 9:40 10:30	1		Introduction to metallurgy of engineering materials TSE.A321 S4-202 (S422) 1 credit		Oral Expression in English 10 LAE.E332 M-143A (H119A) 1 credit		Japanese 9 [GSEP]** LAJ.J301-02 1 credit
10:45 11:35 12:25	3	Special Lecture: Urban Space in Literature and Cinema LAH.H312 M-134 1 credit	Unit operations TSE.A303 M-135 2 credits		Special recture: Introduction to online course video creation LAH.H311 W9-322 (W931)	Unit operations TSE.A303 M-135 2 credits	International Engineering Design Experiences (Sprin Semester) TSE:A342 2 credits
12:25 13:30	Lunch Break						Advanced independent Research Project SIc (TSE TSE-7371-04 1 credit
13:30 14:20 15:10	5	Basic Nuclear Engineering 2 TSE.A338 S4-203 (S423) 1 credit	Mechanics of Strength TSE A302 S3-215 (S321) 1 credit	English Speech Seminar 10 LAE.E372 W3-301 (W331) 1 credit	Fundations of Energy Systems Design TSE,A343 S4-203 (S423) 1 credit	Basic Nuclear Engineering 1 TSE.A337 S4-201 (S421) 1 credit	
15:25 16:15 17:05	7		Basic theory of regional and global environment 2 TSE.A336 S4-203 (S423) 2 credits			Basic theory of regional and global environment 2 TSE.A336 S4-203 (S423) 2 credits	
						TSE (Compulsory)	
						TSE Basic Science & Tech. (Compi Basic Science & Tech. English Iapanese Humanities & Social Science	ulsory)
						lapanese Humanities & Social Science	

Independent Research Project and Advanced Independent Research Project for the 4th year students

- For the students of 21B, if you are eligible for IRP, you will be notified by the student division. Check Tokyo Tech portal to see the eligibility of IRP by your own too.
- For students of 22B, IRP can be started <u>from 1Q</u> (April) only under standard graduation
- For students of 22B, after completing IRP, under the standard graduation procedure, students are required to take Advanced Independent Research Project (A-IRP).
- For IRP and A-IRP, student's understanding and course work on research ethics is also checked.

9

GSEP Japanese Language and Culture Courses 2024

GSEP students must obtain the right 9 credits of Japanese language and culture courses to receive your bachelor's degree.

[Course list]

100-level (1st year), Beginner level
Japanese 1(1Q): Tuesday 13:30~ and Thursday 15:25~
Japanese 2(2Q), 3(3Q) and 4(4Q): Tuesday 13:30~ and Thursday 10:45~

200-level (2nd year), Pre-intermediate level Japanese 5(1Q), 6(2Q), 7(3Q) and 8(4Q): Wednesday 13:30~

300-level (3rd year) Japanese 9(1-4Q)

GSEP student Orientation and Consultation for Japanese language

Day and time: 13:30-14:40, Apr. 4 (Thursday) Place: W1-104, West Bldg.1, Ookayama campus

*2nd-year students and above with higher Japanese language levels are encouraged to participate in this consultation.

Details could be found at:

https://docs.google.com/document/d/1JeZ1WND5p9KJ6WC3leB0kilMw6P5zQbn/edit

Japanese Class

2) For beginner learner (B1 and B2 level):

The first class for Japanese 1 will be held on April 9th, 13:30-.

Classes will be held face-to-face at Ookayama Campus.

2) For students who have studied Japanese before (B3~ level): according to your Japanese language level, the coordinator will recommend you attending one or two intermediate-level classes open for graduate students.

Consultation session will be held after the orientation on Apr. 3.

Procedures: Once you are allowed to reserve the class, reserve a Japanese class that is suitable for your Japanese level on the JCOS, select "Japanese 1-9" from a pull-down menu of "credit". Then register for Japanese 1-9 (undergraduate courses) on the Kyomu Web System. For credit approval, the following courses are recommended: Basic Japanese 3 or 4; and Intermediate Japanese 1, 2, 3, 4, 5, 6, 7 or 8.

Guide (Slide 5-7):

 $\underline{https://docs.google.com/presentation/d/1sz20whUI8n2CaPjyBaC9CbRDJOuoOJQF/edit?usp=sharing\&ouid=102660635403088944014\&rtpof=true\&sd=true$

4. Japanese 9 (300-level)

You should obtain "Japanese 9" credit by attending one of the I3 or higher levels of Intermediate Japanese courses for graduate students; and register "Japanese 9" in the Kyomu web system. Note that we will not open any class named "Japanese 9".

11

References:

Japanese courses for international graduate students https://js.ila.titech.ac.jp/~web/japanese.html

Japanese course lists for graduate students https://js.ila.titech.ac.jp/~web/courselist.html

Reservation and registration procedure of Japanese language classes for graduate students

https://js.ila.titech.ac.jp/~web/japanese.html#procedure

Inquiry about Japanese courses: basic@js.ila.titech.ac.jp

The remaining slides are for the new 3rd year students

13

13

Tentative

Laboratory (research group) assignment

- Students are assigned to the laboratory where they will conduct their <u>TSE.Z389</u>: <u>Independent Research Project (IRP)</u> in mid-December of their junior year after completing <u>TSE.Z381</u>: <u>Research opportunity in Laboratories (TSE)</u> in the 3rd quarter.
- By belonging to a laboratory before the start of the IRP from the 4th year, students are able to conduct in-depth research.
- In a laboratory, students follow the instructions of the principle investigator (PI) = professor or associate professor.
- Eligibility for the assignment
 - Students who satisfy the following two requirements at the same time
 - Grade: 3rd year or above after the entrance to Tokyo Tech
 - Earned credits: students must have earned 62 credits or more by the 2nd quarter of the year of the assignment. Eligible credits are due to the courses that are counted toward the total number of credits required for graduation.

Tentative

Laboratory assignment rule for GSEP students

- · Possible affiliations
 - All labs led by professors and associate professors, who are affiliated with TSE Department as the primary appointment.
 - The labs led by the instructors for "Biological Science", which is offered by Dept. of Life Science and Technology (DLST). Note that the students who join DLST labs still belong to TSE department (no affiliation change). Assignment to DLST only means that the students do IRP under a DLST advisor.
- Number of allowed students joining laboratories
 - 1 student for a lab.
 - Total number of slots for the labs at DLST are limited up to two and 1 student for a lab.
- Grading criteria for the assignment
 - Based upon the GPT up to the 2nd quarter of the third year
 - However, based on each student's self-report and the submission of official transcript issued by Tokyo Tech, 0.01 point will be added to the GPT for each credit earned in courses offered in Japanese (excluding language courses)

15

Laboratory assignment rule for GSEP students (2)

- Students who are eligible for laboratory affiliation should submit up to 10 laboratory choices in order of preference.
- Priority to select laboratories are based on the ranking of the students. Rank is based on the grading criteria mentioned earlier (i.e., GPT).

Tentative

Important notes about lab assignment

- A preliminary survey of the laboratory choices will be conducted in the 3Q. The result will be public. Available laboratories where students can join will be listed.
- If a student applies for early graduation after 3 years of study and is
 provisionally approved, he/she will be assigned to a laboratory from July
 or September of his/her junior year, and will have priority in selecting a
 laboratory. For this case, the number of students who belong to a
 laboratory is determined separately. However, this option is strictly
 evaluated and rarely conducted.
- For students who have studied abroad for a long period of time or transfer students, consideration will be given to relaxing the credit requirements for laboratory affiliation.
- If a student has been a member of a laboratory but is not eligible to apply for IRP in the 3rd quarter of the 4th year, the student may apply for reassignment to the laboratory. If the application for reassignment is approved, the student's laboratory affiliation will be decided based on the student's academic performance in the year of application.

17

Requirements to apply for IRP

- · University-wide requirements applied.
- In addition to the above, the following TSE department conditions must be met.
 - The student must have earned at least 28 credits in the compulsory TSE major courses (◎) from among the courses.
 - 2. The student must have completed <u>TSE.Z381</u>: Research opportunity in Laboratories (TSE).
 - 3. Students must have earned at least 44 credits from the TSE major courses.
- Please check the PDF below for GSEP-specific requirements:

https://www.titech.ac.jp/english/student/pdf/20b.pdf

TSE.Z381: Research opportunity in Laboratories (TSE)

- The purpose of this course is to provide students with an opportunity to be exposed to "research" at an early stage and to develop a concrete interest in graduate school education, which is highly specialized education.
- This is a required course in order to apply for <u>TSE.Z389</u>: <u>Independent</u> Research Project (IRP)
- A group of students visits four laboratories.
 - The four laboratories to be visited are randomly selected by the department.
 - To be taken in 3Q.
- Students may take the course in 1Q if they meet one of the following conditions.
 - Students who are provisionally approved for early graduation after 3 years of study.
 However, this option is strictly evaluated and rarely conducted.
 - The student has a concrete plan to study abroad or internship for more than one
 month in the 3Q, and is in the process of applying for such an internship or studyabroad program. Appropriate evidence must be submitted.
 - Students who have not completed this course (TSE.Z381) in the third year or later since they joined the department, including those who failed in the previous year.

19

19

University-wide requirements

Category		Minimum	number of credits required		
Courses		department ation	Eligibility for independent research project for a bachelor's degree	Eligibility for graduation	
Humanities and Social Science Courses English Language Courses	A total of 5 credits consisting of 2 credits in 100-level required courses 3 credits in 100-level restricted elective courses (1 credit each from the humanities, social studies, and transdisciplinary studies)	31 credits - A total of 31 credits - Consisting of 17 credits from the total of 23 credits shown in the column to the left and, including those to the left, credits in 100-	9 credits - 2 credits in 100-level required courses - 3 credits in 100-level restricted elective courses (one credit each from humanities, social sciences, and transdisciplinary studies) - 4 credits from 200-level and 300-level required courses and restricted elective courses	13 credits - 2 credits in 100 level required courses - 3 credits in 100 level restricted elective courses (1 credit each from humanities, social sciences, and transdisciplinary studies) - 4 credits in 200 level restricted elective courses - 2 credits in 300 level required courses - 2 credits in 300 level restricted elective courses	
	A total of 4 credits in 100- level required courses	level courses (excluding separately prescribed courses)	6 credits - 4 credits in 100-level required courses - 2 credits in 200-level and 300-level required courses	9 credits 4 credits in 100-level required courses 4 credits in 200-level required courses 2 credits in 300-level required courses	
Basic Science and Technology Courses	A total of 14 credits in 100- level required		14 credits • 14 credits in 100-level required courses	14 credits · 14 credits in 100-level required courses	
courses Second Foreign Language Courses		-	2 credits - 200 level and 300-level restricted elective courses Students will be asked to choose one or two languages to study. 2 credits can be attained by learning the same two different languages of (1 credit each)	4 credits 200 level and 300 lev restricted elective courses Students will be asked choose one or two languages to study. 4 credits can be attain by learning the same language, or by learnin two different language (2 credits each).	
Research Related Courses			2 credits • 2 credits in research opportunity courses	8 credits - 2 credits in research opportunity courses - 6 credits in independent research project for a bachelor's degree	

University-wide requirements (continued)

Other major courses		Determined for each standard curriculum	Determined for each standard curriculum	See nex
Total	31 credits above * The upper limit for the required courses and restricted elective courses in humanities and social science courses described above is 5 credits, the upper limit for required English language courses is 4 credits, and the upper limit for required basic science and technology courses is 14 credits.	110 credits or more that satisfy the above requirements	124 credits or more that satisfy the above requirements	

Note: Credits attained from the Japanese language and culture courses, teacher education courses, and some global awareness and other breadth courses do not count toward the minimum of 31 credits required to be eligible for department affiliation. (Credits from the wellness courses can be counted as part of the required credits.)

Credits attained from the teacher education courses do not count toward the minimum of 110 credits required to be eligible for the independent research project or the minimum of 124 credits for graduation eligibility. (Credits from the wellness courses, global awareness and other breadth courses, and Japanese language and culture courses can be counted as part of the required credits.)

Please check the following pdf for the GSEP students in HSS and language course work. https://www.titech.ac.jp/english/student/pdf/20b.pdf

21

21

Eligibility for graduation by TSE curriculum (in addition to university-wide requirements)

- © 30 credits from the Table of the courses for TSE undergraduate major
- For the students with 21B: Completed Laboratory Opportunity for Research (TSE), Independent Research Project (IRP)
- More than 54 credits from the Table of the courses for TSE undergraduate major
- · More than 124 credits in total

Eligibility for graduation by TSE curriculum (in addition to university-wide requirements)

- © 30 credits from the Table of the courses for TSE undergraduate major
- For the students with 22B: Completed Laboratory Opportunity for Research (TSE), Independent Research Project (IRP) and Advanced IRP (A-IRP).
- IRP must be taken first from April only and then A-IRP can be taken.
- More than 54 credits from the Table of the courses for TSE undergraduate major
- More than 128 credits in total

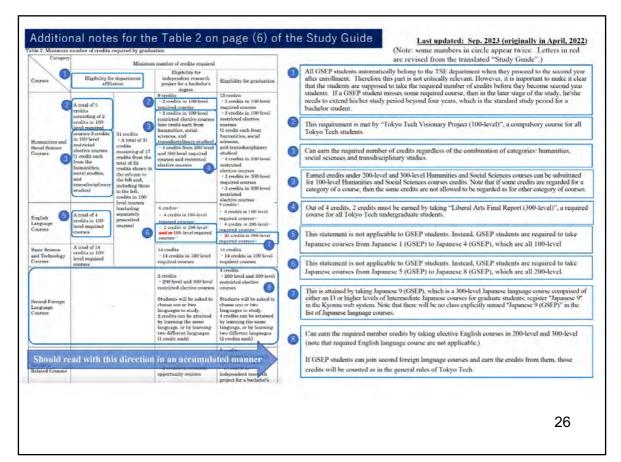
23

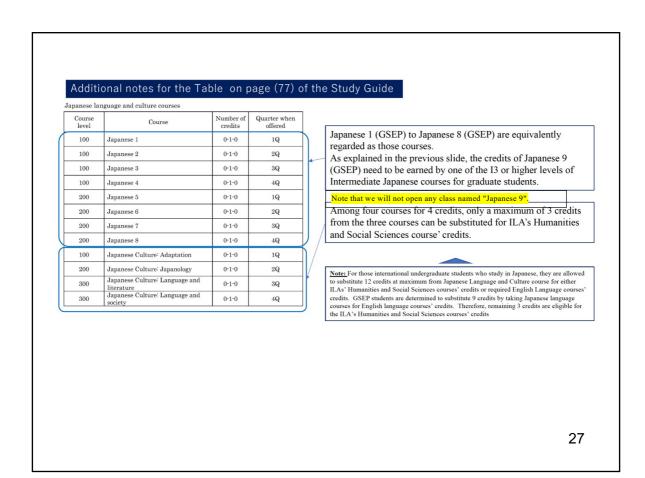
23

About early graduation

- Graduation with 3 years study or with 3.5 years study
- Eligibility conditions for early graduation
 - At the end of 2nd Quarter of the third year or at the end of 4th Quarter of the third year, GPT is more than 3.5
 - All requirements are met to start IRP

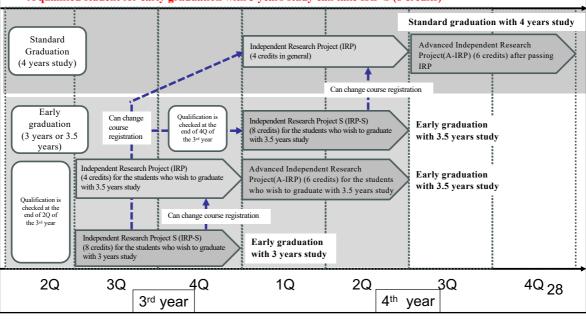
Category	Minimum number of credits required										
Courses		r department ation	Eligibility for independent research project for a bachelor's degree	Eligibility for graduation							
Humanities and Social Science Courses	A total of 5 credits consisting of 2 credits in 100-level required to in 100-level restricted elective courses (1 credit each from the humanities, social studies, and transdisciplinary studies)	31 credits - A total of 31 credits consisting of 17 credits from the total of 23 credits shown in the column to the left and, including those to the left, credits in 100-level courses	9 credits • 2 credits in 100-level required courses • 3 credits in 100-level restricted elective courses (one credit each from humanities, social sciences, and transdisciplinary studies) • 4 credits from 200-level and 300-level required courses and restricted elective courses	13 credits 2 credits in 100-level required courses 3 credits in 100-level restricted elective courses (1 credit each from humanities, social sciences, and transdisciplinary studies) 4 credits in 200-level restricted elective courses 2 credits in 300-level required courses 2 credits in 300-level required courses 2 credits in 300-level restricted elective courses 9 credits in 300-level required courses 10 credits in 300-level restricted elective courses							
English Language Courses	A total of 4 credits in 100- level required courses	A total of 4 credits in 100- level required courses	A total of 4 credits in 100- level required courses	(excluding separately prescribed courses)	separately prescribed courses)	separately prescribed courses)	separately prescribed courses)	separately prescribed courses)	separately prescribed courses) - 4 credits in 10 required courses - 2 credits in 200 and 300 level requires	• 2 credits in 200-level	4 credits in 100 level required courses 4 credits in 200 level required courses 7 credits in 300 level required courses
Basic Science and Technology Courses	A total of 14 credits in 100- level required courses	200			14 credits • 14 credits in 100-level required courses	14 credits • 14 credits in 100-level required courses					
Second Foreign Language Courses			2 credits - 2000-level and 300-level restricted elective courses Students will be asked to choose one or two languages to study. 2 credits can be attained by learning the same language, or by learning two different languages (I credit each)	4 credits - 200-level and 300-level restricted elective courses Students will be asked to choose one or two languages to study. 4 credits can be attained by learning the same two different languages (2 credits each).							





!New rules adapted for graduation for the student 22B or later!

- Independent Research Project (IRP, 4 credits) and Advanced Independent Research Project (A-IRP, 6 credits) become compulsory courses.
- Must take IRP first from April of the 4th year only and then take A-IRP in the standard graduation procedure
- If a student could not satisfy the requirements to start IRP by the end of 4th quarter of the 3rd year, the student needs to repeat another year.
- A qualified student for early graduation with 3 years study can take IRP-S (8 credits)



Agreement	Credits acquired by students	\rightarrow	Can be counted toward the credit requirements for the courses below	
1.1	Humanities and Social Science Courses (200-level restricted electives)		Humanities and Social Science Courses (100-level restricted electives)	
1.2	Humanities and Social Science Courses (300-level restricted electives) (A)	→ →	Humanities and Social Science Courses (100° or 200°level restricted electives) (B)	
1.3	English Language Courses (200° or 300° level electives) (courses other than "English 1" to "English 9")		Second Foreign Language Courses (restricted electives)	
1.4	Japanese Language and Culture Courses (up to 3 credits) (up to 3 out of the following 4 courses: "Japanese Culture: Adaptation," "Japanese Culture: Society," "Japanese Culture: Arts," and "Japanese Culture: Japanology")		Humanities and Social Science Courses (100· or 200·level restricted electives) (C)	
1.4	Japanese Language and Culture Courses (9 credits) (In principle, the following 9 courses: "Japanese 1 GSEP" to "Japanese 9 GSEP": For students who enrolled in 2016, "Survival Japanese 101, 102" and "Introduction to Japanese 2A, 2B" are deemed equivalent to "Japanese 1A, 1B, 2A, 2B.")	→	English Language Courses (required courses) (9 credits) (9 courses: from "English 1" to "English 9")	
	Global Awareness and Other Breadth is no longer applicable to (2 specific courses)		(100 level restricted electives)	2
	is no longer applicable		(100 level restricted electives)	

Notes for section 1

Notes for section 2 International students may use up to 12 credits acquired from Japanese Language and Culture Courses to fulfill the requirements for Humanities and Social Science Courses. For consistency with that rule, regarding credits that can be counted toward the credit requirements for Humanities and Social Science Courses (100- or 200-level restricted electives) under agreement 1.4, GSEP students may use up to 3 credits (9 credits for English Language Courses subtracted from the 12 credits) to fulfill the same requirements. (C)

For example, when a student attains 300-level course credits from Humanities and Social Science Courses (200- and 300-level restricted electives) as stipulated in (A) and uses those credits to fulfill the requirements stipulated in (B), the student may not use those credits to fulfill the requirements for 300-level restricted electives .

https://www.titech.ac.jp/english/student/pdf/20b.pdf

Research Ethics Education

The targets of education on research ethic are the following four items: (1) academic integrity, (2) responsibility as a researcher, (3) responsible conduct of research, (4) legal compliance.

 Level 1: 1st year to 3rd year in bachelor's program (before starting Independent Research Project (IRP))

Level 2: 4th year in bachelor's program (from the start of IRP)

to master's program

Level 3: Doctoral program

Liberal Arts Courses

©Tokyo Tech Visionary Project (LAH.C101)

0Ethics in Engineering A/B/C (LAH.T105, T206, T305) 0Frontiers of Science and Technology (LAS.F101)

Major course group

OProcesses for Creation in Science and Technology

[School of Environment and Society] (XES.P101)

OSchool of Environment and Society Academic Group Literacy (XES.A101)

© Research Opportunities at Laboratories (TSE.Z381)

◎Independent Research Project (TSE.Z389)

NO worry about the requirements for Level 1 as long as you take the "visionary project" and "Intro. to TSE" in the second year. But you must understand the importance of research ethics. Simply put, please do not "copy and paste", which is not acceptable. Please cite others' work appropriately.

Required courses- Electives

3

31

Research Ethics Education

Online learning

Following on-line courses are also recommended:

0SPOC「Tokyo Tech Science, Engineering, AI & Data Ethics: Level 1-2 https://edge.edx.org/courses/coursev1:TokyoTechX+2020TTethics+2020Q1/about

0eL CoRE (JSPS) Level 1-2 (Research ethics education materials) https://www.jsps.go.jp/j-kousei/rinri.html