



MY ACADEMIC JOURNEY at TOKYO TECH from GSEP to IGP-C

Jeremy Gavriel

Contents

Intro

Self-introduction

GSEP

Global Scientists and Engineers Program
Bachelor studies in English

IGP(C)

International Graduate Program (C)
Master's studies in English

Closing

Take home notes

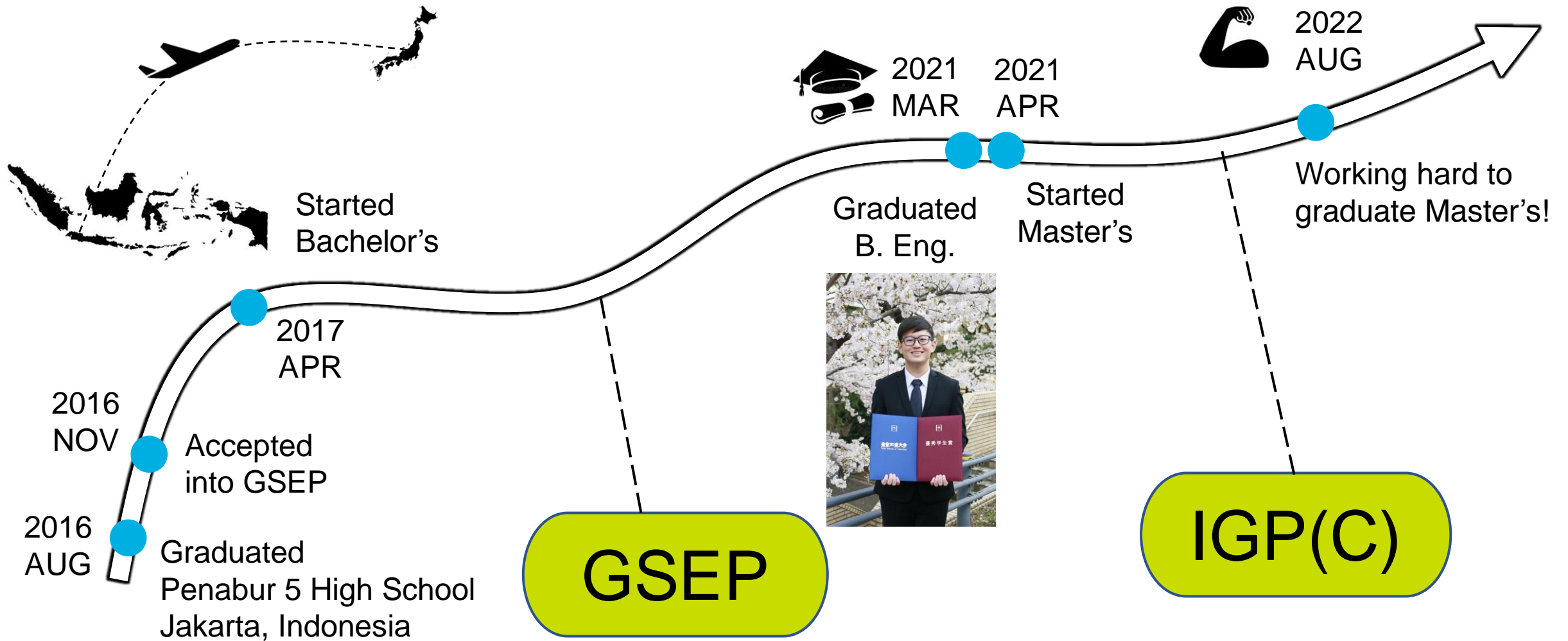
Brief introduction

- 2nd year master's student
 - Department of Mechanical Engineering
- Bachelor of Engineering (2021)
 - Tokyo Institute of Technology
- Hometown: Jakarta, Indonesia
- Hobbies: Singing, guitar, anime, cooking



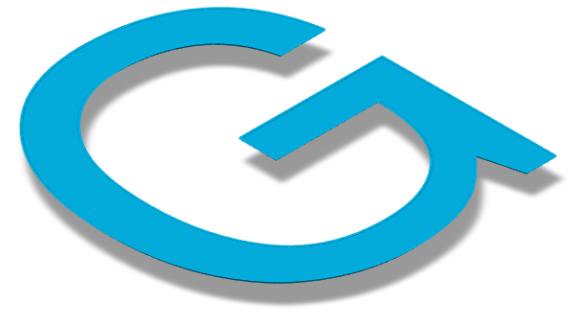
President of Tokyo Tech
Kazuya Masu

My roadmap



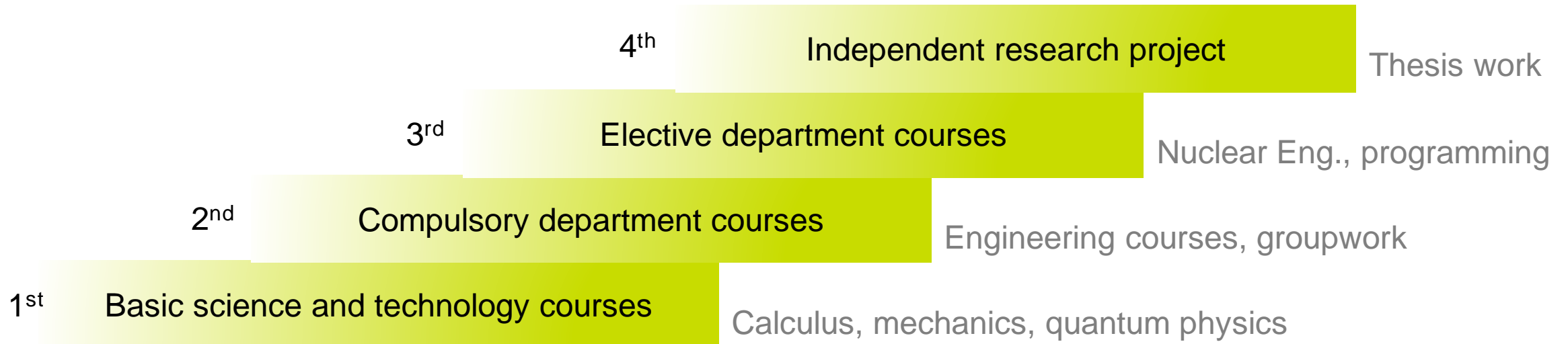
GSEP

April 2017 ~ March 2021



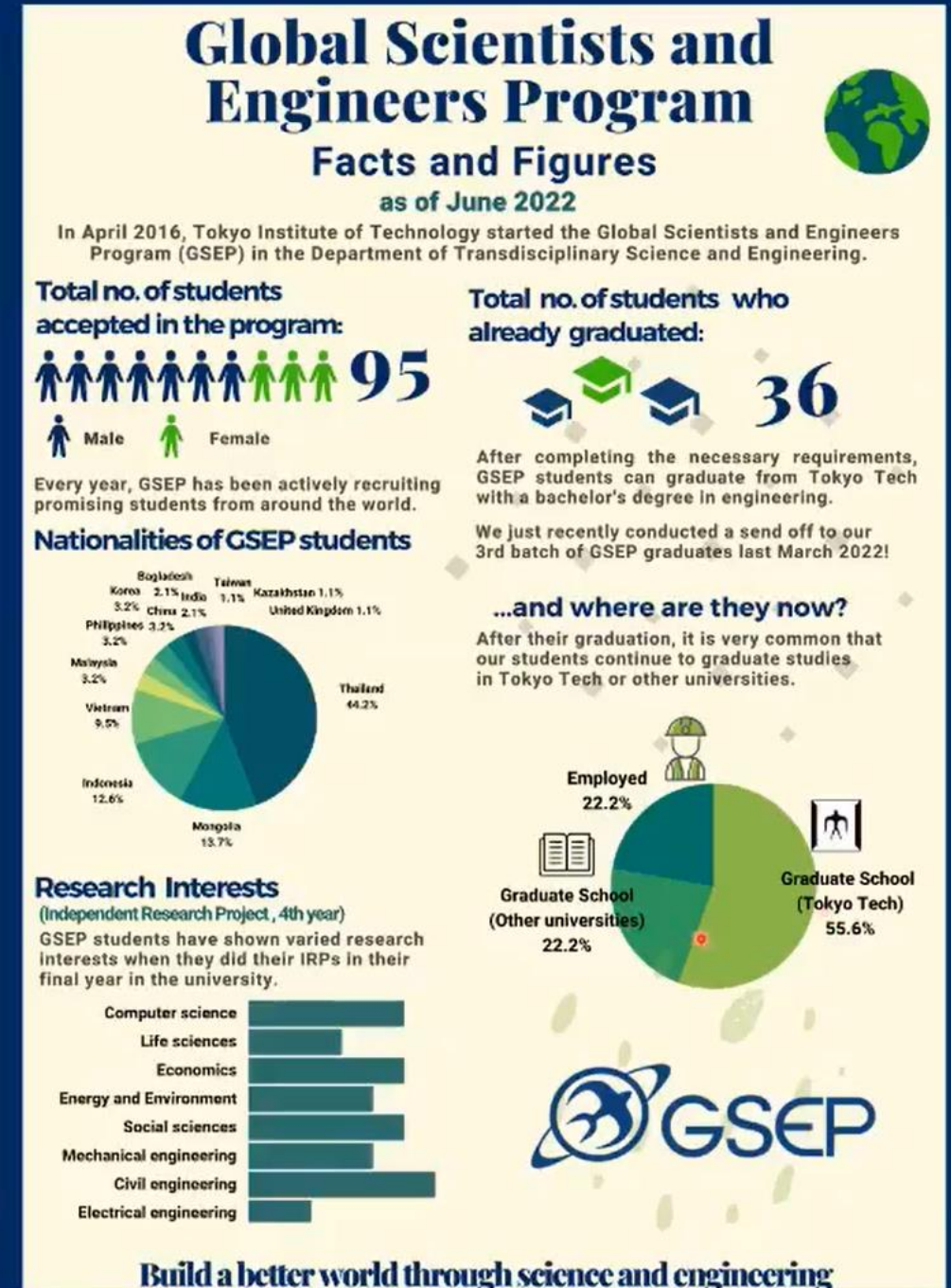
What is GSEP?

- Stands for Global Scientists and Engineers Program
- Get a bachelor degree in science/engineering
 - *Transdisciplinary Science and Engineering (TSE) major ONLY
 - **All courses offered in English!
- MEXT scholarships opportunities for 8 students (intake: ~15/y)



GSEP statistics

- Launched in 2016
 - I'm part of the 2nd batch (2017 admission)
- Truly global program
 - Increasing nationalities



Class timetables

Tokyo Tech uses a Quarter system.

1Q: April – May

2Q: June – July

3Q: October – November

4Q: December – January

13 – 15 credits per quarter

20 – 23 hours of classes per week

3rd Quarter 2018 (For GSEP 2nd Year Students)

Time		Mon	Tue	Wed	Thu	Fri
9:00 9:45 10:30	1					
	2					
10:45 11:30 12:15	3	Fluid Engineering TSE.A205-01 S513 2 credits		Chemical Reaction Engineering TSE.A204-01 S513 2 credits	Fluid Engineering TSE.A205-01 S513 2 credits	Chemical Reaction Engineering TSE.A204-01 S513 2 credits
	4					
13:20 14:05 14:50	5		Civil Engineering English II CVEL211 M5 Meeting Room 1 credit (Dept. of Civil & Env. Eng.)	Japanese 4A [GSEP] LAJ.J203-03 W936 1 credit	System Design and Impact Assessment TSE.C204 S513, S514 1 credit	
	6					
15:05 15:50 16:35	7	Partial Differential Equations for Science and Engineering TSE.M202-01 S513 2 credits			Partial Differential Equations for Science and Engineering TSE.M202-01 S513 2 credits	
	8					

3rd Quarter 2018 (For GSEP 1st Year Students)

(Last Updated Sept 25, 2018)

Time		Mon	Tue	Wed	Thu	Fri
9:00 9:45 10:30	1	Japanese 2A [GSEP] LAJ.J103-04 W112 1 credit	Basic Quantum Chemistry [English Class] LASC105-09 H112 1 credit	Linear Algebra Recitation II [X] LAS.M106-05 H111 1 credit	Linear Algebra II [X] LAS.M106-05 H111 2 credits	Fundamentals of Electromagnetism I [I] LAS.P103-09 H135 1 credit
	2					
10:45 11:30 12:15	3	Computer Science I [EN(CS1)] LAS.J121-13 W621 1 credit	Linear Algebra II [X] LAS.M106-05 H111 2 credits		Japanese 2A [GSEP] LAJ.J103-04 W936 1 credit	Fundamental Life Science 2-1 [K] LAS.B103-09 W371 1 credit
	4					
13:20 14:05 14:50	5	Special Lecture: Southeast Asia LAH.S111 S621 1 credit		Oral Expression in English 7 LAE.E233 S511 1 credit		
	6					
15:05 15:50 16:35	7					Exercises in Physics II [I] LAS.P106-09 S321 1 credit (for Q3-Q4)
	8	Fundamental Life Science Laboratory [月I or 月II] LAS.B105-03 or LAS.B105-04 W3 Basic Biology Lab 1 credit (for 3Q-4Q)				Physics Experiment II [Fr] LAS.P108-04 W2 Physics Lab 1 credit (for Q3-Q4)
16:50 17:35 18:20	9					
	10					

3rd Quarter 2018 (For GSEP 3rd Year Students)

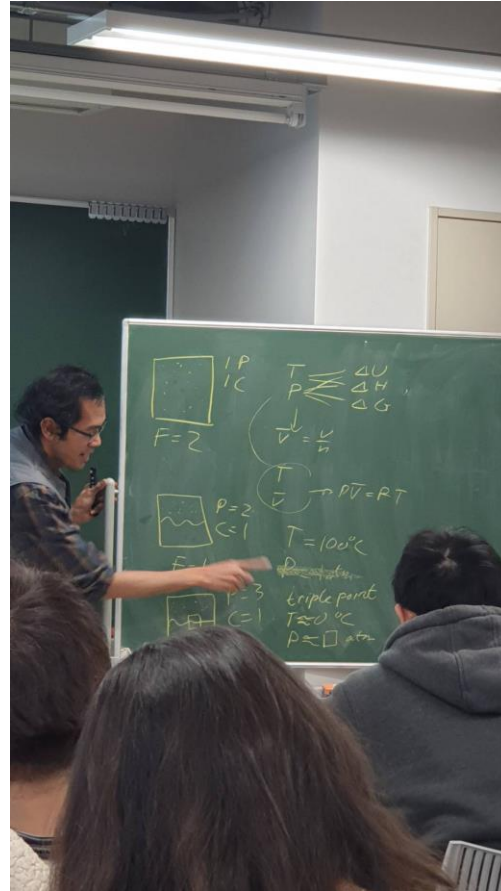
(Last updated Sept 25, 2018)

Time		Mon	Tue	Wed	Thu	Fri	Intensive
9:00 9:45 10:30	1	Advanced English Communication for Engineers [融合理工学系A] XEN.E301-10 S322.S323.S511.S512.S517. S611 1 credit	Advanced English Communication for Engineers [融合理工学系B] XEN.E301-11 S322.S323.S511.S512.S517. S611 1 credit	Research Opportunities in Laboratories (TSE) TSE.Z381-02 2 credits (Also conducted at different timeslots)	Programming and numerical analysis [a] TSE.A307-01 GSIC 3F Room 1 1 credit	Oral Expression in English I LAE.E333 H118 1 credit	Independent Research Project (TSE)** TSE.Z389 6 credits
	2				TOEFL Seminar (Reading and Writing) 7 LAE.E257 H117 1 credit		
10:45 11:30 12:15	3					Basic Nuclear Engineering 4 TSE.A340 W936 1 credit	Japanese 5A [GSEP]*** LAJ.J301-03 1 credit
	4						
13:20 14:05 14:50	5	Academic Presentation 11 LAE.E343 Language Lab 3 1 credit	Basic Nuclear Engineering 3 TSE.A339 S511 1 credit	Oral Expression in English 7 LAE.E233 S511 1 credit	Special Lecture: Urban Space in Literature and Cinema LAH.H312 W351 1 credit	Transdisciplinary Engineering Experiment B TSE.A352 1 credit	International Creative Design Project XEN.P301 1 credit
	6						
15:05 15:50 16:35	7	Introduction to Environmental Policy and Social System TSE.C312 S514 2 credit			Introduction to Environmental Policy and Social System TSE.C312 S514 2 credit		
	8						
16:50 17:35 18:20	9	Probability and Statistics for Engineering and Sciences [A] XEG.G301-01 W611 2 credits			Probability and Statistics for Engineering and Sciences [A] XEG.G301-01 W611 2 credits		
	10						

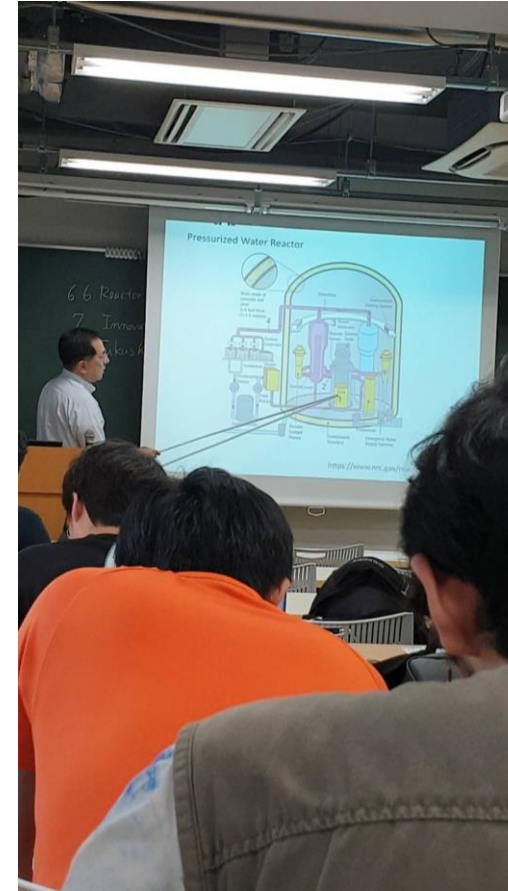
Classes



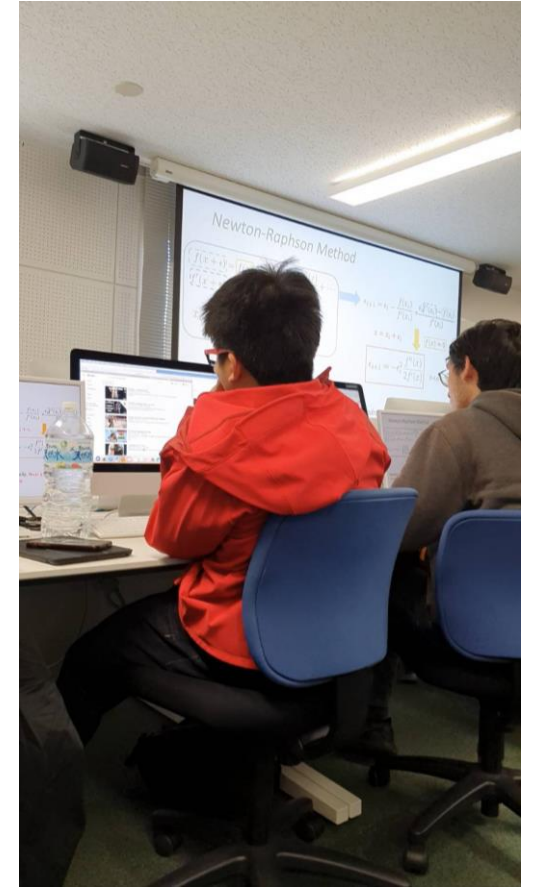
Calculus
1st year



Material Eng.
2nd year



Nuclear Eng.
3rd year



Programming
3rd year

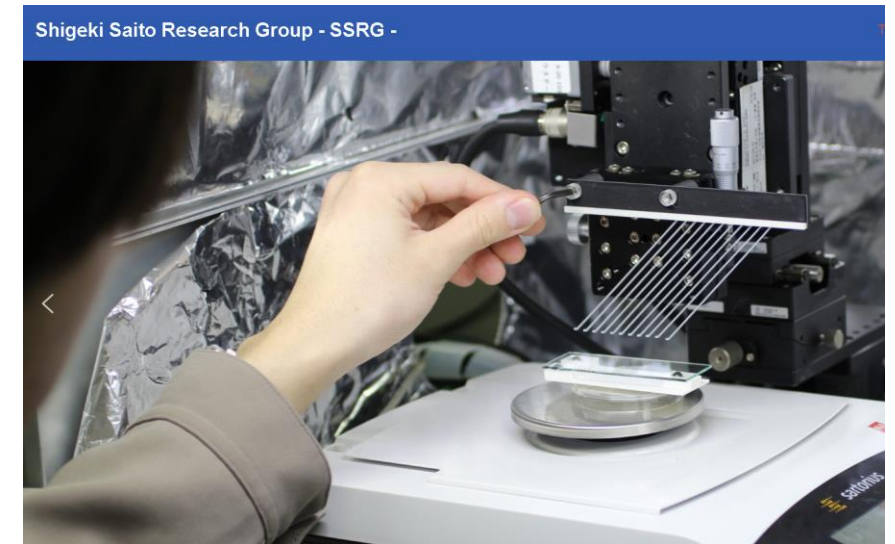
Research laboratory

- Enter a laboratory that matches our best interests and work on an independent research project for a whole year

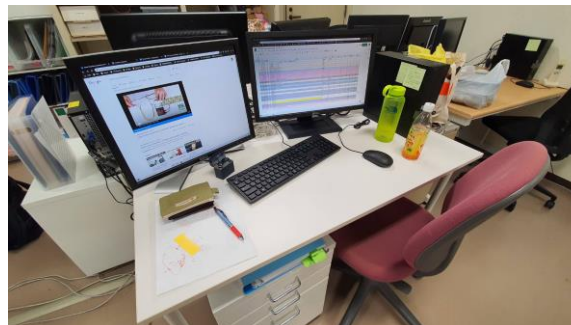
Visit lab website



Mechanical Eng.
research looks
interesting!



Relax space



Personal desk

Enter lab in
the 4th year

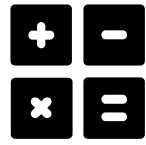
Contact
academic
professor
(Prof. Saito)

Part-time jobs



Programming
Teacher (1y)

Help young kids enjoy
programming through
fun coding projects



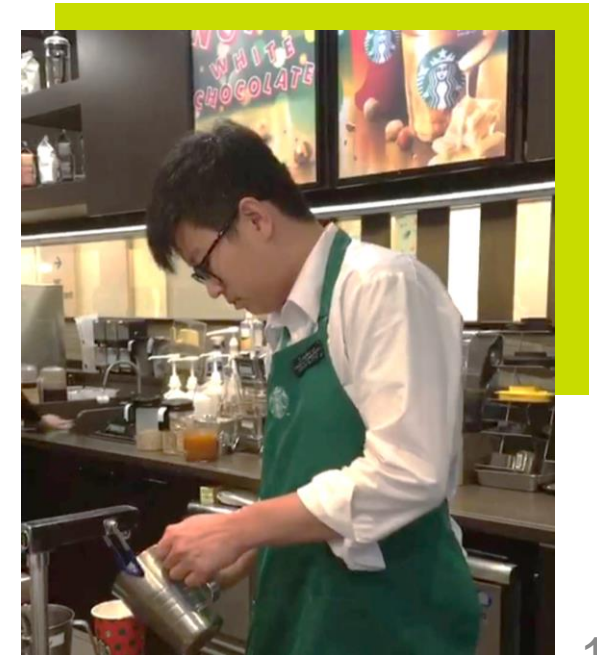
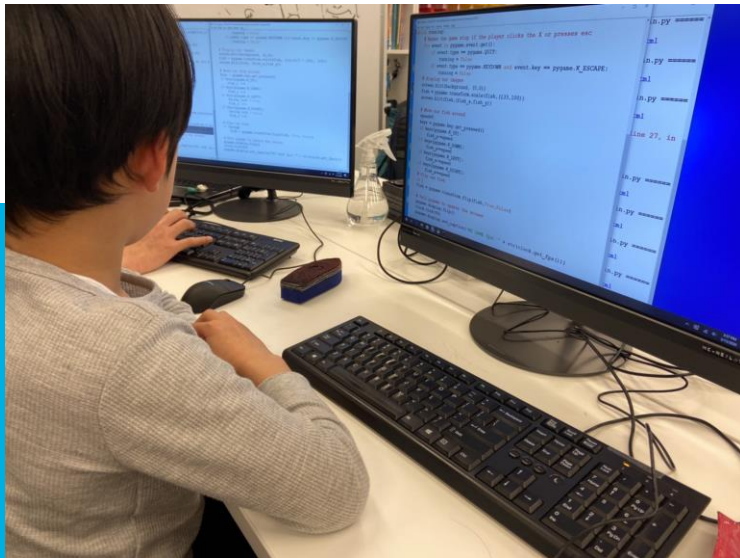
Math
tutor (3y)

Day-to-day
private lessons



Starbucks
Barista (6m)

Fully immersed in a
Japanese environment



Overseas opportunities

- China
- Taiwan
- Hongkong
- UK
- USA
- Korea
- Denmark
- Etc.

Taiwan



London



China



University Support



Student Support

- Scholarship info
- Tuition Exemption
- Part-time job info
- Housing info



Scholarships

JASSO (2y) ¥48,000/m
Private foundation (4y) ¥120,000/m



Housing

2y in a school dormitory
(price subsidized)



Tutor

One freshman is
paired with one tutor

Tutors guide and
helps new students
with studies and
adapting to
university life



GSEP community

- Academic support
- Leisural activities
- Community
- Guidance



Umegaoka Dormitory



Common room



1st floor kitchen

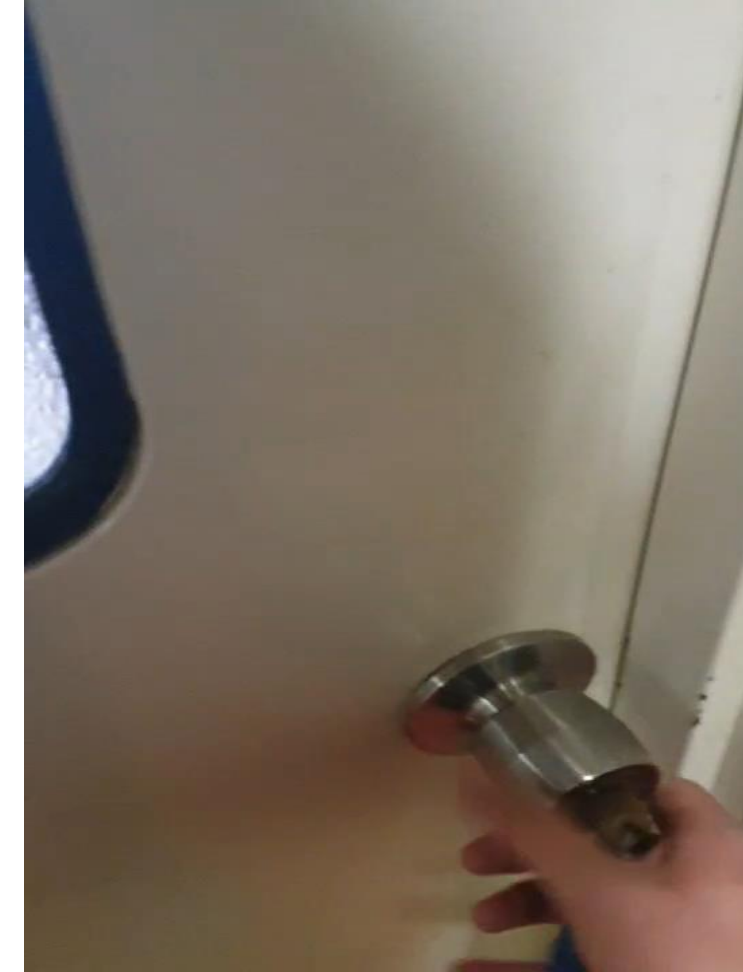


Shower



Washer (¥ 150)
Dryer (¥ 200)

3 floors
Campus: 1 hour
Nearest station: 15 min
Rent: ¥ 20,000 ~



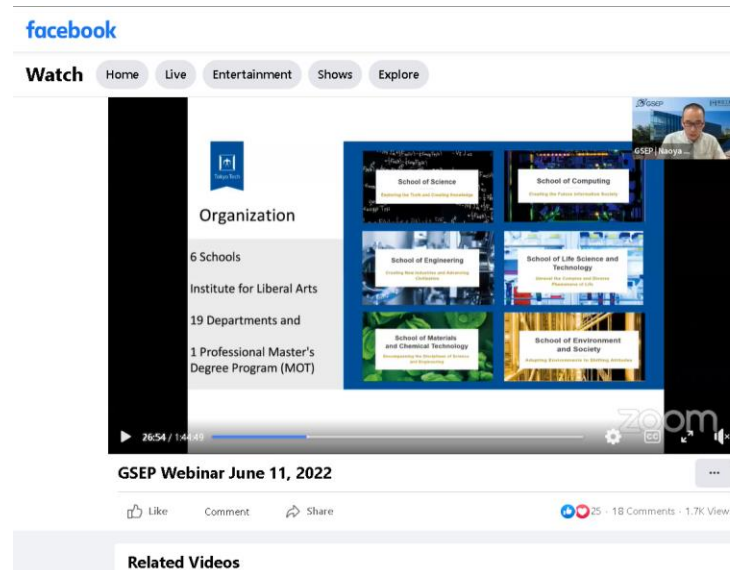
Single room (2.5 x 5.0)

For more info

- GSEP Website, Facebook, admissions
 - <http://www.tse.ens.titech.ac.jp/~gsep/>
 - <https://www.facebook.com/gseptokyotech>
 - <https://www.titech.ac.jp/english/admissions/prospective-students/explore-undergraduate/gsep>

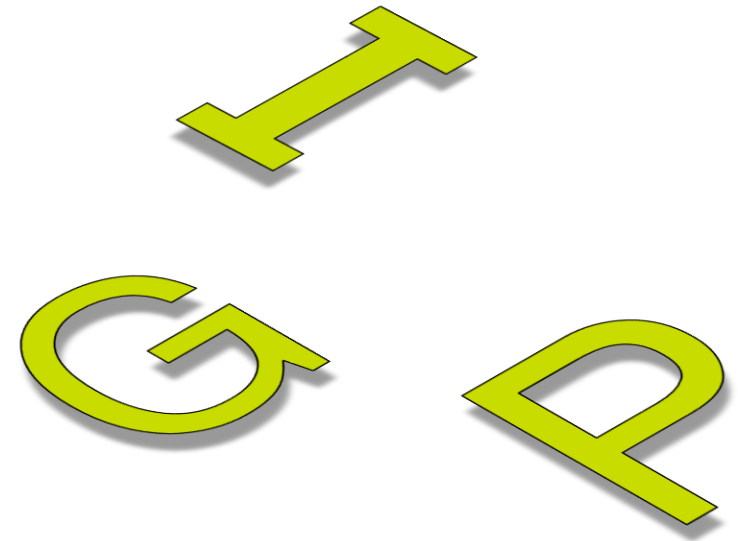
GSEP admission
deadline for 2023
admissions is near!

1 Sep 2022



IGP(C)

April 2021 ~ now



What is IGP?

- Stands for International Graduate Program
 - A: Master's + Doctorate
 - B: Doctorate
 - C: Master's
- Admission system for international students
- MEXT scholarship opportunities
- Covers all majors

IGP
(C)

School

ex: School of
Engineering

Department

ex: Dept. of
Mech. Eng.

Major

ex: Engineering
Sciences and Design

Research
Laboratory

ex: Saito Shigeki Lab

IGP faculty list example

School of Engineering

(5) Dept. of Mechanical Engineering

	Academic Supervisor	Research Field	Remarks	Graduate Major
Professor	AOKI, Takayuki	Multi-phase Flow Simulation, Large-scale Computational Fluid Dynamics, GPU Computing	Accepted Students only for Master's Program	<ul style="list-style-type: none"> Mechanical Engineering Energy Science and Engineering
Professor	SAITO, Shigeki	Micromechanics, Micro Robotics, Engineering Design		<ul style="list-style-type: none"> Engineering Sciences and Design
Professor	OKUNO, Yoshihiro	Physics and Application of Magnetohydrodynamics, MHD Power Generation, Plasma Science and Engineering	Accepted Students only for Master's Program	<ul style="list-style-type: none"> Energy Science and Engineering Mechanical Engineering
Professor	XIAO, Feng	Computational fluid dynamics, Numerical analysis, Integrated system of data, deterministic and statistical models		<ul style="list-style-type: none"> Mechanical Engineering
Professor	SUEKANE, Tetsuya	CO2 Geological Storage, Enhanced Oil Recovery, Transport in Porous Media, Numerical Simulation of Multiphase Flow		<ul style="list-style-type: none"> Energy Science and Engineering Mechanical Engineering
Professor	TANAHASHI, Mamoru	Fluid Dynamics, Heat and Mass Transfer, Combustion		<ul style="list-style-type: none"> Energy Science and Engineering Mechanical Engineering
Professor	NOZAKI, Tomohiro	Plasma Chemistry, Reaction Engineering, Thermal Engineering		<ul style="list-style-type: none"> Energy Science and Engineering Mechanical Engineering
Professor	HIRAI, Shuichiro	Global Environment Engineering	Accepted Students only for Master's Program	<ul style="list-style-type: none"> Mechanical Engineering Energy Science and Engineering

Shigeki Saito Research Group - SSRG -

研究代表者



齊藤 滋規 教授

<https://www.ssrge.sdt.titech.ac.jp/>



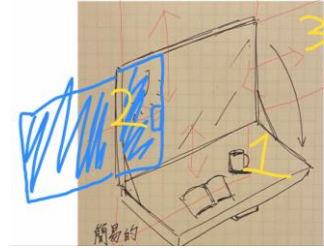
<http://www.energy-lab.mech.e.titech.ac.jp/index-e.html>

Source: <https://www.titech.ac.jp/english/admissions/pdf/application-guide-igp-c--202304-20220823.pdf>

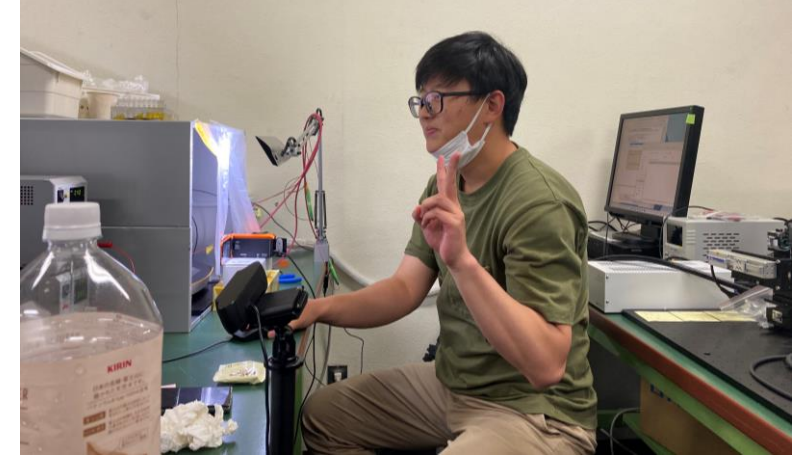
Graduate school

Case: Graduate Major in Engineering Sciences and Design

- User-centered product design
 - What does the user want to do?
 - How might we solve the user's problems?
- Intensive groupwork (1y)
 - Collaboration with people from various backgrounds
- Skills acquired / keywords
 - User experience (UX)
 - Prototyping
 - Design Thinking



Master's studies



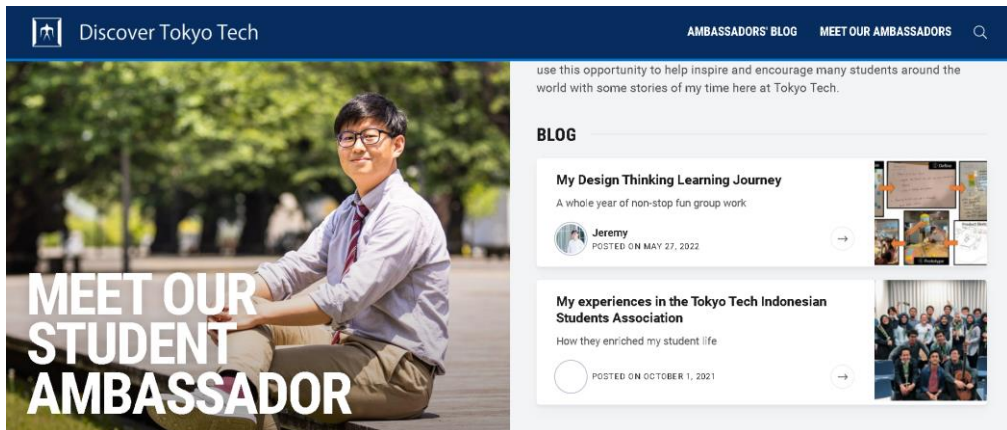
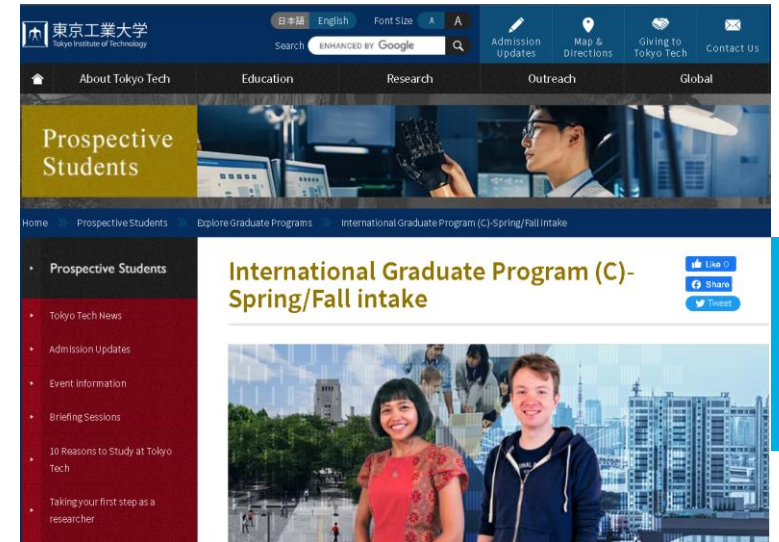
Fun groupwork
Product Design

Teaching Assistant
(paid hourly)

Research,
international conference 20

External links

- International Graduate Program website
 - <https://www.titech.ac.jp/english/admissions/prospective-students/graduate-programs/igp-c>
- Graduate School ESD course website
 - <https://www.esd.titech.ac.jp/en/>
- Tokyo Tech's Student Ambassadors blog
 - <https://discover.titech.ac.jp/blog/>



Closing

Take-home notes



A Tokyo Tech student?



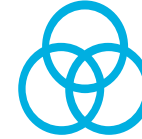
Level Up

- Ability to compete internationally.
- Academic-oriented with a future vision.
- Passion for research.



Energetic spirit

- Active in communities
- Eager to take up new challenges



Open-minded

There is a very wide range of engineering subjects to learn.
In GSEP, specializations are on hold until the fourth year or master studies.



Flexibility

Adapt to new environments, new cultures, new ways of thinking.
Be ready to accept new stuff.

FAQ

- Muslim community
- Halal food (canteen)
- Scholarship opportunities other than MEXT
- No Japanese requirements
- English requirements ⇒ please check the admissions website
- Time for part-time jobs ⇒ depends per person
- Job hunting support
- Mental health support (consultation)
- Price of living ⇒ depends on location, size, etc.
- Required subjects ⇒ high school math, physics, chemistry





Experience Lovely JAPAN

