

University-wide Graduate Education Program

Science, Technology and Innovation Governance (STIG) Education Program



東京大学
THE UNIVERSITY OF TOKYO

Director Graduate School of Public Policy

Prof. Hideaki Shiroyama

Spring Information Session

Thursday, 7 April 2022

17:00~ (about 1 hour)

**Seminar Room E, International Academic Research Bldg. 12F
& Online Zoom (Reg Required at STIG website)**

An overview of



STIG

Educational and research project on technology governance

University-wide graduate education program

•12-credit certification program

GraSPP

THE UNIVERSITY OF TOKYO
東京大学公共政策大学院
Graduate School of Public Policy



SCHOOL OF ENGINEERING
THE UNIVERSITY OF TOKYO

東京大学大学院
工学系研究科

Graduate School for Law and Politics

Economics Graduate School of Economics
Faculty of Economics
The University of Tokyo



東京大学大学院 医学系研究科・医学部
Graduate School of Medicine and Faculty of Medicine, The University of Tokyo



東京大学大学院 情報学環・学際情報学府
The University of Tokyo III / GSII



東京大学 大学院総合文化研究科・教養学部
The University of Tokyo, Komaba
Graduate School of Arts and Sciences, College of Arts and Sciences

SciREX
サイレックス事業

「技術イノベーション政策における
策のための科学」

Government offices &
Research institutes



東京大学未来ビジョン研究センター
Institute for Future Initiatives



東京大学先端科学技術研究センター
Research Center for Advanced Science and Technology

Collaborate
with other
universities



政策研究大学院大学
NATIONAL GRADUATE INSTITUTE
FOR POLICY STUDIES

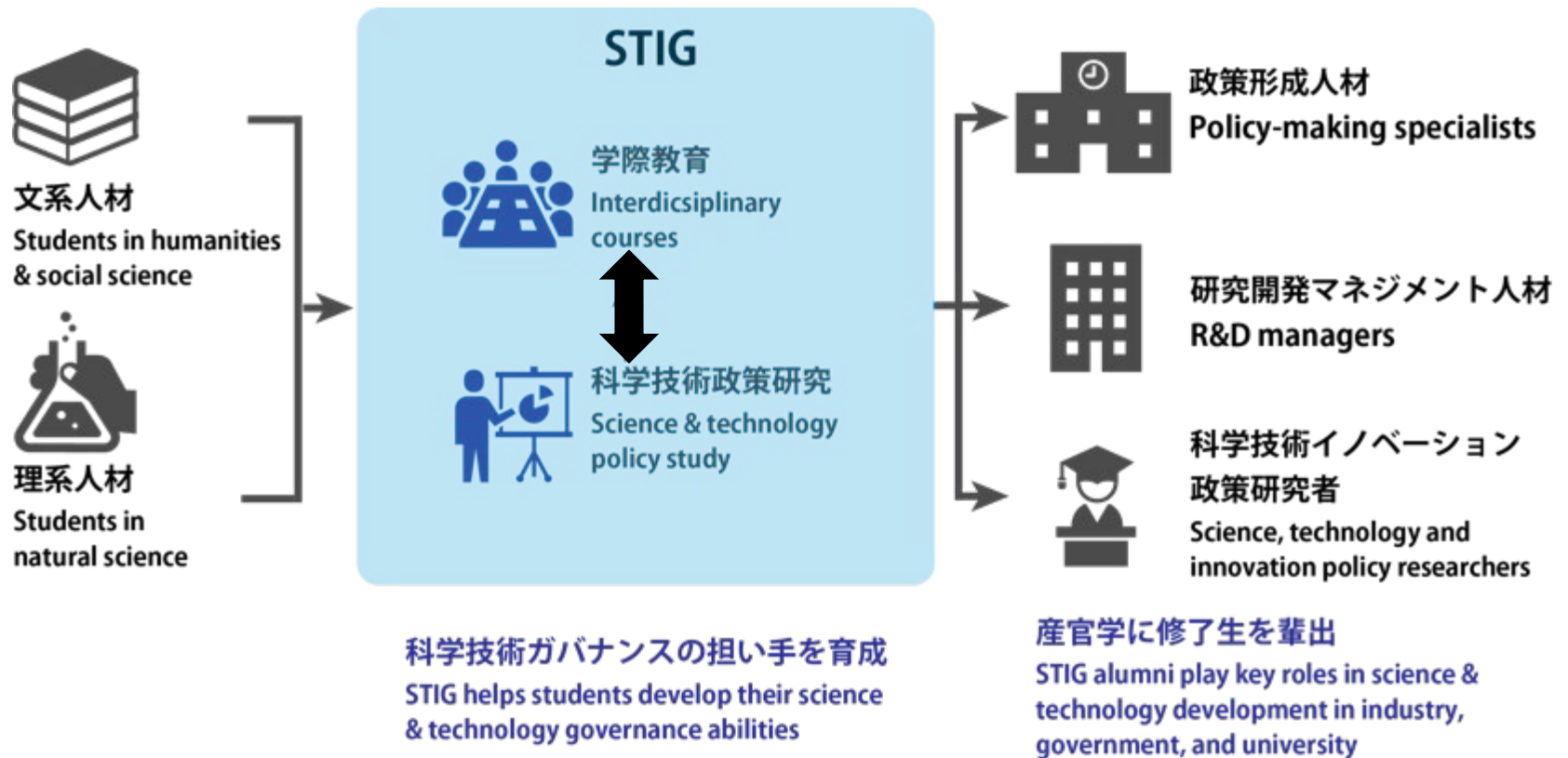
Inter-disciplinary research network



STIG

SCIENCE, TECHNOLOGY,
AND INNOVATION GOVERNANCE

Our goal



STIG Graduate Education Program

Study science and technology policy

- Various courses are prepared to study STI policy design and research
- Provide opportunities for taking courses of different departments within The University of Tokyo

Interdisciplinary collaboration

- Core Curriculum: Interdisciplinary group exercise in policy study
 - Summer camp: 3 days intensive group working, collaborating with other universities and government offices*
 - Seminars, inviting guest lectures from government officers or academia (Policy Platform (PoP) Seminar)
- Explore the opportunities!!!

*One-day Online Summer School in 2020
Three-days Online Summer Camp in 2021

Structure of the Education Program

Required course

Group exercise in STI policy study
Learning methodologies to integrate diversified disciplines and knowledge

Required electives

(a): Policy Processes and Institutions
(b): Evidence Development
Methodologies

Electives

Applied courses
Business courses and intensive S&T policy study
Field-specific research courses
Focusing on specific issues; energy environment, healthcare, IT, resilience

Credit requirements

Required course: Case study	2 credits
Required electives: Basic courses (a)	2 credits or more
Required electives: Basic courses (b)	2 credits or more
Electives: Basic (a), (b), Applied courses, Field- specific research courses	6 credits or more
Total	At least 12 credits

Note: The credits to be counted are specified in syllabus. We have 28 English courses as of April 2022. Classes of the required course is conducted in Japanese with simultaneous English interpretation.

Course Listings (*refer to the syllabus)

Required course

- ・事例研究・科学技術イノベーション政策研究

Case Study (Science, Technology and Innovation Policy)

Required electives

Basic Course (a): Policy Processes and Institutions

- ・政策過程論
- ・交渉と合意
- ・科学技術・産業政策論
- ・Science, Technology and Public Policy
- ・Policy Process and Negotiation
- ・事例研究・企業の技術戦略と国際公共政策
- ・Case Study (Social Design and Management)
- ・Science and Technology in International Relations

Basic Course (b): Evidence Development Methodologies

- ・Quantitative Methods for Management and Policy Analysis
- ・Economic Analysis of Innovation
- ・政策分析
- ・公共政策の経済評価
- ・Data Science for Practical Economic Research
- ・Economic Analysis of Public Sector
- ・Political Economics
- ・事例研究・テクノロジーアセスメント
- ・Evidence-based Science & Technology Policy Design

Electives: Applied courses

- ・規制政策
- ・知的財産経営
- ・科学技術コミュニケーション論
- ・Global Business Strategy and Policy
- ・事例研究・政策環境・事業環境検討手法としてのシナリオプランニング：理論と実践
- ・Case Study(Business environment, stakeholders and issues; a learning experience in collaboration with Japanese industry)

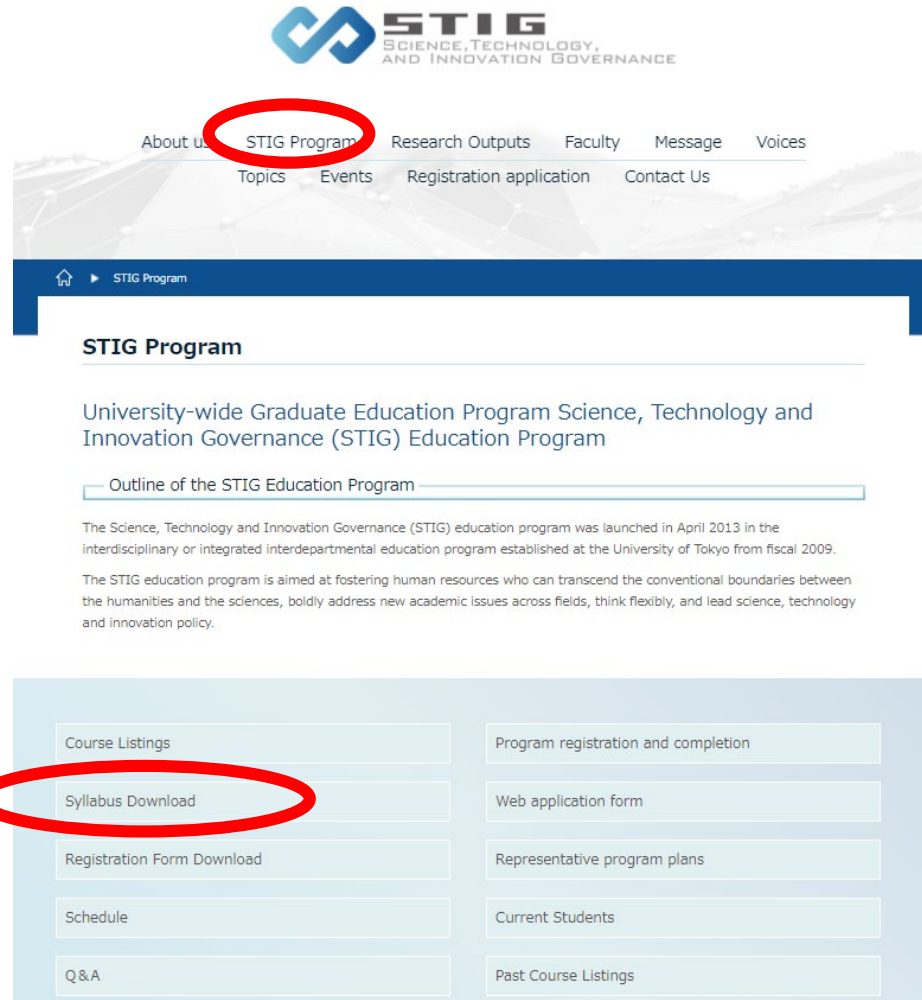
- ・International Intellectual Property Management
- ・Advanced Study of Science & Technology
- ・事例研究・科学技術と政治・行政 I
- ・Case Study (GraSPP Policy Challenge: Global Innovative Public Policy Solutions)
- ・Innovation and Entrepreneurship
- ・Advanced Technology Management
- ・知識社会マネジメント
- ・市民社会組織・政策論

Electives: Field-specific research courses

- ・先端エネルギー技術経営と政策
- ・Space Development and Public Policy
- ・地域交通政策研究
- ・国際交通政策
- ・航空技術・政策・産業特論
- ・海洋科学技術政策論
- ・観光政策概論
- ・観光地域政策
- ・事例研究・デジタル時代の行政と社会
- ・Special Lecture in Global Health Policy I, II
- ・Overview of Energy System
- ・Advanced Lecture on Resilience Engineering
- ・Case Study(Institutions and Methods of Health Technology Assessment in Healthcare Policy)
- ・医療イノベーション政策
- ・Case Study(Project Based Learning on the Technological Innovation and the Social Solutions)
- ・事例研究・人工知能と社会
- ・Social Design and Global Leadership
- ・電力ネットワーク政策
- ・Governance of Space Activities

Download the Syllabus

<https://stig.pp.u-tokyo.ac.jp/en/program.html>



The screenshot shows the STIG Program website. The STIG logo is at the top center. The navigation menu includes 'About us', 'STIG Program', 'Research Outputs', 'Faculty', 'Message', and 'Voices'. Below the navigation menu, there are links for 'Topics', 'Events', 'Registration application', and 'Contact Us'. The main content area is titled 'STIG Program' and contains the following text:

University-wide Graduate Education Program Science, Technology and Innovation Governance (STIG) Education Program

Outline of the STIG Education Program

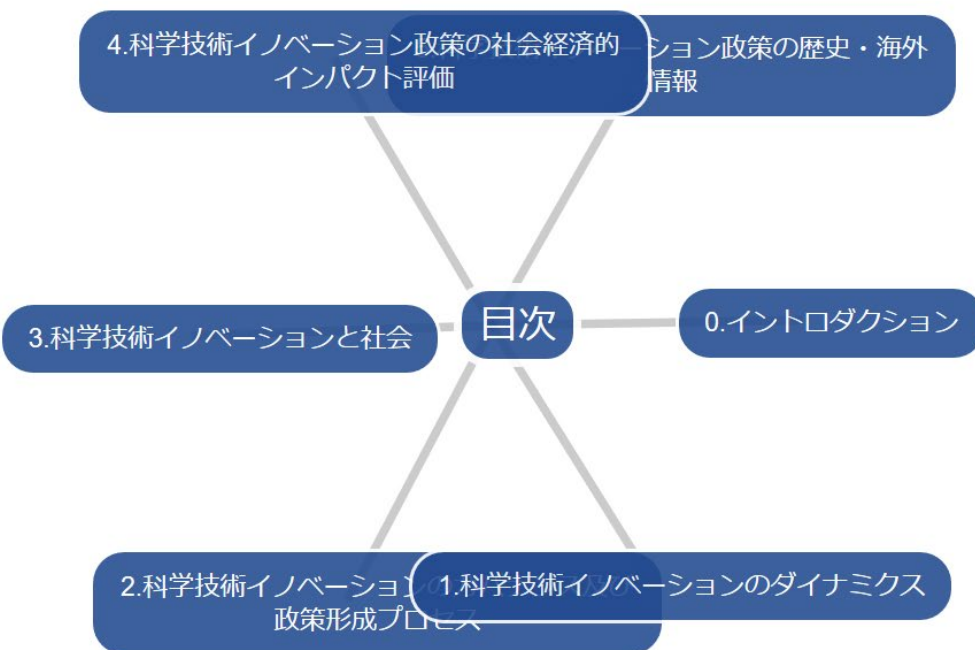
The Science, Technology and Innovation Governance (STIG) education program was launched in April 2013 in the interdisciplinary or integrated interdepartmental education program established at the University of Tokyo from fiscal 2009.

The STIG education program is aimed at fostering human resources who can transcend the conventional boundaries between the humanities and the sciences, boldly address new academic issues across fields, think flexibly, and lead science, technology and innovation policy.

At the bottom of the page, there is a grid of links. The 'Syllabus Download' link is circled in red. A large red arrow points to this link from the left side of the page.

Course Listings	Program registration and completion
Syllabus Download	Web application form
Registration Form Download	Representative program plans
Schedule	Current Students
Q & A	Past Course Listings

STI Core Contents (available only in Japanese)



2. 科学技術イノベーションのガバナンス及び政策形成プロセス

2.0 STI政策とは何か

- 2.0.1 イントロダクション
2019年4月 | 赤池伸一 (科学技術・学術政策研究所上席フェロー、文部科学省科学技術・学術政策
城山英明 (東京大学法学部、公共政策大学院教授)
- 2.0.2 STI政策の対象と手段
2019年4月 | 岩淵秀樹 (政庁連合日本政府代表部参事)
赤池伸一 (科学技術・学術政策研究所上席フェロー、文部科学省科学技術・学術政策参事、内閣府参事)
- 2.0.3 科学技術イノベーション政策の正当性
2019年4月 | 永田晃也 (九州大学大学院経済学研究院教授)

2.1 STIガバナンス

- 2.1.1 STIガバナンスの構造
2019年5月 | 城山英明 (東京大学法学部、公共政策大学院教授)
岸本充生 (大阪大学データリテリシティフロンティア機構教授)
松尾真紀子 (東京大学公共政策大学院特任講師)
- 2.1.2 STI政策プロセス
2019年4月 | 岸本充生 (大阪大学データリテリシティフロンティア機構教授)
松尾真紀子 (東京大学公共政策大学院特任講師)

2.2 STIガバナンスの各段階におけるツール

- 2.2.1 STIガバナンスにおける意思決定のツール
2019年4月 | 松尾真紀子 (東京大学公共政策大学院特任講師)
- 2.2.2 科学的助言
2019年4月 | 松尾真紀子 (科学技術振興機構研究開発戦略センターフェロー)
- 2.2.3 レギュラトリー・サイエンス
2019年4月 | 岸本充生 (大阪大学データリテリシティフロンティア機構教授)
- 2.2.4 STI政策の評価とフィードバック
2019年4月 | 五十川大也 (京都大学経済学研究院講師)

- 2.3 STI政策執行におけるアクター間関係のガバナンス
2019年4月 | 吉岡 (小林) 徹 (一橋大学イノベーション研究センター講師/前、東京大学大学院工学部)

- <https://scirex-core.grips.ac.jp/>

SciREX Summer Camp

- SciREX periodically organizes collaborative programs
- Group discussions and collaborations with faculties and students from GRIPS, Hitotsubashi, Kyoto, Kyushu and Osaka, and with government officers from MEXT

(STIG send UTokyo delegates after the selection)

- **STI and industrialization (2015; Inuyama, Aichi)**
- **STI and Reconstruction from Tohoku Earthquake (2016; Matsushima)**
- **Making Scenario for 2030: Interdisciplinary Collaboration for Future Science, Technology and Innovation Policies (2017; Roppongi)**
- **STI and Society towards 2030 (2018; Roppongi)**
- **STI Policy to Challenge (2019; Roppongi)**
- **One-day Summer School (2020; Webinar lecture style)**
- **Innovation System in the Post-pandemic Era (2021; Online by Zoom)**



SciREX Summer Camp



PoP (Policy Platform) seminar



114th STIG PoP Seminar
Online by Zoom Webinar

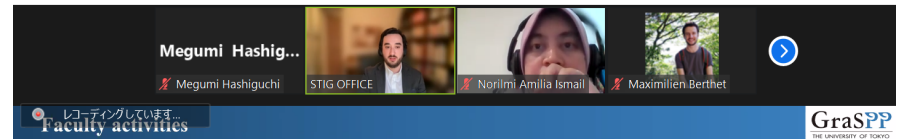
“ASEAN Space Programs:
Policy Considerations”

Rogel Mari Sese, Ateneo de Davao University, Norilmi Amilia Ismail, Universiti Sains Malaysia, David Ho Lit Xian, Singapore Space and Technology Limited

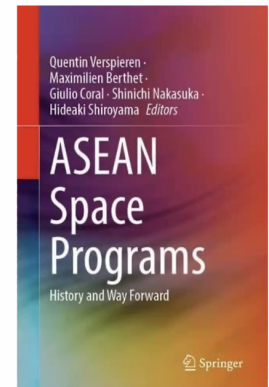
63rd STIG PoP seminar/WS

“Co-existence of offshore wind energy and local fisheries in Japan and Taiwan”

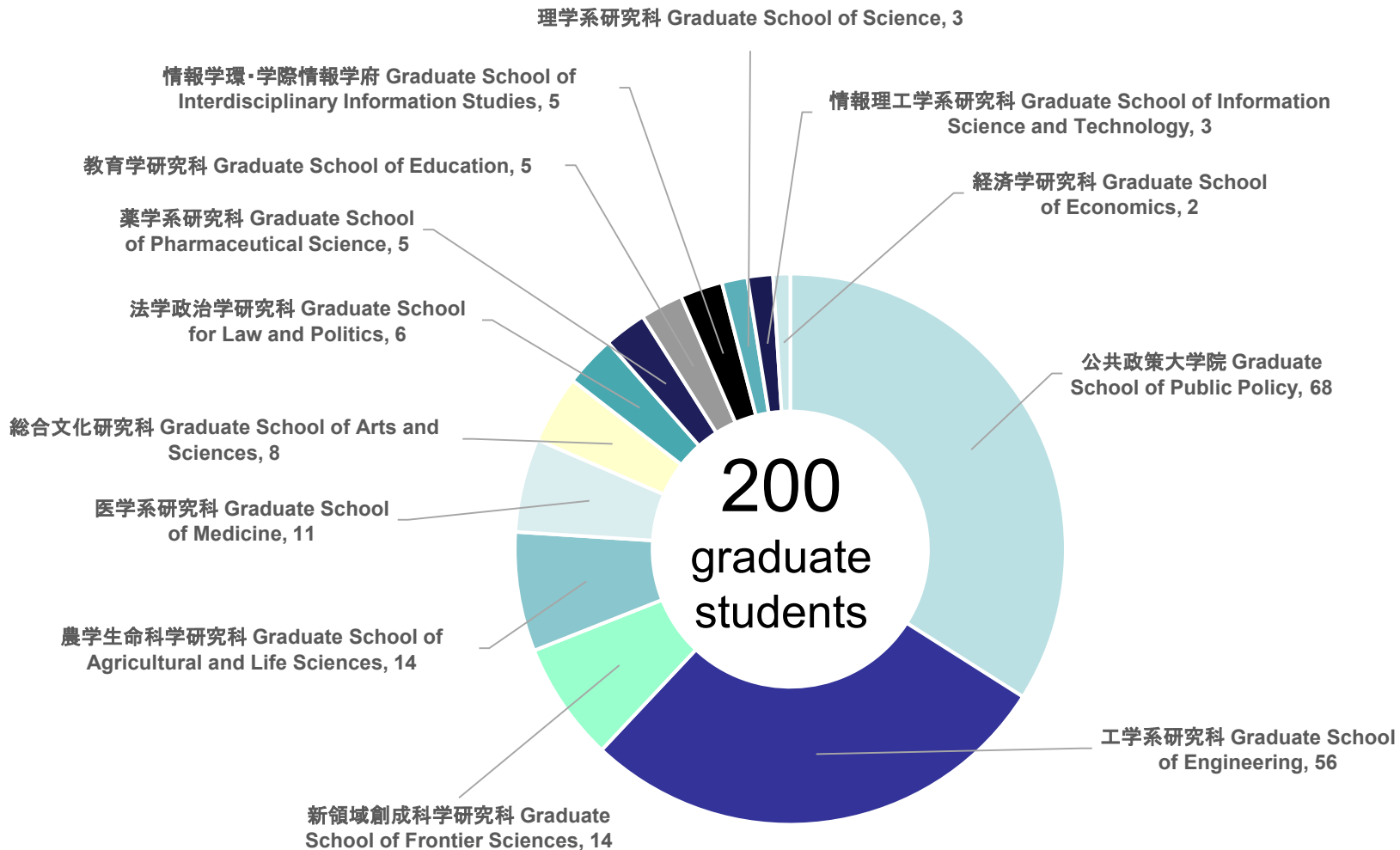
Shih-Ming Kao, Assistant Professor,
National Sun Yat-sen University,
Institute of Marine Affairs



- Publication of books and articles in leading journals
 - Latest: Verspielen, Q., Berthet, M., Coral, G., Nakasuka, S., & Shiroyama, H. (Eds.). (2022). *ASEAN Space Programs: History and Way Forward*. Springer Singapore.
- Strong presence in media and conferences
- Involved in Japanese and international governmental projects
 - Members of various Japanese government committees on space activities (National Space Policy Committee, Cabinet Office)
 - Contributing to foreign governments' space policy drafting (e.g. European Commission)
- Affiliated with leading foreign think-tanks (e.g. European Space Policy Institute)
- Advisory roles for leading Japanese space start-up companies



Departments of STIG enrolled students



Humanities 51% Sciences 49 %
Master 158 Doctoral 42
 As of February 2022

Graduates from STIG Education Program

121 graduates (M109:D12) received certification from AY 2013 to 2021



Career Paths of STIG Graduates

官公庁

Government



29%

- Ministry of Economy, Trade & Industry
- Ministry of Finance
- Ministry of Land, Infrastructure, Transport and Tourism
- Ministry of Internal Affairs and Communications
- Ministry of Education, Culture, Sports, Science and Technology
- Ministry of Foreign Affairs
- National Diet Library
- The Legislative Bureau of the House of Representatives
- Prefectural office

シンクタンク・コンサルティング
Thinktank & consulting



- Private think-tank
- Consultation firm

16%

STIG修了生
STIG Alumni

産業界
Industry

26%

- Manufacturing firm
- General trading company (Shosha)
- Electric power company
- Technology, IT, e-commerce
- Bank / Securities company
- Audit corporation



大学・研究職・進学
Academia, Research



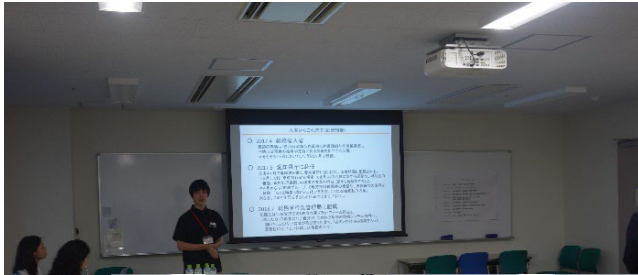
- University
- Ph.D. student
- Researcher

16%

その他
Others

13%

Networking with STIG Alumni



Exchange views with STIG alumni, faculties, staff and current students

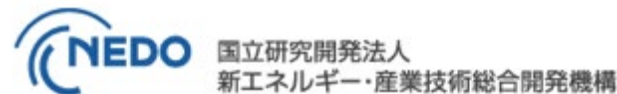
◆ **Date: 6th July (Sat) 2019**
17:00-19:00

◆ **Venue: IAR Seminar Room E,**
The University of Tokyo

Five alumni shared their work experiences by presentation. 25 participants.

Your benefits of joining STIG education program

Various agencies are in charge of STI policies in Japan



Your benefits of joining STIG education program

For those who seek a government job

- Learn fundamentals of policy design
 - Especially, methodologies of evidence-based policy design
- For students with natural science backgrounds: Provide opportunities to cultivate a social science mindset through group work exercises and teaching by our educational staff, who have social science-based expertise
- For students with social science backgrounds: Provide opportunities to network and connect with STI policy practitioners & researchers

Your benefits of joining STIG education program

For those who seek an opportunity in the industry

- learn the importance of social acceptance, the relationship between science technology and society, when introducing technology into society
- Learn a design process of evidence-based R&D strategy
- Develop a policy proposal skill
 - Industry associations and individual firms actively lobby to the public sector through their government relations sections
 - An innovative business needs adequate lobbying

FAQ (1)

Q. Are there any requirements for registration? Also, are there examinations, interviews or other selection procedures?

A. No. The course can be taken by any University of Tokyo graduate student. **There is no particular requirement nor fee.** Also, there is no examination or interview when registering.

Q. I am interested in the STIG education program, but is it possible to take only certain courses?

A. Students are welcome to take individual courses, without planning to complete the program.

FAQ (2)

Q. If I register for the STIG education program from now, can the credits I earned during the previous year (my first year of graduate school) be used to satisfy the STIG completion requirements?

A. **Partly yes. Please consult with the STIG education program administrative staff** regarding the credits you want to count from the previous year.

Q. How can I register to the STIG program?

A. **You can register today.** Or submit the STIG Registration Form to the STIG Education Program Office. Please access the official site: <https://stig.pp.u-tokyo.ac.jp/en/>

FAQ (3)

Q. If I register for the STIG education program and meet the credit requirements, would I automatically get the certificate?

A. **No. You need to apply for certification on UTAS. An email reminder will be sent to you, but please do not forget to submit your application.**

Registration Form

<https://stig.pp.u-tokyo.ac.jp/en/>



Contact STIG administrative staff for any question concerning STIG program

STIG@pp.u-tokyo.ac.jp