

**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**

## **Autumn Information Session**

**Wednesday, 5 October 2022**

**5<sup>th</sup> Period 16:50~18:35**

**SMBC Academia Hall, 4F, International Academic Research Bldg.  
& Online by Zoom (<https://forms.gle/x5c5yHoe5vB23uZ59>)**

# 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



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

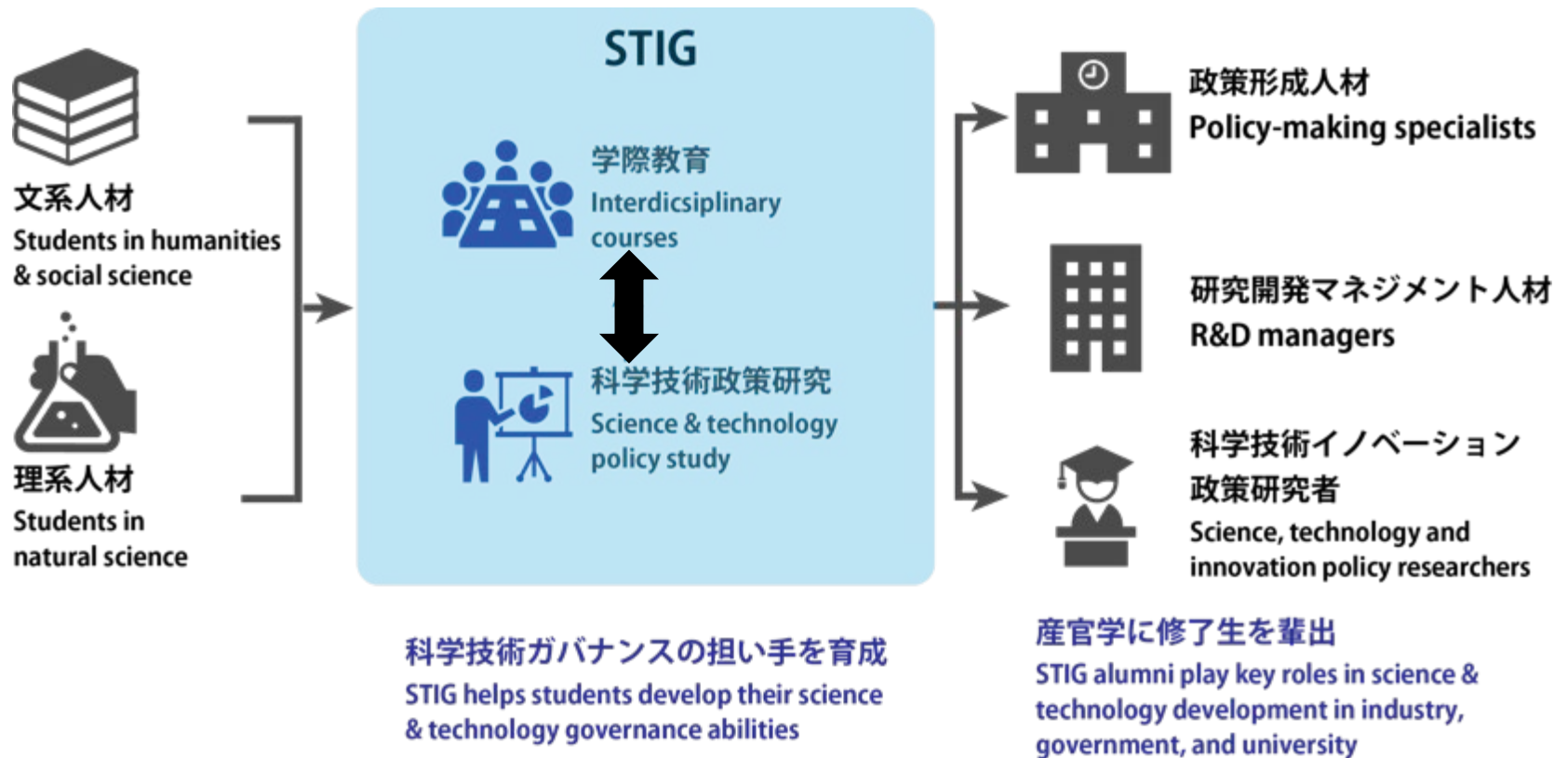
**Inter-disciplinary research network**



# 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!!!

# 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
<b>Total</b>	<b>At least 12 credits</b>

**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)

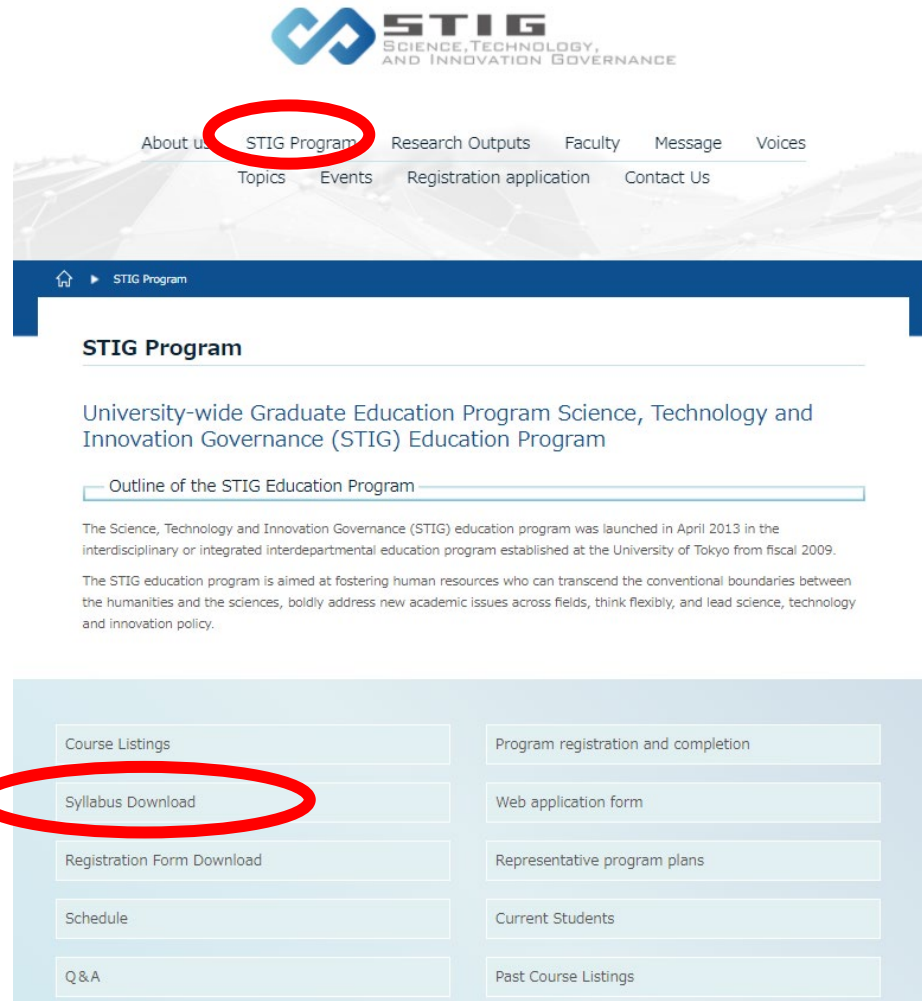
- ・International Intellectual Property Management
- ・Advanced Study of Science & Technology
- ・事例研究・科学技術と政治・行政Ⅰ
- ・Case Study (GraSPP Policy Challenge: Global Innovative Public Policy Solutions)
- ・Innovation and Entrepreneurship
- ・Advanced Technology Management
- ・知識社会マネジメント
- ・市民社会組織・政策論

### 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. A navigation bar contains links: About us, STIG Program (circled in red), Research Outputs, Faculty, Message, and Voices. Below this is a secondary navigation bar with Topics, Events, Registration application, and Contact Us. A blue banner below the navigation bar contains a home icon and the text 'STIG Program'. The main content area is titled 'STIG Program' and describes the 'University-wide Graduate Education Program Science, Technology and Innovation Governance (STIG) Education Program'. It includes an 'Outline of the STIG Education Program' section with two paragraphs of text. A large red arrow points from the 'STIG Program' link in the navigation bar to a grid of links at the bottom. In this grid, the 'Syllabus Download' link is circled in red.

**STIG**  
SCIENCE, TECHNOLOGY,  
AND INNOVATION GOVERNANCE

About us **STIG Program** Research Outputs Faculty Message Voices  
Topics Events Registration application Contact Us

STIG Program

**STIG Program**

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.

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

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

## What is the Core Contents of the Science of Science, Technology and Innovation Policy?

“The Science of Science, Technology and Innovation Policy” is an emerging discipline where policy and research interact and develop in order to make science, technology and innovation (STI) policy more evidence-based. The Core Contents on this website provides the knowledge that is fundamental to understanding the Science of STI Policy. It is intended for students who are new to the Science of STI Policy, as well as for policy makers and practitioners involved in STI policy.

The scope of the Science of STI Policy is diverse and involves a variety of disciplines, including economics, business administration, political science and sociology. At the same time, the Science of STI Policy aims to create knowledge that can be used in the practice of policy formation. The authors are researchers active in various academic fields, as well as policy makers and practitioners involved in STI policy. The content was discussed and developed by the Core Curriculum Editorial Committee comprised of members from related universities and institutions.

The Core Contents may change with time and social conditions, so its content will be periodically updated.

The copyright of the articles belongs to the authors and the editorial copyright of the entire core contents belongs to the Editorial Committee. Readers are free to quote parts of the article. When quoting, the name of the author(s) must be included.



# 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 sends UTokyo delegates after the selection)

**Declining population society-2045 (2014; Awaji-island, Hyogo)**

**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)**

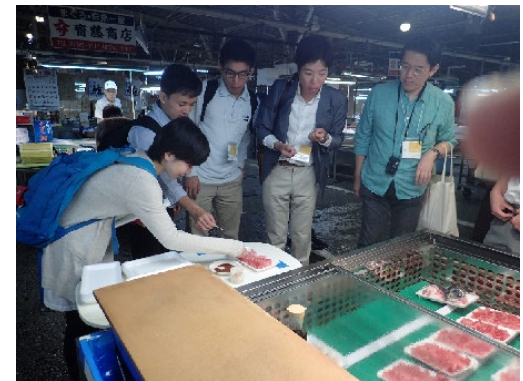
**STI and Society towards 2030 (2018; Roppongi)**

**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)**

**Policy Making with Consideration of Diverse Values (2022; Roppongi)**



# SciREX Summer Camp



**STIG**  
SCIENCE, TECHNOLOGY,  
AND INNOVATION GOVERNANCE



# PoP (Policy Platform) seminar



63rd STIG PoP seminar/WS

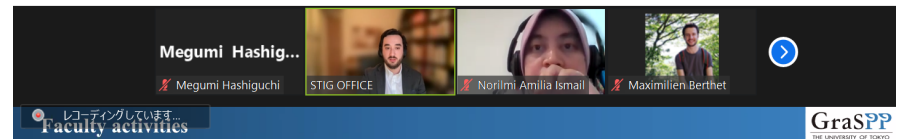
**"Co-existence of offshore wind energy and local fisheries in Japan and Taiwan"**

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

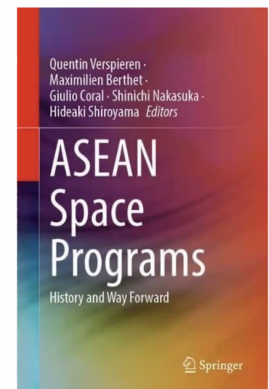
**114<sup>th</sup> STIG PoP Seminar  
Online by Zoom Webinar**

**"ASEAN Space Programs:  
Policy Considerations"**

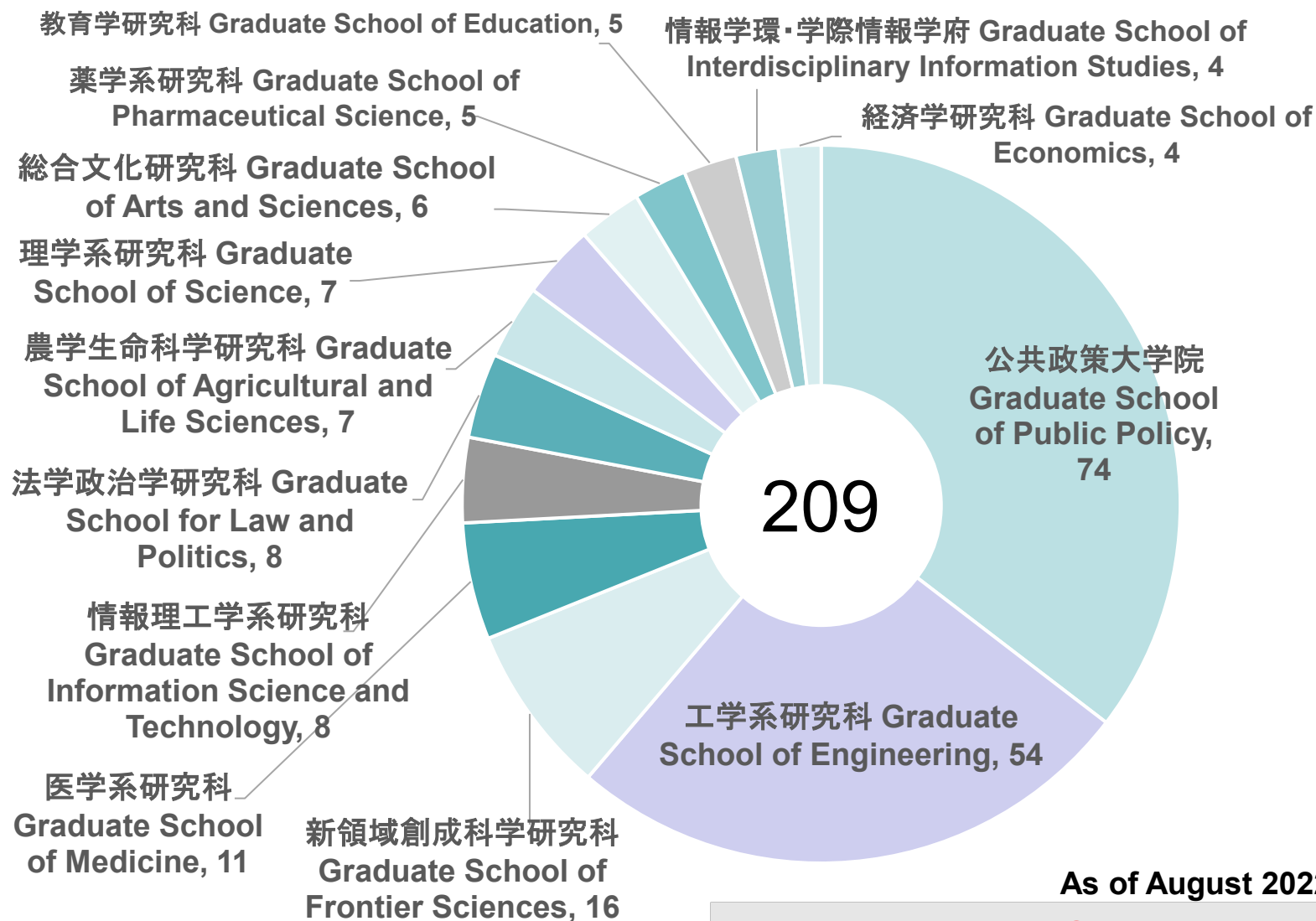
**Rogel Mari Sese, Ateneo de Davao  
University, Norilmi Amilia Ismail, Universiti  
Sains Malaysia, David Ho Lit Xian,  
Singapore Space and Technology Limited**



- Publication of books and articles in leading journals
  - Latest: Verspieren, 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



As of August 2022

**Humanities 54% Sciences 46 %**  
**Master 163 Doctoral 46**

# Graduates from STIG Education Program

120 graduates (M109:D11) received certification from AY 2013 to 2021



# Career Paths of STIG Graduates

官公庁

Government



27%

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

15%

STIG修了生  
STIG Alumni

産業界  
Industry

28%

- 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

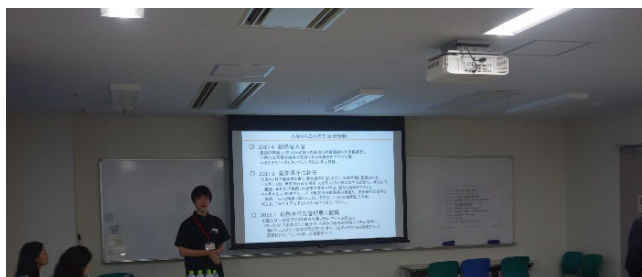
17%

その他  
Others

13%



# Networking with STIG Alumni



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

◆ **Date: 6<sup>th</sup> 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.**



# Networking with STIG Alumni



University-wide Graduate Education Program:  
Science, Technology, and Innovation Governance  
STIG Alumni x Students Reunion  
大学院横断型教育プログラム: 科学技術イノベーション政策の科学  
第2回STIG同窓会のご案内

Saturday, **15 October** 2022, 13:00-15:00

@SMBC Hall, 4F, IARB, Hongo Campus

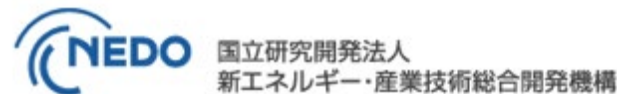
2022年10月15日(土)13時~15時

本郷キャンパス国際学術総合研究棟4F, SMBCアカデミアホール



# 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](mailto:STIG@pp.u-tokyo.ac.jp)