Pursuing Doctoral Studies

Benefits

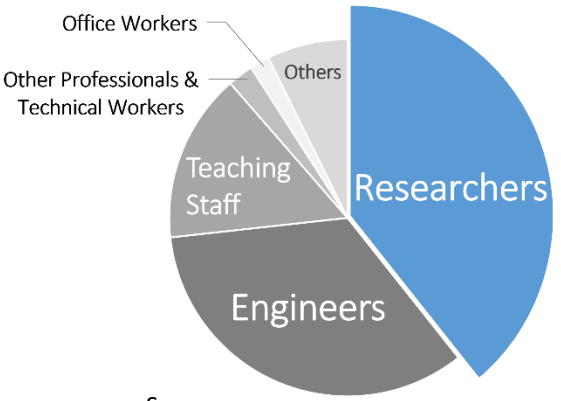
- Developing your **logical thinking, critical thinking ,and problem-solving skills**, and enabling you to understand **the process of creating new value**
- Training your creativity, while providing the **enjoyment of research** and a **broad perspective** on technology in relation to society
- Helping you gain self-confidence to **work independently** regardless of field, a **wider range of career path options**, and greater chances of finding satisfying and rewarding jobs and success.

Changes in the perception of doctoral degrees

With the goal of **taking advantage of scientific and technological progress**, and **developing capabilities for creating new industries**, the **expectations** for individuals with doctoral degrees are growing. Their advanced sci-tech knowledge, as well as **problem-finding and -solving skills** are sought after by society.

After completing doctoral programs, a **wide range of career paths** can be considered – doctoral graduates work as scientists at higher education or research institutions, active players in companies, entrepreneurs, bureaucrats, politicians, etc. In particular, they are becoming more active in R&D companies.

First occupations for science and engineering doctoral graduates



Source:
MEXT-NISTP "Japanese Science and Technology Indicators 2023"

Three Takuetsu Programs

Financial support for doctoral students

At Tokyo Tech, almost all doctoral students receive financial support from public or private entities. The TAC-MI, WISE-SSS, and ISE academies engaging in Takuetsu programs offer students opportunities for financial support.

Takuetsu programs and academies

As part of efforts to foster outstanding doctoral graduates, Tokyo Tech has established the aforementioned three academies that function **across academic disciplines at the Institute**, and enable **seamless transition between master's and doctoral degree programs**. With the objective of developing students' abilities and skills required to **create new value and solve social problems**, these academies offer unique programs. They aim to promote **interdisciplinary research**, and encourage **personnel exchanges** among various organizations such as industrial entities, national institutions, and overseas institutions, while placing value on laboratory work and activities.

Takuetsu programs are waiting to welcome you!

Tokyo Tech Academy for Convergence of Materials and Informatics (TAC-MI)

Tokyo Tech Academy for Super Smart Society (WISE-SSS)

Tokyo Tech Academy of Energy and Informatics (ISE)

＊The enrollment examination for the TAC-MI program ended in AY2023.

* Takuetsu programs: Programs offered by the TAC-MI, WISE-SSS, and ISE academies are supported by MEXT's Doctoral Degree Program for World-leading Innovative & Smart Education (WISE Program). They are commonly called *Takuetsu* (卓越 in Japanese, meaning excellence or superiority) programs.

Tokyo Tech Academy for Convergence of Materials and Informatics (TAC-MI)

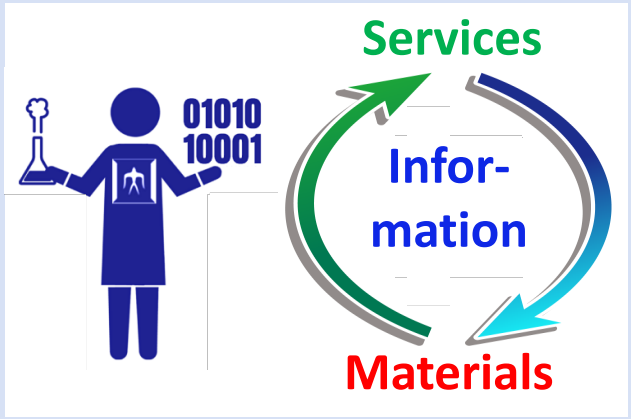
Creating sustainable societies through [Material × Information] multi-talented human resource development

Tokyo Tech

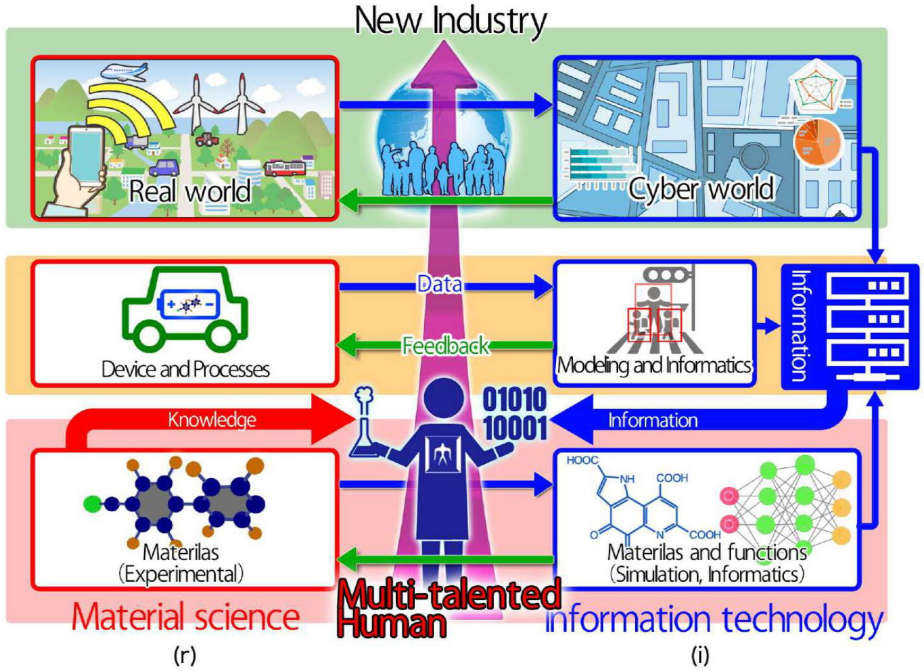
Materials and devices — Fusion — **Information technologies**

Fusion between material science and information technologies based on Tokyo Tech's own research centers, such as Center for Element Strategy and TSUBAME super computer

Tokyo Tech Academy for Convergence of Materials and Informatics (TAC-MI) Start!



Creating **new industries** by connecting "**materials**", which is Japan's strengths, to "**services**" by utilizing **information science & technologies**.



Produce leaders who create new industries as advanced professionals in materials science and informatics

In April 2025, the TAC-MI program will be further developed, and a new interdisciplinary graduate major for doctoral students “Materials and Information Sciences” will be established

A new interdisciplinary graduate major will begin accepting students in April 2025.
We will offer the scholarship and RA salary that helps students enrolled in this graduate major to be financially independent and allows them to concentrate on their studies.

Student Recruitment

Details will be explained at the briefing session.
If you are interested in this graduate major, please participate in the briefing session.

Briefing Session

Schedule **April 17th ,2024**

① 17:15～18:15 Explanation in Japanese
② 18:15～19:15 Explanation in English

To be live-streamed using Zoom

If you wish to participate in the briefing session, please register from the TAC-MI website.

https://www.tac-mi.titech.ac.jp/en/event/2024sp-gmbriefing/

＊The enrollment examination for the TAC-MI program ended in AY2023.

WISE for Super Smart Society (since Apr. 2020)

↑ WISE-SSS Introduction Video

- Opportunities for education and advanced research using multiple research & education fields that bring together the best of cutting-edge science and technology
- Unique educational programs in cooperation with industry
- Substantial financial support

Register now on the web!

Join us at the Briefing Session for Student Recruiting!

April 24（Wed）17：15-18：15（Eng）

Collaboration between WISE-SSS and Super Smart Society Promotion Consortium

- What is the Super Smart Society Promotion Consortium?

  A next-generation education and research platform

- Students have opportunities to form **interdisciplinary research teams** with the Consortium partners and participate in the team with **financial support.**

学生向けイベント・情報提供を実施！

SSS Matching Workshop

Held twice a year

Next: June 5th (open in the middle of April)

Internship Information

SSS Consortium Partners (refer the right)

provide internship programs

Company tour for students

Open tour of SSS Consortium Partners

(SSS Students Limited)

Etc…

SSS Promotion Consortium partners (as of November ,2023)

Tokyo Tech, JAMSTEC, AIST, NICT, NARO, AIP, QST, aiwell, ITD Lab, Azbil, ANRITSU, Idemitsu Kosan, ITOKI, UMITRON, ACSL, AGC, NTT Urban Solutions, LG Japan Lab, ORNIS, Kawasaki Heavy Industries, Kubota, KDDI, Koden Electronics, Komatsu, JTEKT, SHO-BOND, SoftBank, TsukArm Robotics, DENSO, Central Japan Railway Company (JR Central), Tokyu Research Institute, TOSHIBA, TRESSBIO LABORATORY, Nileworks, NSK, NEC, NTT, Panasonic, Hitachi, FUJITSU, Honda Research Institute JP, Makino Seiki, Mazda Motor, Mizuho–DL Financial Technology, MITSUBISHI ESTATE, MITSUBISHI JISHO DESIGN, Mitsubishi Electric, YASKAWA Electric, Yokogawa Electric, Rakuten Mobile, Ricoh Company, ROCKY-ICHIMARU, MAFF, Ota City, Kawasaki City, Meguro-City, City of Yokohama, SME Kanto Head Office, OPRI, Institute for Marine Culture and Research Promotion, The EcozzeriaAssociation, MaoI

Award @ SSS Matching Workshop

Features

- ✓ Integrated Master's and Doctoral program
- ✓ Financial support
- ✓ Open for all courses

Tokyo Tech Academy of Energy and Informatics

Tokyo Tech Academy of Energy and Informatics

Multi-scope・Energy WISE Professionals

For AY2025 Enrollment

Enrollment Q&A Session

DATE : April 23, 2024 (Tue)
17:00-18:00
Japanese and English
Venue : Online by Zoom

HP: https://www.infosyenergy.titech.ac.jp/Academy/en/

For more information, please visit our website.→

Feel free to attend session!!

Outline of Tokyo Tech Academy of Energy and Informatics

Tokyo Tech Academy of Energy and Informatics

Tokyo Tech

Expectations

Create, design and lead the future society

Multi-Scope・Energy WISE Professionals

＝

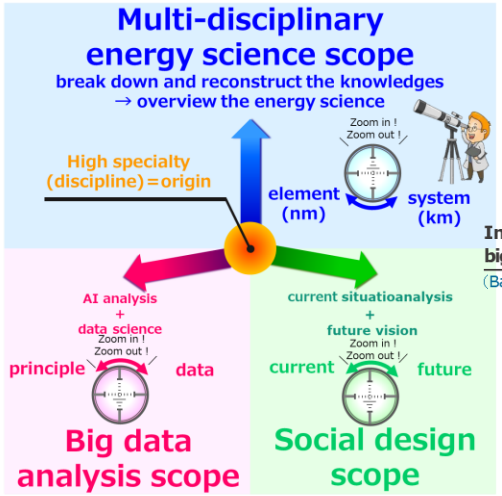
“Professionals” with “Multi-disciplinary energy science scope” applied by “Big Data Science” (AI analysis+Data science) who can design a new sustainable energy

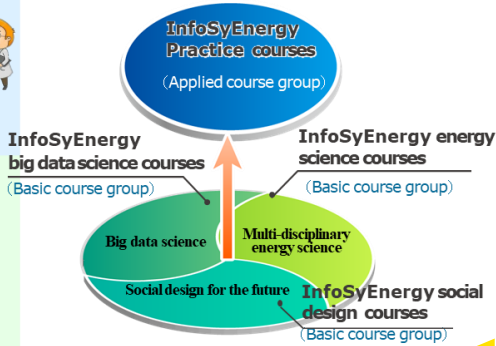
Our Efforts

- Hitotsubashi University’s cooperation by providing knowledges of social science, educational skills and professional skills
- Utilization of energy big-data in smart energy system developed and demonstrated at Tokyo
- Collaboration with consortium members of 25 companies, 4 public institutes and 14 world’s leading universities
- Cultivating abilities of flexibly handling on the site and finding problems by providing internship and co-research programs with domestic/overseas companies and universities
- Constructing a global human network centered on doctoral students by participating in various events such as cutting-edge research workshops and exchange events with consortium member companies and overseas universities
- The business and international mentorship system will help students develop multifaceted viewpoints

Our Curriculum

Cultivate “3 scopes” by “4 course groups” collaborating with “InfoSy**Energy** Research and Education Consortium”





Tokyo Tech InfoSyEnergy Research and Education Collaboration

Promote the integrative researches of “system” and “devices”

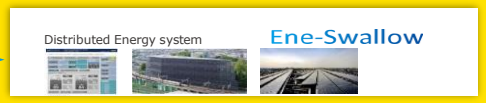
Companies · Public institutions · World’s top universities × Tokyo Tech

- Over 70 Professors/Assoc. Professors participating from across all of Tokyo Tech’s schools
- Organized into nine areas, teams design and conduct collaborative research
- “Multi-scope” energy education through academia-industry cooperation
- Strategic student-industry matching, and a recurrent education system

The Aim of InfoSyEnergy

「Synergistic effects from integrated promotion of "energy device development" and "system development

Campus system technology developed and demonstrated at Tokyo Tech



Tokyo Tech

Graduate major in Materials and Information Sciences Briefing Session

A new interdisciplinary graduate major for doctoral students "Materials and Information Sciences" will be established, and will begin accepting students in April 2025.

If you are interested in this graduate major, please participate in the briefing session.

Schedule

Wed., April 17, 2024

To be live-streamed using Zoom

①17:15~18:15 Explanation in Japanese

②18:15~19:15 Explanation in English

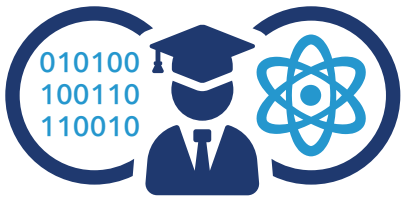
Registration required.

How to register

If you wish to participate in the briefing session, please register from the TAC-MI website.

https://www.tac-mi.titech.ac.jp/en/event/2024sp-gmbriefing/

In order to foster outstanding individuals, the Institute established the Tokyo Tech Academy for Convergence of Materials and Informatics (TAC-MI) in April 2019 under the auspices of MEXT's WISE Program. The TAC-MI program is a seamless educational program provided throughout graduate learning, which aims to empower students to become multitalented individuals capable of promoting creative, interdisciplinary research in materials science and informatics.
In April 2025, the TAC-MI program will be further developed, and a new interdisciplinary graduate major for doctoral students "Materials and Information Sciences" will be established.
In this graduate major, we provide practical education with an eye on social services in collaboration with partners from industry, and will enable students to connect information and materials by utilizing information science and multifaceted thinking, as well as by taking a broad perspective.
We will also offer the scholarship and RA salary that helps students enrolled in this graduate major to be financially independent and allows them to concentrate on their studies.



**The graduate major in Materials and Information Sciences will begin accepting students in April 2025.
Details will be explained at the briefing session.**

Contact information

TAC-MI Office (S6 Bldg., Rm 402)
tac-mi@jim.titech.ac.jp
Please visit our website for details.
URL: https://www.tac-mi.titech.ac.jp/en/

Tokyo Tech Academy of Energy and Informatics

東京工業大学 Tokyo Institute of Technology

AY2024 Enrollment Q&A Session

4/23 (TUE)

Target

Students who can take final exam of 3-4Q "Energy Innovation Co-creative Project" during master's and professional master's program plus Undergraduate students

- Master's students
- Professional master's students
- Undergraduate students

(In particular as of 2024 April:
M1 students, M2 first semester and Undergraduate students)

Date & Time

April 23,2024 (Tuesday)
17:00～18:00 (Japanese and English)

Venue

Online by Zoom meeting
Registration is required. Please check our website.
https://www.infosyenergy.titech.ac.jp/Academy/en/

Tokyo Tech Academy of Energy and Informatics
Management Operations Office
NE-24 2-12-1 Ookayama, Meguro-ku, Tokyo 152-8550
Environmental Energy Innovation Building
(Ookayama North Bldg. 3) Room 613
E-mail: management_office@infosyenergy.titech.ac.jp

Japanese

English

Features of Tokyo Tech Academy of Energy and Informatics

Cultivate "3 Scopes" by "4 Course Groups" collaborating with "InfoSyEnergy Research and Education Consortium"

Scope2. Big Data Science Scope

The aptitude to concretely synthesize AI analysis and data science as they apply to their own energy-related areas of specialization (expertise and skills)

Scope1. Multi-disciplinary Energy Science Scope

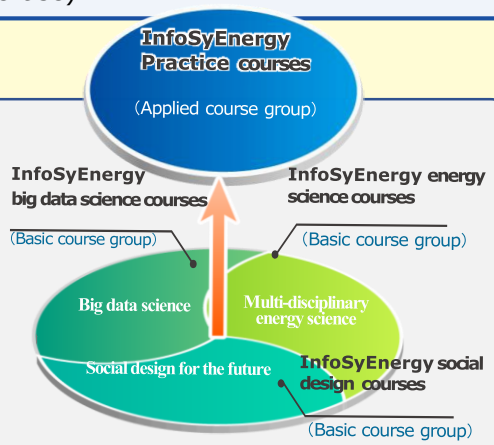
Scholarly knowledge related to multi-disciplinary energy science classified and reconstructed through analysis of knowledge and parallels pertaining to energy devices and systems (profound expertise)

Scope3. Social Design Scope

Knowledge and skills in social science disciplines covering business innovation, finance, marketing, policy theory, econometrics, etc. The ability to persuasively motivate and engage others by sharing the social and economic value of their own R&D and business designs, and leadership competencies needed for success at a global level (expertise and quality as members of society)

4 Course Groups

1. InfoSy**Energy Energy Science courses** : 4 credits or more
2. InfoSy**Energy Big Data Science courses** : 4 credits or more
3. InfoS**yEnergy Social Design courses** : 4 credits or more from the InfoSyEnergy Social Design courses, including one or more from restricted electives
4. InfoSy**Energy Practice courses** : 4 credits or more including InfoSyEnergy-outreach and one or more from restricted electives



Completing both the doctoral degree program in your own Graduate Major, and Tokyo Tech Academy of Energy and Informatics program is required. **There will be an acknowledgement of completion of the program on their diploma in addition to recognition of their degree**

InfoSyEnergy Research and Education Consortium

Collaboration with the following Partner Institutions and promotion of educational program

Company 25 / Local Gov. Public Institution 4 / University 14 × Tokyo Tech

【Company】 IHI / Azbil / IMRA JAPAN/ Iwatani / NTTDATA CUSTOMER SERVICE / NTT DATA BUSINESS SYSTEMS / NTT FACILITIES / KAJIMA / Kawasaki Heavy Industries / ENEOS / JFE Engineering / SUMITOMO / Chiyoda / Deloitte Tohmatsu / Tokyo Electric Power Company Holdings/ Toshiba Energy Systems & Solutions/ Tokuyama / TOYO KANETSU K.K./ Panasonic / Fujitsu/ BROTHER INDUSTRIES /Mizuho Research & Technologies /Mitsui Chemical/ Mitsubishi Electric / Resonac

【Local Gov./Public institution】 Japan International Cooperation Agency (JICA) (Japan)/National Institute of Advanced Industrial Science and Technology (AIST) (Japan)/CEA-Liten (France)/Kawasaki-shi(Japan)

【University】 Hitotsubashi University (Japan)/Georgia Institute of Technology (USA)/Imperial College London (UK)/INSA de Lyon(France)/ Korea Advanced Institute of Science and Technology(Korea)/Massachusetts Institute of Technology(USA)/Princeton University (USA)/Nanyang Technological University (Singapore)/RWTH Aachen University(Germany)/University of California, Santa Barbara (USA)/Tsinghua University (China)/ University of Cambridge, Judge Business School (UK)/University of Stuttgart (Germany)/Uppsala University (Sweden)

Financial Aid System for Program Students

- Students have opportunities to participate in and receive financial support through the joint research with companies promoted by the Tokyo Tech InfoSyEnergy Research and Education Consortium.
- Doctoral students recognized as having stellar research abilities and potential can receive up to 2.53 million yen (including Tsubame Scholarship, RA Salary from Supervisor) in support annually during their enrollment.

Merit of Collaboration with InfoSyEnergy Research and Education Consortium

- A global human network is created by holding various events that include cutting-edge research workshops and exchange events with consortium member companies and overseas universities, which would be an opportunity to form a career path.
- Doctoral students can participate in team-based collaborative research
- Through experience such as groupwork in the same room with overseas students at the InfoSyEnergy International Forum, students can form networks with other doctoral students and cultivate relationships that will be an asset in their postdoctoral careers.
- The business and overseas mentorship system will help students develop multifaceted viewpoints.