Pursuing Doctoral Studies

Benefits

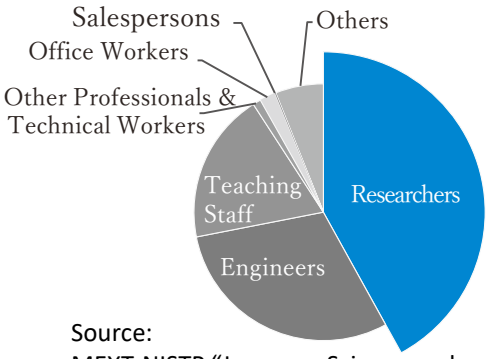
- Developing your **logical thinking, critical thinking ,and problem-solving skills**, and enabling you to understand **the process of creating new value**
- Training your creativity, while providing the **enjoyment of research** and a **broad perspective** on technology in relation to society
- Helping 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 2020"

Related information: 「博士」のすゝめ* https://www.tac-mi.titech.ac.jp/pdf/hakasenosusume.pdf

* Roughly translated as "Benefits of earning doctoral degrees"

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)

* 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)

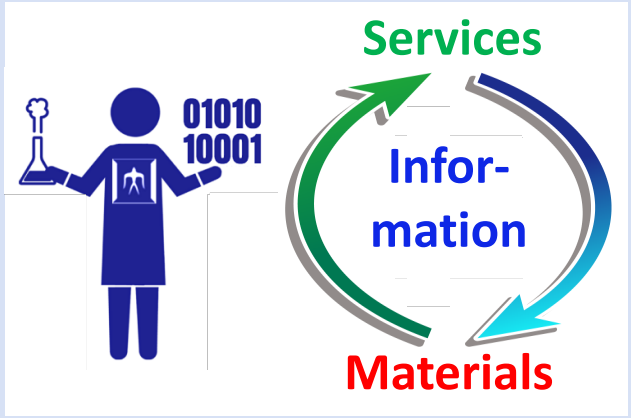
Creating sustainable societies through [Material × Information] multi-talented human resource development

Tokyo Tech

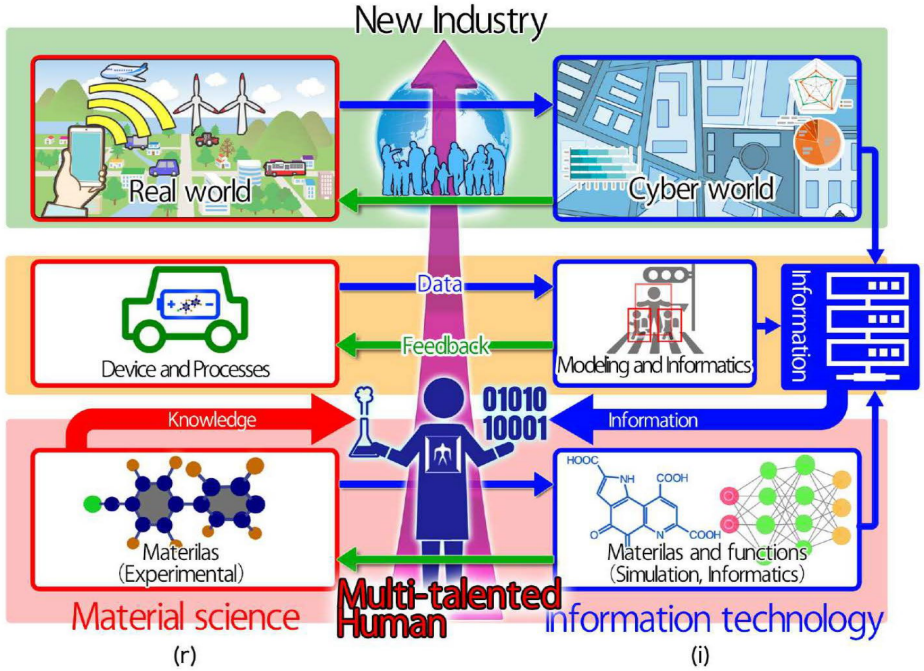
Materials and devices — Fusion — **Information technologies**

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

◆ Specially offered degree programs for TAC-MI students

To help students develop the four attributes required to become **multitalented individuals**, the academy has designed 12 educational modules:

(1) Creativity

- **Materials and Informatics lectures** with exercises
- **Laboratory rotation**
- Originality education with **Self-designed thesis**

(2) Broad perspective

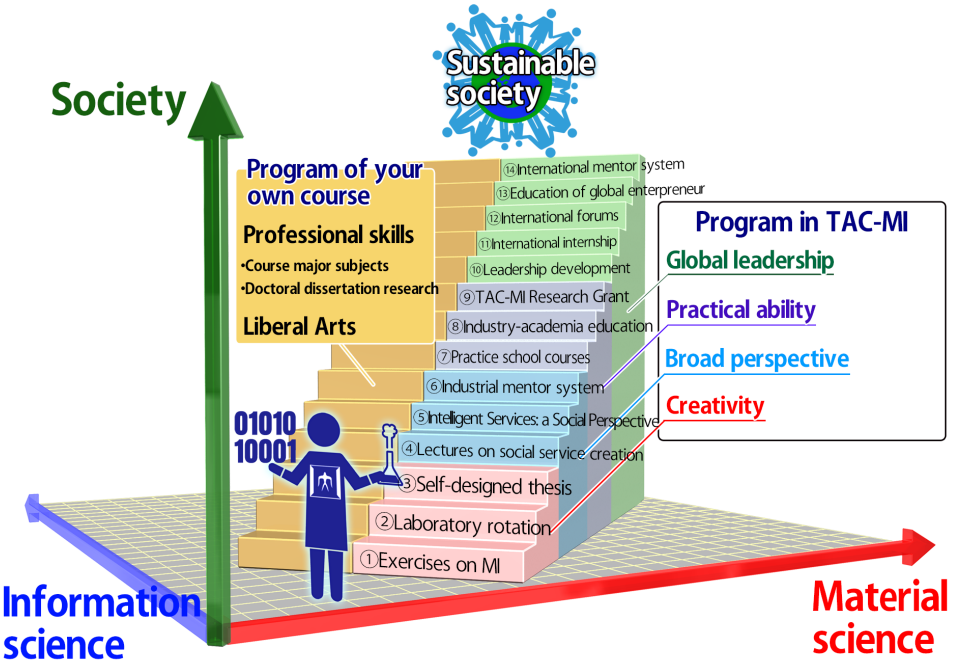
- **Lectures on social service creation**
- **Intelligent Services: A Social Perspective**
- **Industrial mentor system**

(3) Practical ability

- **Practice School** to solve companies issues
- **TAC-MI Research Grant** to enhance the ability to find and solve problems

(4) Global leadership

- **Leadership development courses** provided by ToTAL
- **International internships**
- **International forums** on materials and informatics
- **International mentor system**



We also offer the **TAC-MI Scholarship** and **RA** that helps TAC-MI students to be financially independent and allows them to concentrate on their studies.

Student Recruitment Briefing will be held online. Please participate in the briefing session !

Schedule **October 20th ,2021** **To be live-streamed using Zoom**

① 17:15～18:00 in Japanese
② 18:15～19:00 in English

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/ay2022spring-briefing/

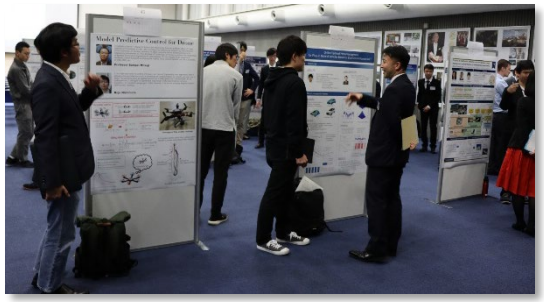
Super Smart Society (SSS) Promotion Consortium

A next-generation education and research platform has been established!

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

SSS matching workshop

But, how?



Match the needs of the Consortium partners with the seeds of the research and human resources of students through mutual presentations and discussions

15 matchings have been formed on average in the past 3 workshops

Next chance is coming soon!

Nov 17 (Wed) … Seeds from students

Dec 8 (Wed) … Needs from industry

All of you are eligible for attending.

Register now on the web!

Consortium Partners (as of August 2021) The order follows that of the Japanese.

【University】
- Tokyo Institute of Technology

【Reseach Institution】
- Japan Agency for Marine-Earth Science and Technology
- Information Technology and Human Factors, National Institute of Advanced Industrial Science and Technology
- The Wireless Networks Research Center, National Institute of Information and Communications Technology
- National Agriculture and Food Research Organization
- Center for Advanced Intelligence Project, RIKEN
- National Institutes for Quantum and Radiological Science and Technology

【Company】
- aiwell Inc.
- Azbil Corporation
- ANRITSU CORPORATION
- ITOKI CORPORATION
- AGC Inc.
- NTT Urban Solutions, Inc.
- LG Japan Lab Inc.
- Kawasaki Heavy Industries, Ltd.
- Kubota Corporation
- KDDI CORPORATION
- Koden Electronics Co., Ltd.
- Komatsu Ltd.
- JTEKT CORPORATION
- SHO-BOND CORPORATION
- SoftBank Corp.
- DENSO Corporation
- Central Japan Railway Company
- TOSHIBA CORPORATION
- NSK Ltd.
- NEC Corporation
- NIPPON TELEGRAPH AND TELEPHONE CORPORATION
- Panasonic Corporation
- Hitachi Industrial Equipment Systems Co., Ltd
- FUJITSU LIMITED
- Honda Research Institute Japan Co., Ltd.
- Makino Seiki Co., Ltd.
- Mazda Motor Corporation
- MITSUBISHI ESTATE CO., LTD.
- Mitsubishi Electric Corporation
- YASKAWA Electric Corporation
- Yokogawa Electric Corporation
- The Bank of Yokohama, Ltd.
- Rakuten Mobile, Inc.
- Ricoh Company, Ltd.
- ROCKY-CHIMARU Co., Ltd.

【Public Institution and others】
- Ministry of Agriculture, Forestry and Fisheries
- Ota City
- Kawasaki City
- Kanto Head Office, Organization for Small & Medium Enterprises and Regional Innovation, JAPAN
- The Ocean Policy Research Institute, The Sasakawa Peace Foundation
- The Ecozzeria Association

WISE for Super Smart Society (since Apr. 2020)

https://youtu.be/MEQqgL1gnkw

- **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!

17:15-18:00 on Oct 20th, 2021(English)

Features

- ✓ Integrated Master's and Doctoral program
- ✓ Financial support
  up to 2.53 million yen/year
- ✓ Open for all courses

Tokyo Tech

Tokyo Tech Academy of Energy and Informatics

Tokyo Tech Academy of Energy and Informatics

Multi-scope・Energy WISE Professionals

Briefing Session on Recruiting Students for 21AY Fall & 23AY Spring Enrollment

DATE : October 5, 2021（Tue.）
JPN 17:00-18:00
ENG 18:15-19:15
Venue : Online by Zoom

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

Register here→

Feel free to attend the 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

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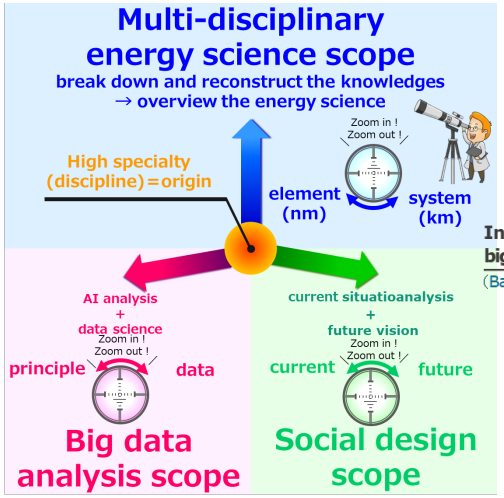
“Professionals” with “Multi-disciplinary energy science scope” applied by “Big Data Science” (AI analysis+Data science) who can design a new sustainable energy

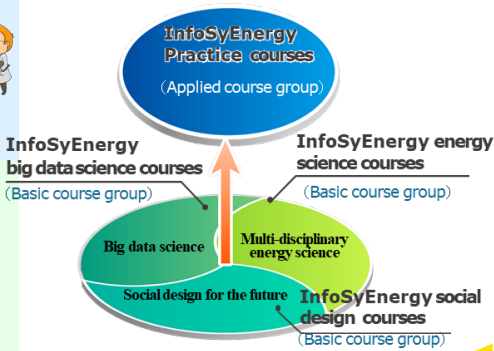
Our Efforts

- 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, 6 public institutes and 15 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”





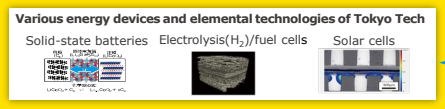
Tokyo Tech InfoSyEnergy Research and Education Collaboration

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

Companies 25 | Public institutions 6 | World’s top universities 15

× 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