

International Graduate Program for Life Science and Technology

1. IGP (A) Outline

“Objectives”

The School of Life Science and Technology nurtures students who will be able to contribute to the creation of universal intellectual basis and give it back to the society with an ethical worldview through elucidation of biological mechanisms and through pioneering new engineering applications based on the biological knowledge.

Since 2007, the School of Life Science and Technology (the former Graduate School of Bioscience and Biotechnology) has established an international graduate course for foreign students, especially excellent students from East Asian countries. In 2013, as making advances in this graduate course, we have launched a new international education program including master, doctoral and integrated master's and doctoral curricula designed to help students cultivate their creativity, learn practical working skills, and improve their English and Japanese capabilities. IGP (A) is one of this international program and, in this IGP (A), we foster international leaders able to develop leading-edge R&D in innovation of science and technology and construct a bridge between Japan and other nations in the future.

IGP (A) is a combined master's and doctoral education and considered to be one continuous course of study, which cannot be divided into two separate curricula. A student is required to enroll in the Tokyo Tech Master's course firstly, regardless of whether or not they have already earned a Master's degree. A maximum of 10 credits from a graduate school in which students have studied may be transferred to Tokyo Tech upon approval.

1-1. Graduate Majors available to IGP (A) Students

Graduate Major in Life Science and Technology

Graduate Major in Human Centered Science and Biomedical Engineering

2. Competencies Developed

[Integrated Master's and Doctoral Degree]

IGP (A) students aim to acquire the following skills at a high level in order to achieve the above objectives.

- Broad, exceptional expertise centered on the “Life Science and Technology” or “Human Centered Science and Biomedical Engineering” field
- Exceptional problem-setting and problem-solving skills underpinned by expertise and high ethical standard, as well as the innovative creativity to pioneer new technologies and new theoretical paradigms
- Exceptional sophistication and communication skills for exhibiting leadership on the global stage

3. Learning Goals

[For Master's Degree]

To acquire the skills listed in “Competencies Developed”, students in this IGP (A) will study the following.

- A) Acquiring advanced expertise in the field of “Life Science and Technology” or “Human Centered Science and Biomedical Engineering”

Acquiring advanced expertise in the research field of “Life Science and Technology” or “Human Centered Science and Biomedical Engineering” through Research Seminars, Research-Related Courses, and Major Courses

- B) Acquiring the knowledge of a broad range of science and technology fields

Learning broad knowledge conducive to the development of science and technology through abundant Major Courses

- C) Acquiring research-executing skills, problem-setting skills, problem-solving skills, and innovative creativity

Acquiring research-executing, problem-setting, problem-solving, and academic writing skills as well as innovative creativity through Research Seminars, Research-Related Courses, and exercises and experiments in Major Courses

D) Acquiring international communication skills

Learning advanced communication skills required as international professionals through Humanities and Social Science Courses, Career Development Courses, and Major Courses

E) Cultivating sophistication in relation to bioethics and society

Learning ethical and social values relevant to life and research in “Life Science and Technology” or “Human Centered Science and Biomedical Engineering” through Humanities and Social Science Courses, Career Development Courses, and exercises and experiments in Major Courses

[For Doctoral Degree]

In order to acquire the skills listed in “Competencies Developed”, students in this IGP (A) will study the following.

A) Acquiring exceptional expertise centered on the “Life Science and Technology” or “Human Centered Science and Biomedical Engineering” field

Advancing expertise in the research field of “Life Science and Technology” or “Human Centered Science and Biomedical Engineering” and skills to evaluate research in that field through Research Seminars, Research-Related Courses, and exercises and experiments in Major Courses

B) Acquiring research-executing skills, problem-setting skills, problem-solving skills, and innovative creativity

Acquiring exceptional research-executing skills, problem-setting skills, problem-solving skills, and academic writing skills, as well as the innovative creativity to pioneer new technology and theoretical paradigms through Research Seminars, Research-Related Courses, and exercises and experiments in Major Courses

C) Acquiring international communication skills

Learning exceptional communication skills for exhibiting leadership on the global stage through Humanities and Social Science Courses, Career Development Courses, and exercises and experiments in Major Courses.

D) Acquiring leadership and research-planning and -organizing skills

Learning skills to plan and lead advanced research as a next-generation leader through Career Development Courses, Research Seminars, and exercises and experiments in Major Courses

E) Nurturing sophistication in relation to bioethics and society

Developing strong ethical and social views towards life and research in “Life Science and Technology” or “Human Centered Science and Biomedical Engineering” through Humanities and Social Science Courses, Career Development Courses, and exercises and experiments in Major Courses

4. IGP (A) Completion Requirements and Courses

[For Master's Degree]

【1.】 IGP (A) Completion Requirements

In order to complete this program, requirements for master's degree of your Graduate Major must be met. For completion requirements of your Graduate Major, please refer to the relevant Graduate Major pages in "Guide to Graduate Majors (for IGP)".

【2.】 IGP (A) Courses

In order to complete this program, requirements for master's degree of your Graduate Major must be met. For core courses of your Graduate Major, please refer to the relevant Graduate Major pages in "Guide to Graduate Majors (for IGP)".

[For Doctoral Degree]

【1.】 IGP (A) Completion Requirements

In order to complete this program, requirements for doctoral degree of your Graduate Major must be met. For completion requirements of your Graduate Major, please refer to the relevant Graduate Major pages in “Guide to Graduate Majors (for IGP)”.

【2.】 IGP (A) Courses

In order to complete this program, requirements for doctoral degree of your Graduate Major must be met. For core courses of your Graduate Major, please refer to the relevant Graduate Major pages in “Guide to Graduate Majors (for IGP)”.