Educational purpose

To develop global human resources with the extensive knowledge needed to realize a sustainable society, and having specialties from the basics to applications of science and technology, flexibility in thinking, competencies for intellectual creativity with problem finding and solving skills, broad perspectives, enriched sense of humanity, and collaboration skills to work in teams, all with a view to contributing to the international society.

College of Policy and Planning Sciences

Bachelor of Policy and Planning Sciences

Educational purpose

We develop human resources with a thinking ability integrating arts and sciences and skills of analyzing and utilizing data, needed for engineering, practical, and strategic analyses of various social problems, where human behaviors are intricately intertwined, and the skills to design systems for comprehensive problem-solving.

Desired students

Acquiring the interdisciplinary thinking needed to recognize and manage a wide variety of social problems that occur in society/economy, companies/management, and cities/regions; and desiring to contribute to the international society.

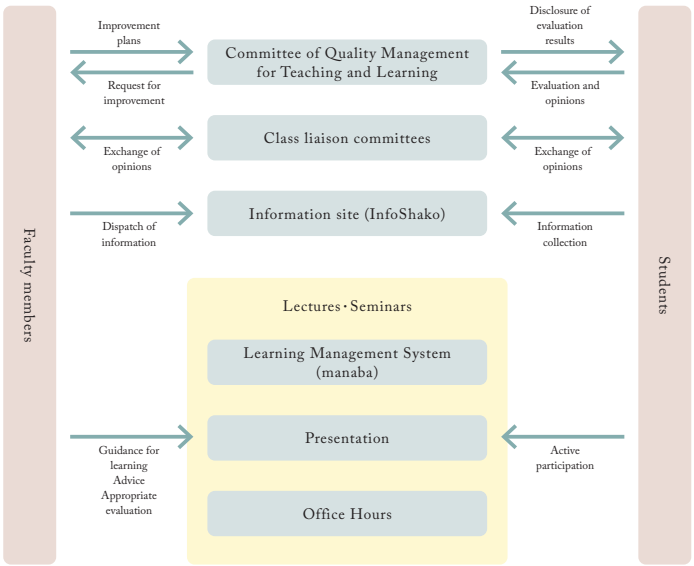
Measures to ensure and improve the quality of education

We present course descriptions, course goals, and schedules/course plans in the CPPS Syllabi, while objectively assessing academic performance to guarantee the achievement of sufficient levels of specialty and interdisciplinarity by the time of graduation.

We also evaluate all lectures and seminars, and share the results with students, in addition to all faculty, requiring the submission of improvement plans by the faculty in charge of lectures/seminars scored 40 or less (full score: 100). Furthermore, as a measure for faculty development, we also hold a meeting to exchange opinions with students during each term, and improve the contents and methodologies of lectures/seminars.

When several faculty are in charge of the same course, we minimize variations in assessment results among these faculty by adjusting the level of difficulty/progress of learning among their classes and adopting common questions for examinations.

Measures to ensure and improve the quality of education



Bachelor of Policy and Planning Sciences

Diploma Policy

We confer a bachelor's degree (of policy and planning sciences) to students, who have acquired the knowledge and skills (Generic Competences) specified based on the goals of education in undergraduate courses at the University of Tsukuba, and have achieved the following goals, meeting the purposes of human resource development at the College of Policy and Planning Sciences, School of Science and Engineering.

- Having a basic understanding and insight into social systems, such as economy, enterprises, and cities, and being able to propose specific policies to reduce uncertainty in the social environment based on evidence.
(Relevant competences: Basic understanding and insight into social systems)

- Being able to use one's knowledge of mathematics (calculus/linear algebra), statistics (data analysis), and information technology (programming) as a tool to solve various problems facing complex societies.
(Relevant competences: Mathematics, statistics, and information technology for solving complex social problems)

- Being able to identify the essences of global problems in modern society.
(Relevant competences: Ability to analyze global issues)

- Being able to flexibly fulfill social demands from multiple perspectives, such as economics, management science and engineering, and urban and regional planning.
(Relevant competences: Ability to fulfill social demands)

- Being able to comply with professional ethics as an expert/engineer in the field of economics, management science and engineering, or urban and regional planning.

- Having objective and persuasive communication skills.
(Relevant competences: Communication skills)

- Having skills for basic communication using English.

- Being able to act cooperatively as a member whenever team collaboration is required.

- Being able to explore issues autonomously, and learn independently and continuously.
(Relevant competences: Problem-solving skills)

Curriculum Policy

As a program to obtain academic achievements related to the bachelor's degree (in policy and planning sciences), we plan education and implement these plans based on the following policies.

General policy

The complex and diverse problems facing modern society are no longer manageable for individual areas of traditional scholarship on their own. With a view to addressing such a situation, we organize 3 majors, Social and Economic Sciences, Management Science and Engineering, and Urban and Regional Planning, and help students acquire both specialized and interdisciplinary skills. We place an emphasis on the scientific and empirical aspects of policy- or project-related decision-making processes for the national government, local governments, corporate organizations, and communities as a goal. Therefore, at this college, students decide on a major to acquire more specialized knowledge and skills not at the time of enrolment, but during the fall semester of the second year after taking various courses from the first year to the spring semester of the second year. It is also possible for them to choose a minor, in addition to these majors.

Course sequence policy

- Until the spring semester of the second year, students mainly take basic courses (foundations) required for advanced learning (major subjects) at this college, including those serving as introductory to the 3 majors
- From the fall semester of the second year, they belong to one of the 3 majors, and take major subjects. To show the structure of each specialized field in an easy-to-understand manner, we divide major subjects in each major into groups of courses called "areas", and encourage students to acquire interdisciplinary skills. This program also allows students with excellent academic performance to graduate in their third year.

After advancing to the fourth year, students conduct research for their graduation thesis throughout the year. They select supervisors from researchers in various specialized fields, such as engineering, economics, management, statistics, psychology, and sociology, to conduct theoretical and practical studies.

Implementation policy

To help students autonomously learn theories and practices, seminars are held in all areas of each major. Thoroughly practicing presentation and discussion skills through these seminars, they can also acquire the skills needed to develop engineering, practical, and strategical solutions to various problems that occur in society.

Policy for evaluation of learning outcomes

We have also defined criteria for the acquisition of the 9 skills listed in the Diploma Policy, and show skill acquisition goals in the syllabus for each course. With regard to the evaluation of skill acquisition, we measure the achievement level based on the credit acquisition status in these courses. We decide whether or not to confer a degree comprehensively based on the results of graduation thesis evaluation and the status of acquiring credits required for graduation.

Characteristics

We provide opportunities for real-world problem-solving activities in cooperation with national and local governments, private companies, and local communities. In addition, for each major, we have developed specialized exercises to help students develop their skills in analyzing and utilizing data.

Curriculum structure

1st year → 4th year

Foundation Subjects for Major

Mathematics Literacy
Linear Algebra
Calculus
Statistics

Introduction to Economic Theory
Introduction to Quantitative Economics
Accounting and Management
Optimization in Practice
Introduction to Urban and Regional Planning
Urban Analytics

Introduction to Programming

Seminar in Policy and Planning Sciences
Policy and Planning Sciences in English

Major Subjects

Major in Social and Economic Sciences
Econometric Analysis System area (Lecture・Seminar)
Public System area (Lecture・Seminar)
Strategic Behavior System area (Lecture・Seminar)

Major in Management Science and Engineering
Management area (Lecture・Seminar)
Information Technology area (Lecture・Seminar)
Mathematical Engineering area (Lecture・Seminar)

Major in Urban and Regional Planning
Environment and Community Development area (Lecture・Seminar)
Urban Structure/Social Infrastructure area (Lecture・Seminar)
Regional Science area (Lecture・Seminar)

General Foundation Subjects (Common Foundation Subjects, Specific Foundation Subjects)