

# The College of Policy and Planning Sciences (CPPS) Study Planning Guide AY2025

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## **Message on the Publication of the CPPS Study Planning Guide AY2025**

The CPPS Study Planning Guide is a reference material for students to systematically take courses at the College of Policy and Planning Sciences toward major assignment and the graduation thesis. Therefore, it provides information related to areas and available courses, in addition to major assignment and the graduation thesis. For the details of each course, please also refer to the latest KdB information and the “Course Catalog for Undergraduate Student”.

We expect that it will help you have a fruitful time at this college.

April 2025

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# Goals of Education and Characteristics of Education Planning at CPPS

## 1) Educational purpose

To develop global human resources with the extensive knowledge needed to realize a sustainable society and specialties from the basics to applications of science and technology, flexible thinking, competencies for intellectual creation and problem identification/-solving, broad perspectives, rich humanity, and collaboration skills to work in teams, in order to contribute to the international society.

## 2) Educational purposes and desired students

### (Educational purposes)

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.

## 3) Diploma Policy

We confer a bachelor's degree (of policy and planning sciences) to students, who have acquired the knowledge and skills (general 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.
- 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.
- Being able to identify the essences of global problems in modern society.
- Being able to flexibly fulfill social demands from multiple perspectives, such as economics, management science and engineering, and urban and regional planning.
- 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.
- 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.

## 4) 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 Degree Conferral 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.

### **5) Guaranteeing and improving 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 faculties 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.

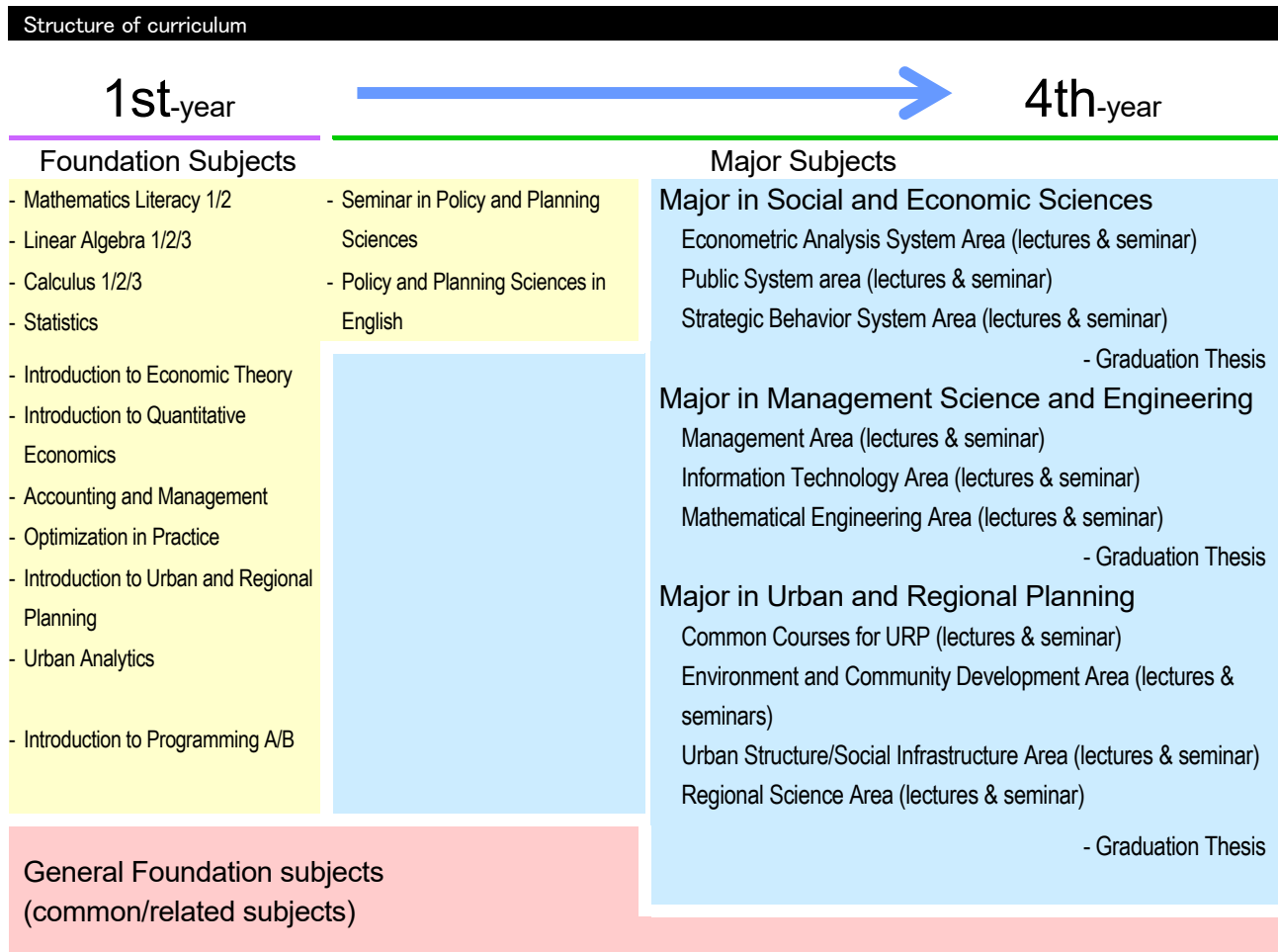


Fig.1 Curriculum structure at CPPS

# College of Policy and Planning Sciences Competence List

## <Bachelor of Policy and Planning Sciences>

### Generic Competences (Bachelor Program)

No.	Knowledge and abilities	Content
1	Communication ability	Communication ability to use the mother tongue and foreign languages properly and make presentations, etc. using various media
2	Ability for critical and creative thinking	Ability to think critically and creatively based on systematic understanding of general and specialized knowledge
3	Data and information literacy	Ability to properly analyze and process various events and information using quantitative methods, computers, etc.
4	Broad perspective and international character	Ability to broadly understand culture, society, nature, and materials and understand and respect different cultures and be not only involved in one's own expertise
5	Mental and physical health, humanity and ethics	Ability to maintain mental and physical health through the understanding, practice, etc. of arts and sports and be conscious of one's responsibility and put it into practice as a citizen with humanity and ethics
6	Cooperative, independent and autonomous attitudes	Ability to keep learning and act autonomously while dealing with a situation through team work and leadership and practicing self-management

### Specific Competences

No.	Knowledge and abilities	Content
1	Basic understanding and insight into social systems	Basic understanding and insight into social systems
2	Mathematics, statistics, and information technology for solving complex social problems	Knowledge of mathematics, statistics, and information technology as a tool to solve various problems facing complex societies
3	Ability to analyze global issues	Ability to identify the essences of global problems in modern society
4	Ability to fulfill social demands	Ability to flexibly fulfill social demands from multiple perspectives
5	Communication skills	Objectively persuasive communication skills
6	Problem-solving skills	Ability to explore issues autonomously, and learn independently and continuously

## Curriculum Map of the College of Policy and Planning Sciences <Bachelor of Policy and Planning

Course Category		Course Name	Credits	Generic Competences						Specific Competences					
				1	2	3	4	5	6	1	2	3	4	5	6
				Communication ability	Ability for critical and creative thinking	Data and information literacy	Broad perspective and international character	Mental and physical health, humanity, and ethics	Cooperative, independent, and autonomous attitudes	Basic understanding and insight into social systems	Mathematics, statistics, and information technology for solving complex social problems	Ability to analyze global issues	Ability to fulfill social demands	Communication skills	Problem-solving skills
General Foundation Subjects	Common Foundation Subjects	Multidisciplinary Subjects(inc. Freshmen Seminar and Invitation to Multidisciplinary Subjects(exc. Freshmen Seminar and Invitation to Physical Education	2.0												
		Multidisciplinary Subjects(exc. Freshmen Seminar and Invitation to Physical Education	1.0												
		1st Foreign Language(English)	4.0												
		2nd Foreign Language	0.0												
		Information Literacy	4.0												
		Japanese Language	0.0												
		Art	0.0												
	Specific Foundation Subjects	Subjects that are offered by other Schools and Colleges as specified	6.0												
	Extracurricular activities														
	Subtotal		20.0												
Foundation Subjects for Major		Seminar in Policy and Planning Sciences	3.0	○	○	○	○		○	○	○		○	○	
		Policy and Planning Sciences in English	2.0	○			○							○	
		Introduction to Programming A	3.0			○				○	○				○
		Introduction to Programming B	3.0			○				○	○				○
		Introduction to Economic Theory	1.0		○		○			○	○				
		Introduction to Quantitative Economics	1.0		○	○	○			○	○	○	○		
		Accounting and Management	1.0		○	○	○			○		○	○		
		Optimization in Practice	1.0		○	○	○			○	○		○		
		Introduction to Urban and Regional Planning	1.0		○		○			○	○	○	○		○
		Urban Analytics	1.0		○	○	○			○	○	○	○		○
		Mathematics Literacy 1	1.0							○					
		Mathematics Literacy 2	1.0							○					
		Linear Algebra 1	1.0							○					
		Linear Algebra 2	1.0							○					
		Linear Algebra 3	1.0							○					
		Calculus 1	1.0							○					
		Calculus 2	1.0							○					
		Calculus 3	1.0							○					
		Statistics	2.0			○				○	○				
	Subtotal		27.0												
Major Subjects	Econometric Analysis System Area	Seminar in Social and Economic Planning: Quantitative Systems	2.0	○	○	○			○		○			○	○
		Econometrics	2.0		○	○				○	○				
		Macro-econometrics	2.0		○	○				○	○				
		Money, Financial System and Economy	2.0		○	○				○			○		
		Time Series Analysis	2.0		○	○	○			○	○				
		Japanese Economy	2.0		○	○				○			○		
	Public System Area	Seminar in Social and Economic Planning: Public System Area	2.0	○	○	○	○		○		○	○		○	○
		Macroeconomics	2.0		○		○			○		○			
		International Finance	2.0		○		○			○		○	○		
		Public Economics	2.0		○		○			○		○	○		
		Public Finance	2.0		○		○			○		○	○		
		Network Science	2.0		○	○	○				○	○			○
		Social Policy	2.0		○		○			○		○	○		
		Seminar in Social and Economic Planning: Strategy and Behavior	2.0	○	○	○			○		○			○	○
	Strategic Behavior System Area	Microeconomics	2.0		○		○			○	○				
		Game Theory	2.0	○	○					○	○				
		Decision Theory	2.0		○	○				○	○				
		Evolutionary Game Theory	2.0		○	○				○	○				
		Behavioral Economics	2.0		○	○				○			○		
		Empirical Microeconomics	2.0		○	○					○	○			
		Special Lectures on Socio-Economic Systems I (Introduction to International Trade	1.0		○					○					
		Industrial Organization	2.0			○	○						○		
	common courses for SES														

## Curriculum Map of the College of Policy and Planning Sciences <Bachelor of Policy and Planning

Course Category	Course Name	Credits	Generic Competences						Specific Competences					
			1	2	3	4	5	6	1	2	3	4	5	6
			Communication ability	Ability for critical and creative thinking	Data and information literacy	Broad perspective and international character	Mental and physical health, humanity, and ethics	Cooperative, independent, and autonomous attitudes	Basic understanding and insight into social systems	Mathematics, statistics, and information technology for solving complex social problems	Ability to analyze global issues	Ability to fulfill social demands	Communication skills	Problem-solving skills
Management Area	Seminar on Management Science	2.0	○	○	○	○	○	○	○	○	○	○	○	○
	Marketing	2.0		○	○	○			○	○	○			
	Finance	2.0		○	○	○			○	○	○			
	Management	2.0		○		○			○		○	○		○
	Production and Quality Management	2.0		○	○	○			○	○	○			
	Seminar on Information Technology	2.0	○	○	○	○		○		○		○	○	○
	Computer Science	2.0		○	○					○				
	Simulation	2.0		○	○					○				
	Information Networks	2.0		○	○				○	○				
	Data Analysis	2.0		○	○	○				○	○			
	Machine Learning for Management	2.0		○	○					○				
	Seminar on Mathematical Engineering	2.0	○	○	○	○	○	○	○	○		○	○	○
	Mathematical Optimization	2.0		○	○					○				
	Applied Probability	2.0		○	○					○				
	Discrete Mathematics	2.0		○	○					○				
	Mathematical Statistics	2.0		○	○					○				
	Workshop on Finding Problems and Solutions	2.0	○	○	○	○	○	○	○	○	○	○	○	○
	Seminar in Living Environment Design	6.0	○	○				○				○	○	○
	Planning of Housing and Habitat	2.0		○		○			○		○	○		
	Design of Urban Space	2.0		○	○				○		○	○		
	Landscape and Environmental Planning	2.0		○		○			○		○	○		
	New Wave of Urban Planning	2.0		○		○			○		○	○		
	Urban Multicultural Planning	2.0		○		○			○		○	○		
	Seminar in Urban Masterplan	6.0	○	○	○	○	○	○	○	○		○	○	○
	Urban Land Use Planning	2.0		○		○			○		○	○		
	Evaluation of Urban Environment	2.0		○	○	○			○		○	○		
	Urban Disaster Management	2.0		○		○			○	○	○	○		
	Transportation Planning	2.0		○		○			○	○	○	○		
	Seminar in Urban and Regional Economics	3.0	○	○	○	○		○	○	○		○	○	○
	Urban Economics	2.0		○	○	○			○		○	○		
	Regional Management and Public Administration	2.0		○		○			○		○	○		
	Policy and Public Works Evaluation	2.0		○	○	○			○		○	○		
	Urban and Regional Analysis	2.0		○	○				○	○				
	Theory and Practice of Environmental Policy	2.0		○		○			○		○	○		
	Internship on Urban and Regional Planning	2.0	○	○	○	○	○	○				○	○	○
	Seminar in Information Systems: Urban and Regional	3.0			○			○	○	○				
	Principles of Urban Planning	2.0		○		○			○					
	History of Urban Planning	2.0		○		○			○					
	Independent Study : Related laws and regulations on building	1.0		○		○			○					
	Independent Study : Building Economy	1.0		○		○			○		○	○		
	Building Construction	1.0		○		○			○		○	○		
	History of Urban Planning Thought	2.0		○		○			○		○	○		
	Practice for Facility Design	2.0	○	○	○			○				○	○	○
	Seminar in Urban and Regional Planning	4.0	○	○	○	○	○	○					○	○
	Empirical Studies on Urban Regional Planning	3.0	○	○		○		○			○	○	○	○
	Fundamental Drawing	1.0			○							○	○	○
	Graduation Thesis in Policy and Planning Sciences A	4.0	○	○	○	○	○	○					○	○
	Graduation Thesis in Policy and Planning Sciences B	4.0	○	○	○	○	○	○					○	○
	Special Graduation Thesis in Policy and Planning Sciences	4.0	○	○	○	○	○	○					○	○
	Independent Study A	3.0	○	○	○	○	○	○					○	○
	Independent Study B	3.0	○	○	○	○	○	○					○	○
Subtotal		164.0												
Total		211.0												



## Standard Class Schedule in AY2025: General Foundation/Foundation Subjects (1st-year)

### Spring Term (1st-year)

	Monday			Tuesday			Wednesday			Thursday			Friday		
	module			module			module			module			module		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1							Foreign Language (1st-year)			Information Literacy (Exercises)	Information Literacy (Lectures)		PE (1st-year)		
2							Calculus 1						English (1st-year)		
3	English (1st-year)							Introduction to Economic Theory		Mathematics Literacy 1	Linear Algebra 1				
4	Foreign Language (1st-year)														
5				Mathematics Literacy 1	Mathematics Literacy 2	Introduction to Urban and Regional Planning	Invitation to Arts and Sciences				Accounting and Management				
6															

### Fall Term (1st-year)

	Monday			Tuesday			Wednesday			Thursday			Friday		
	module			module			module			module			module		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1							Foreign Language (1st-year)			Data Science			PE (1st-year)		
2							Linear Algebra 3						English (1st-year)		
3	English (1st-year)						Optimization in Practice	Urban Analytics	Linear Algebra 3	Introduction to Quantitative Economics	Calculus 2		Calculus 3		
4	Foreign Language (1st-year)														
5							Linear Algebra 2		Calculus 3	Introduction to Programming A	Introduction to Programming B	Statistics			
6															

## Standard Class Schedule in AY2025: General Foundation/Foundation Subjects (2nd-year)

### Spring Term (2nd-year)

	Monday			Tuesday			Wednesday			Thursday			Friday				
	module			module			module			module			module				
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C		
1	Principles of Urban Planning (URP)									History of Urban Planning (URP)							
2																	
3							PE (2nd-year)			Foreign Language (2nd-year)							
4										English (2nd-year)							
5										Seminar in Policy and Planning Sciences							
6																	

### Fall Term (2nd-year)

	Monday			Tuesday			Wednesday			Thursday			Friday									
	module			module			module			module			module									
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C							
1																						
2																						
3	Seminar in Urban and Regional Planning (URP)			Seminar in Information Systems:Urban and Regional Planning (URP)		Fundamental Drawing (URP)	PE (2nd-year)						Policy and Planning Sciences in English									
4																						
5																						
6																						

## Standard Class Schedule in AY2025: Major Subjects (2nd-4th-year; Major in Social and Economic Sciences)

### Spring Term (2nd-4th-year)

	Monday			Tuesday			Wednesday			Thursday			Friday		
	module			module			module			module			module		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1	<div>PE (3rd-year)</div> <div>Evolutionary Game Theory</div>			Seminar in SEP: Strategy and Behavior Area			Econometrics			International Trade			Seminar in SEP: Quantitative Systems Analysis Area		
2															
3				Time Series Analysis			International Finance			Behavioral Economics					
4															
5				Microeconomics											
6															

### Fall Term (2nd-4th-year)

	Monday			Tuesday			Wednesday			Thursday			Friday				
	module			module			module			module			module				
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C		
1	Network Science			Macroeconomics			Game Theory			Macro-econometrics							
2																	
3	PE (3rd-year)			Seminar in SEP: Public System Area						Money, Financial System and Economy							
4																	
5	Social Policy									Empirical Microeconomics							
6																	

Intensive class: "Japanese Economy", "Public Economics", "Public Finance", "Special Lectures on Socio-Economic Systems I" and "III".

\*: "Decision Theory" and "Industrial Organization" are not opened in AY2025.

## Standard Class Schedule in AY2025: Major Subjects (2nd-4th-year; Major in Management Science and Engineering)

### Spring Term (2nd-4th-year)

	Monday			Tuesday			Wednesday			Thursday			Friday		
	module			module			module			module			module		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1										Finance					
2															
3	PE (3rd-year)		Mathematical Optimization			Production and Quality Management				Discrete Mathematics		Mathematical Optimization	Production and Quality Management		
4										Discrete Mathematics		Mathematical Optimization			
5	Information Networks			Seminar on Mathematical Engineering						Applied Probability					
6										Applied Probability					

### Fall Term (2nd-4th-year)

	Monday			Tuesday			Wednesday			Thursday			Friday		
	module			module			module			module			module		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1				Data Analysis									Mathematical Statistics		
2															
3	PE (3rd-year)			Management			Simulation		Seminar on Management Science						
4															
5	Seminar on Information Technology			Computer Science						Machine Learning for Management		Workshop on Finding Problems and Solutions			
6															

Intensive class: "Marketing"

## Standard Class Schedule in AY2025: Major Subjects (2nd-4th-year; Major in Urban and Regional Planning)

### Spring Term (2nd-4th-year)

	Monday			Tuesday			Wednesday			Thursday			Friday				
	module			module			module			module			module				
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C		
1	Principles of Urban Planning			Policy and Public Works Evaluation		History of Urban Planning Thought	Evaluation of Urban Environment			History of Urban Planning		History of Urban Planning Thought					
2																	
3	PE (3rd-year)			Transportation Planning			Planning of Housing and Habitat				Seminar in Living Environment Design						
4																	
5	Urban Land Use Planning			Seminar in Urban and Regional Economics			New Wave of Urban Planning							(Practice for Architecture and Urban Design I) (Seminar in Living Environment Planning)			
6																	

### Fall Term (2nd-4th-year)

	Monday			Tuesday			Wednesday			Thursday			Friday		
	module			module			module			module			module		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1	Landscape and Environmental Planning			Urban Multicultural Planning			Regional Management and Public Administration			Urban Economics			Design of Urban Space		
2															
3	PE (3rd-year)			Theory and Practice of Environmental Policy						Urban and Regional Analysis			Seminar in Urban Masterplan		
4															
5	Practice for Facility Design			Urban Disaster Management			Empirical Studies on Urban Regional Planning								
6	(Practice for Architecture and Urban Design II)														

Intensive class: Related laws and regulations on building, Building Economy, Building Construction, Internship on Urban and Regional Planning

# Fixed Class Schedule for Collage of Policy and Planning Sciences in AY2025

Day		Monday						Tuesday						Wednesday						Thursday						Friday					
		Spr.-A	Spr.-B	Spr.-C	Fall-A	Fall-B	Fall-C	Spr.-A	Spr.-B	Spr.-C	Fall-A	Fall-B	Fall-C	Spr.-A	Spr.-B	Spr.-C	Fall-A	Fall-B	Fall-C	Spr.-A	Spr.-B	Spr.-C	Fall-A	Fall-B	Fall-C	Spr.-A	Spr.-B	Spr.-C	Fall-A	Fall-B	Fall-C
1	1st												Foreign Language (1st-year)			Foreign Language (1st-year)			Informaiton Literacy		The Ideal and The Real of Education		Data Science		Development of Child and Youth		PE		PE		
	2nd																														
	3rd											Practice of Educational Counseling	Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods								
	4th																														
2	1st												English (1st-year)			English (1st-year)			Informaiton Literacy		The Ideal and The Real of Education		Data Science		Development of Child and Youth		First Year Seminar		Teaching Profession II		
	2nd	Museology I			Museology II																		Special Activities								
	3rd											Practice of Educational Counseling	Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods		Subject Teaching Methods								
	4th																														
3	1st	English (1st-year)			English (1st-year)					Introduction to History of Education		Psychology of Learning																			
	2nd	Museology III			Museology II								PE			PE		Teaching Profession II		Moral Education			Moral Education		Special Activities		Foreign Language (2nd-year)		Foreign Language (2nd-year)		
	3rd	PE			PE																										
	4th																														
4	1st	Foreign Language (1st-year)			Foreign Language (1st-year)					Introduction to History of Education	Introduction to School Management		Psychology of Learning																		
	2nd												Teaching Profession II									Introduction to Philosophy BII			English (2nd-year)		English (2nd-year)				
	3rd																														
	4th																														
5	1st												Invitation to Arts and Sciences																		
	2nd						Special Activities					Special Activities							Introduction to Philosophy CI						Museum Exhibition I		Conservation for Museums I	Conservation for Museums II		Publicity and information science for Museology	
	3rd	Career Guidance		Foundation of Educational Counseling		Career Guidance			Foundation of Educational Counseling/ Career Guidance			Foundation of Educational Counseling/ Career Guidance					Curriculum and the Course of Study		Subject Teaching Methods			Subject Teaching Methods									
	4th																														
6	1st	Teaching Profession I			Education Law and System								Invitation to Arts and Sciences																		
	2nd	Moral Education I			Moral Education II			Special Activities																	Museum Exhibition II		Conservation for Museums I	Fundamentals of Museum Education		Publicity and information science for Museology	
	3rd			Foundation of Educational Counseling		Curriculum and the Course of Study			Special Needs Education/ Foundation of Educational Counseling			Foundation of Educational Counseling			Curriculum and the Course of Study					Subject Teaching Methods/ Teaching Methods and Techniques			Subject Teaching Methods					Special Needs Education			
	4th																														

\* "Constitutional Law": intensive class for 2nd-year students

## Major in Social and Economic Sciences

This major defines social economics as systems, and it helps students understand the structures of socio-economic systems and conditions for these to smoothly function using economic and engineering approaches, find socio-economic problems, and learn appropriate policies for problem-solving.

For this purpose, it consists of the following 3 areas:

**[Econometric Analysis System Area]**

Students explore solutions to socio-economic problems, adopting quantitative approaches.

They discuss financial issues by analyzing data mainly using econometric techniques.

**[Public System Area]**

Students discuss appropriate socio-economic systems in contemporary economics. They learn about the political role of the public sector in addressing market failures and income inequality.

**[Strategic Behavior System Area]**

Students learn about the most important elements of a socio-economic system: human decision-making and strategic behaviors, as a basis for policy assessment/ formulation to solve socio-economic problems.

1st-year	2nd-year	3rd-year	4th-year
Introduction to Programming A/B	Seminar in PPS PPS in English		Graduation Thesis A Graduation Thesis B
Mathematics Literacy 1 Mathematics Literacy 2  Linear Algebra 1    Calculus 1 Linear Algebra 2    Calculus 2 Linear Algebra 3    Calculus 3		<b>Econometric Analysis System Area</b>	
		Seminar in SEP: Quantitative Systems Analysis Area	
		Econometrics	Time Series Analysis
		Macro-econometrics	Japanese Economy
		Money, Financial System and Economy	
		<b>Public System Area</b>	
		Seminar in SEP: Public System Area	
		International Finance	Macroeconomics
		Public Economics	Network Science
		Public Finance	Social Policy
		<b>Strategic Behavior System Area</b>	
		Seminar in SEP: Strategy and Behavior Area	
		Game Theory	Behavioral Economics
		Decision Theory	Microeconomics
		Evolutionary Game Theory	Empirical Microeconomics
		Subjects in other majors	
Statistics			
Introduction to Economic Theory Introduction to Quantitative Economics Accounting and Management Optimization in Practice Introduction to Urban and Regional Planning Urban Analytics			
First Year Seminar Invitation to Arts and Sciences Foreign Language (English) Information			
General Foundation subjects (common/related subjects)			

## Econometric Analysis System Area

The Econometric Analysis System area helps students explore solutions to various problems in socio-economics, adopting quantitative approaches. Knowledge of mathematics is indispensable for all of the courses listed below, as they are based on data analysis. It is also desirable for students to have learned basic economics as a basis for logically grasping real society, and performing effective analysis. We particularly recommend that students in this area take [Econometrics] as a core course.

Course name	Course description	Target year
Seminar in SEP: Quantitative Systems Analysis Area	Students learn numerical methods and their applications in economics. Students also learn the methods of data visualization, statistics, and econometrics necessary for empirical analysis.	2 – 4
Econometrics	The course will cover the theory of regression analysis, which is the foundation of econometrics. Knowledge of statistics (statistical estimation and hypothesis testing) and differential and integral calculus (partial differentiation) is assumed.	2 – 4
Macro-econometrics	This course explains the econometric methods required for the analysis of economic time series data. Examples of applications to macroeconomic and financial analysis are introduced as necessary.	2 – 4
Money, Financial System and Economy	Students learn the role of finance and monetary policy in the economy through the theoretical and empirical analyses of financial systems using microeconomic and macroeconomic tools.	2 – 4
Time Series Analysis	This course will provide an overview of various time-series analytical methods used for empirical analysis. Students will also learn specific application methods through data analysis using statistical software.	2 – 4
Japanese Economy	In this course, students will deepen their understanding of the current state and challenges of the Japanese economy using various economic indicators.	2 – 4



## Public System Area

Externalities, imperfect competition, and public goods supply may lead to market failures in the economy. Market mechanisms do not result in fair income distribution generally. In the Public System area, students will discuss the role of the public sector in correcting these market failures and income inequality from socio-economic perspectives, and comprehensively learn through multiple lectures and seminars. It is particularly recommended that students in this area take [Macroeconomics] and [Public Economics] as core courses.

Course name	Course description	Target year
Seminar in SEP: Public System Area	In this course, students will learn methods often used for empirical research in the field of public economics. They will analyze socio-economic phenomena using actual data and computers.	2 – 4
International Finance	In this course, we first learn basic concepts that are indispensable to understanding international finance, such as national income accounts and the balance of payments, and then learn the relationship between the foreign exchange market and the financial market, which is the key to the subject's analysis. We deepen our understanding of the determinants of short-term and long-term exchange rates and the mechanisms of interactions between fiscal/monetary policy and international finance.	2 – 4
Public Economics	Appropriate interventions by government are essential to deal with malfunction of market such as environmental problems, undersupply and differential of public goods and existence of inequality. Students will learn main topics of public economics which consider what kind of intervention should be operated, on both sides of theory and actual proof.	2 – 4
Public Finance	The objective of this lecture is to learn the basic ideas of Public Finance, the system and practice of Japanese government. The study of public finance includes a function of government, theory of public goods, tax theory, fiscal balances, and fiscal policy.	2 – 4
Macroeconomics	We examine how gross domestic product (GDP), interest rate, growth rate, etc., are determined within an economy. We also discuss the effects of the fiscal and monetary policies implemented by governments and central banks on economic activities.	2 – 4
Network Science	In this lecture, students will learn network science, which deals mathematically with "relationships" that exist everywhere, from social to natural phenomena. The lecture will include practical exercises using Python with concrete examples.	2 – 4
Social Policy	This course introduces students to the study and practice of social policy, including labor policies and social security/social protection. With basic ideas of economics, students will gain a better understanding on social policy, including: 1) the rationale for social policy; 2) the roles of social policy from the perspectives of economic efficiency and equity; 3) the historical development of social policy; and 4) individual policies.	2 – 4

## Strategic Behavior System Area

Human beings are the constituent member of society, and “human decision-making/strategic behaviors” are the basis of all social sciences. In the Strategic Behavior System area, students learn the theory of human decision-making/strategic behaviors from various angles. They also experience human strategic behaviors in socio-economics using computers during seminars. It is particularly recommended that students in this area take [Microeconomics] and [Game Theory] as core courses.

Course name	Course description	Target year
Seminar in SEP: Strategy and Behavior Area	This course is to learn basic concepts and methods of statistical processing using the statistical analysis program SPSS through exercises.	2 – 4
Game Theory	This course examines the mathematical and computational foundations of such multiagent systems where agents are assumed to be self-interested. The course offers the main ideas of game theory and shows how they can be used to understand economic, social phenomena.	2 – 4
Decision Theory	In this course, students will learn the basic concepts needed to model various decision-making problems in socio-economic issues, including utility models, risk attitudes, trade-offs, social and group decision-making. Students will also learn risk management techniques through insurance.	2 – 4
Evolutionary Game Theory	This course will provide an overview of Darwin’s evolution theory and learning theories, which have had a great impact on social science. Students will study some example cases to learn the basics of evolutionary game theory, and pursue the mechanism, by which human evolution and learning (adaptation) produce familiar social phenomena.	2 – 4
Behavioral Economics	Approaching human economic behavior from a psychological aspect, we will review the philosophy of economic behavior and the various factors that influence economic behavior.	2 – 4
Microeconomics	This course will give lectures on resource allocation in a perfectly competitive market.	2 – 4
Empirical Microeconomics	Students will learn the foundations of applied/empirical microeconomics and the pros and cons of reduced-form versus structural estimation approaches, using the discrete-continuous choice framework as a motivating example. The course will focus on the identification and estimation of two classic models: Roy model and Rust model.	2 – 4

## Major in Management Science and Engineering

Management is the discipline to study human activities in society from the perspectives of companies and other organizations, and management science and engineering addresses this issue using engineering/mathematical/scientific methods. To develop human resources with international-level “mathematical ability × IT skills × practical competencies”, the following 3 areas are organized in the Major in Management Science and Engineering: [Management area], [Mathematical Engineering area], and [Information Technology area]. The Management area helps students learn how management is performed in actual settings, and methods to solve problems that occur in such settings through management science and engineering. The Mathematical Engineering area introduces a wide range of engineering and mathematical methods used in management science and engineering. Furthermore, the Information Technology area provides knowledge related to information technology, which is one of the important foundations for modern management activities. Thus, the Major in Management Science and Engineering extensively and comprehensively deals with various fields related to management, mathematical engineering that provides tools to approach these fields, and information technology that supports management. One of the features of this major is [Workshop on Finding Problems and Solutions], a compulsory subject that serves as a pre-stage of graduation thesis for third-year students.

1st-year	2nd-year	3rd-year	4th-year
Introduction to Programming A/B	Seminar in PPS PPS in English	Workshop on Finding Problems and Solutions	Graduation Thesis A Graduation Thesis B
Mathematics Literacy 1 Mathematics Literacy 2  Linear Algebra 1     Calculus 1 Linear Algebra 2     Calculus 2 Linear Algebra 3     Calculus 3  Statistics  Introduction to Economic Theory Introduction to Quantitative Economics Accounting and Management Optimization in Practice Introduction to Urban and Regional Planning Urban Analytics  First Year Seminar Invitation to Arts and Sciences Foreign Language (English) Information		Management Area	
		Seminar on Management Science  Management	

### Compulsory course

Course name	Course description	Target year
Workshop on Finding Problems and Solutions	In this workshop, students will determine their themes using the basic knowledge acquired in the Major in Management Science and Engineering, and experience a series of processes consisting of modeling, deriving solutions, and examining solutions, as well as holding discussions and practicing presentations. To help them develop insight into out-of-school activities, case study lectures given by invited people, who are active in society, and exchange presentation meetings with students from other universities are also scheduled.	3 – 4

## Management Area

The educational goal of the Management area is to develop human resources with the ability to grasp problems occurring in the actual settings of management, and solve them. To achieve this goal, it provides major subjects that represent the field of “management”, as well as management science and engineering. It also helps students acquire the ability to apply their specialty in the actual settings of management, and make appropriate decisions at appropriate times through [Seminar on Management Science].

Course name	Course description	Target year
Seminar on Management Science	Japan's first industry-academia collaborative seminar with Accenture Japan Ltd addresses AI development for management support by dealing with real problems and data. Students will develop and introduce an AI approach to support the management of Welcia Pharmacy and resolve the challenges faced by this pharmacy using actual POS data.	2 – 4
Marketing	Marketing is one of the core areas of business administration and has developed through a combination of theory and practice. Students will study traditional theories in the first half of this course and modern practices in the second half.	2 – 4
Finance	Important contents of finance will be widely picked up and taught, such as financial statement analysis, method of investment decision making, bond and stock valuations, mean-variance portfolio theory, capital asset pricing model, estimation of capital cost, and option theory.	2 – 4
Management	In this course, students will learn the royal road theory of management and understand the state-of-the-art theory and practice. Through these, the course aims to understand the unchangeable trends of management.	2 – 4
Production and Quality Management	This course will provide an overview of production and quality control. It will also explain statistical quality control methods, inventory theory, and reliability engineering.	2 – 4

## Information Technology Area

Information technology supports today's management science and engineering in various situations as a fundamental technology for e-commerce and business information systems, and as a calculation tool for data analysis and simulations. The Information Technology area provides various courses for learning from the theoretical basis of this fundamental technology to examples of its application in management science and engineering.

Course name	Course description	Target year
Seminar on Information Technology	In this course, introductory training on object-oriented programming and data base technology (RDB and SQL) computer simulation will be provided during the first and second 5 class sessions, respectively.	2 – 4
Computer Science	Students will learn data structure, algorithms, and fundamentals of computational complexity. Several examples of application on the computer network will be introduced.	2 – 4
Simulation	In this course, students will learn techniques to obtain unbiased data through the minimum possible experiments (experimental designs) and computational techniques for experiments on computers (computer simulations).	2 – 4
Information Networks	The first part of the course will cover the basic concept of data communications. Then, the latter part will cover the network security issues and key encryption and authentication approaches.	2 – 4
Data Analysis	Students will learn basic principles of statistics and practice data analysis methods. In addition, they will practice data analysis through specific programing coding.	2 – 4
Machine Learning for Management	Machine learning methods useful in business data analysis will be widely picked up and taught, such as linear regression, logistic regression, principal component analysis, clustering methods, regularization, decision trees, support vector machines, deep learning, recommender systems, and reinforcement learning.	2 – 4

## Mathematical Engineering Area

With the development of computers, it has become possible to manage a large amount of information in a short time. On the other hand, more advanced mathematical analysis methods are required to present problems, and provide solutions based on this information. In the Mathematical Engineering area, students learn various engineering tools (models) that are powerful weapons in the practice of “proposing scientific management methods”, which is the purpose of management science and engineering. They learn the basic theory of each model through class sessions, and become able to utilize it as “practical knowledge” through seminars.

Course name	Course description	Target year
Seminar on Mathematical Engineering	The objective of this course is to establish basic knowledge about various engineering tools (models) learned in each class of the area of modelling by mathematical engineering as ‘useful’ knowledge through exercises and practice.	2 – 4
Mathematical Optimization	Several topics of mathematical programming (linear programming, nonlinear programming, graph theory, combinatorial optimization method) are picked up and representative algorithms and basic theories are outlined.	2 – 4
Applied Probability	Basics of the probability theory and overview of Markov chain will be explained. Explanation of probability space, random variables, probability distribution, conditional probability, expectation values, conditional expectation, joint probability distribution, convergence of random variables, law of large numbers, central limit theorem, and Markov chain is planned.	2 – 4
Mathematical Statistics	In this course, students will acquire a basic knowledge of mathematical statistics using multivariate data through applied methods and applications.	2 – 4
Discrete Mathematics	This course will give introductory/general lectures on discrete mathematics and combinatorics, which are the basis of modeling/analysis of various discrete systems and information processing technology in policy and planning sciences.	2 – 4

## Major in Urban and Regional Planning

The curriculum for the Major in Urban and Regional Planning consists of 3 areas: [Environment and Community Development area], [Urban Structure/Social Infrastructure area], and [Regional Science area], in addition to [Common Courses for Urban and Regional Planning].

**[Common Courses for URP]** help students learn the basics and techniques needed for urban and regional planning generally. The **[Environment and Community Development area]** deals with from relatively familiar aspects, such as housing and living environments, to town development/urban and regional planning. Students learn space design/town development methods and about the relationship between urban space development and the environment. The **[Urban Structure/Social Infrastructure area]** approaches to urban and regional planning on an extensive scale. Students learn about infrastructure such as land and city structures and transportation. Lastly, the [Regional Science area] is an area for learning urban and regional planning mathematically and economically.

Basic training courses in urban and regional planning called “Seminar in Urban and Regional Planning”, “Internship on Urban and Regional Planning”, and “Empirical Studies on Urban Regional Planning”, as well as those for the qualification to take architect licensure examinations, are available in this major.

1st-year	2nd-year	3rd-year	4th-year
Introduction to Programming A/B	Seminar in PPS PPS in English	Workshop on Finding Problems and Solutions	Graduation Thesis A Graduation Thesis B
Mathematics Literacy 1 Mathematics Literacy 2  Linear Algebra 1    Calculus 1 Linear Algebra 2    Calculus 2 Linear Algebra 3    Calculus 3	<b>Common Courses for Urban and Regional Planning</b> Seminar in URP                      Seminar in Information Systems: URP Principles of Urban Planning      Empirical Studies on URP History of Urban Planning          Internship on URP History of Urban Planning Thought *    Fundamental Drawing Practice for Facility Design		
Statistics	<b>Environment and Community Development Area</b> Seminar in Living Environment Design Planning of Housing and Habitat      New Wave of Urban Planning Design of Urban Space                  Urban Multicultural Planning * Landscape and Environmental Planning		
Introduction to Economic Theory Introduction to Quantitative Economics Accounting and Management Optimization in Practice Introduction to Urban and Regional Planning Urban Analytics	<b>Urban Structure/Social Infrastructure Area</b> Seminar in Urban Masterplan Urban Land Use Planning              Urban Disaster Management Evaluation of Urban Environment      Transportation Planning		
First Year Seminar Invitation to Arts and Sciences Foreign Language (English) Information	<b>Regional Science Area</b> Seminar in Urban and Regional Economics Urban Economics      Regional Management and Public Administration Urban and Regional Analysis      Policy and Public Works Evaluation Theory and Practice of Environmental Policy *		
	Subjects in other majors		
	General Foundation subjects (common/related subjects)		

\*: Provided by collaborative staff (from the College of International Studies)

### Compulsory course

Course name	Course description	Target year
Seminar in Urban and Regional Planning	(See the next page)	2 – 4
Seminar in Information Systems: Urban and Regional Planning	(See the next page)	2

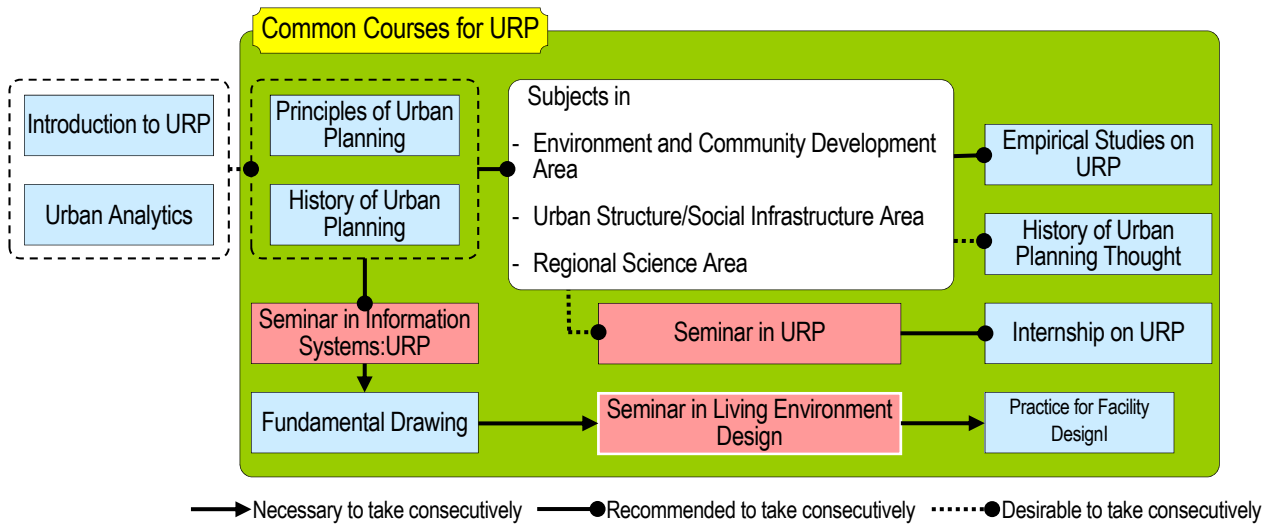
## Common Courses for Urban and Regional Planning

[Common Courses for Urban and Regional Planning] help students acquire the basic knowledge and techniques needed for urban and regional planning generally. There are 4 basic/applied courses based on lectures on urban and regional planning, 3 courses providing seminars to learn methods for finding and solving problems in urban and regional planning, and 3 courses providing seminars to acquire architectural design skills; a total of 10 courses.

Course name	Course description	Target year
Principles of Urban Planning	This course aims to have the students acquire a wide range of knowledge and wisdom as an introduction to this field by reviewing diverse cases in Japan and abroad concerning how cities have developed, their problems, infrastructures and buildings that constitute cities, methods for their designing, and prospects for the future.	2 – 4 (recommended in 2nd-year)
History of Urban Planning	This course gives an overview of the history of cities and architecture from ancient to modern times and evaluates the relationships between the characteristics of the space with the political, economic, social, and technical backgrounds of each period. Also, systems and cases of preservation of historical environments that have remained to the present are discussed.	2 – 4 (recommended in 2nd-year)
Seminar in Urban and Regional Planning	In this course, students will work for specific areas or cities. Through finding problems with city/regional planning and preparing drawings, they will understand the current challenges of regional arrangement.	2 – 4
Seminar in Information Systems: Urban and Regional Planning	In this course, the students learn basic methods to prepare and analyze three-dimensional information indispensable for considering urban/architectural planning (such as maps and drawings) using a computer by performing assignments using professional applications (CAD/GIS).	2
History of Urban Planning Thought*	In this lecture, we discuss subjects and words of people involved in the establishment of "fundamentally topic of urban planning" in a "carefully and carefully deep down".	2 – 4
Internship on Urban and Regional Planning	This course is intended to have the students acquire practical abilities to find and solve problems through internships at public offices, research institutions, business firms, and non-profit organizations, related to urban and regional planning.	3 – 4
Empirical Studies on Urban Regional Planning	In this course, students will study various cases of urban and regional planning and town development to understand the processes and methods of urban and regional planning in the real world, and discuss necessary insights and conditions for success.	2 – 4 (3rd & 4th-year prioritized)
Fundamental Drawing	This course aims to have the students acquire basic knowledge related to the drawing of essential architectural plans (layout plan, floor plan, sectional plan, and elevation plan) necessary for the designing of houses.	2
Practice for Facility Design	The goal is for students to acquire advanced design methods using advanced information processing technology based on the basic methods of design drafting that they have learned so far.	3 – 4

\*: Provided by collaborative staff (from the College of International Studies)



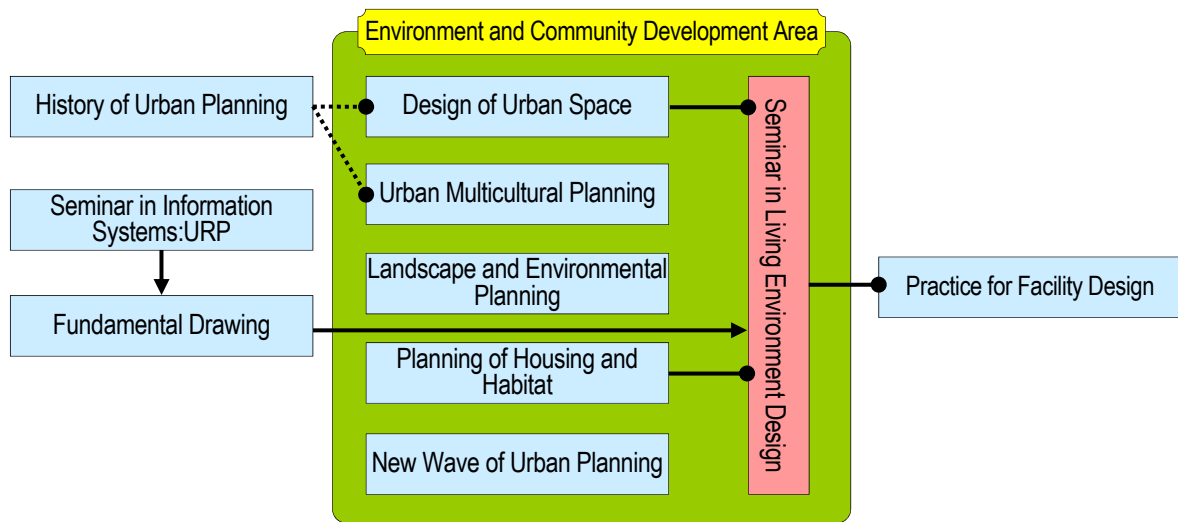


## Environment and Community Development Area

The Environment and Community Development area consists of: 5 courses based on lectures to learn practical theories, and study example cases of environmental maintenance and town development, involving cities, houses, and green areas as well as [Seminar in Living Environment Planning] to acquire the thinking, design, and presentation skills needed for specific planning; a total of 6 courses.

Course name	Course description	Target year
Seminar in Living Environment Design	This is a practice course aiming to improve the ability to design urban/architectural spaces. The course is designed to have students who have taken subjects related to designing (Seminar for Urban Planning Information, Basic Drawing) during the first 2 years become proficient in methods and techniques for designing detached wooden house and collective housing using basic techniques of designing and drawing that they have acquired.	3 – 4
Planning of Housing and Habitat	In this lecture, the history of living places in Japan, the effects of postwar social circumstances and changes in lifestyle on urban and agricultural village houses and living environments and contemporary issues are discussed.	2 – 4
Design of Urban Space	This course gives an overview of trends of architectural/urban designing and presents a variety of the vocabulary necessary for creating attractive spaces. Next, their functional constitution and regulations related to architecture including the Building Standards Act (single unit regulations) are explained. Also, the students will acquire the basic abilities necessary for space designing through designing assignments.	2 – 4
Landscape and Environmental Planning	Concerning desirable urban/regional planning based primarily on the preservation of the natural environment, historical resources, and open spaces, its historical development, contemporary issues, and directions for the future are discussed systematically by referring to concrete examples.	2 – 4
New Wave of Urban Planning	Planning theories in the 20th century as the theoretical background of modern community development are critically reviewed, and planning processes, participation, planning administration, and planning regulations are discussed. In addition, topics including how modern community development is being implemented, regeneration of downtown and regions of mixed presence and mixed living of urban and agricultural populations, and sustainable environmentally symbiotic community development will be selected and discussed.	2 – 4 (recommended in 2nd-year)
Urban Multicultural Planning *	In the first half of this lecture, we will comprehend the composition of the urban space of Asian countries that seems to be complicated and disordered from historical and local images. In the second half, we will consider what ideas and methods are necessary for multicultural symbiosis urban planning based on the actual conditions of contemporary Asian space propagation to non-Asian cities.	2 – 4

\*: Provided by collaborative staff (from the College of International Studies)

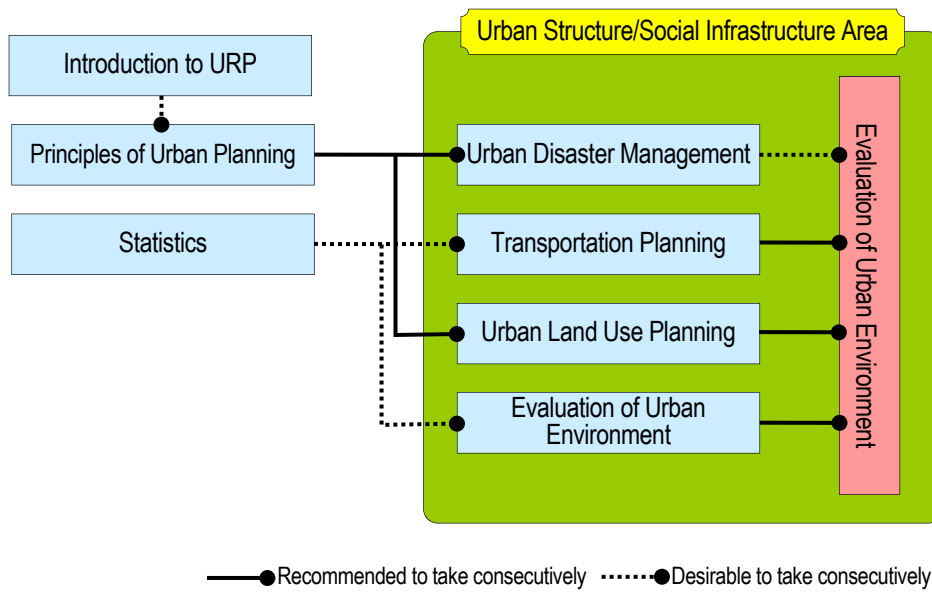


→ Necessary to take consecutively    —● Recommended to take consecutively    .....● Desirable to take consecutively

## Urban Structure/Social Infrastructure Area

This area provides the following 4 courses to help students acquire basic perspectives, knowledge, and analytical techniques indispensable for considering legal systems, planning methods, and policies, involving cities and land, and [Seminar in Urban Masterplan] for them to acquire practical skills for planning:

Course name	Course description	Target year/years
Seminar in Urban Masterplan	Students are expected to learn the processes of preparation of an urban planning master plan and a comprehensive municipalities development plan using transportation and land use prediction software and by preparing materials and presentations using tools including the geographic information system (GIS).	3 – 4
Urban Land Use Planning	The forms, objectives, and functions of land use plans of the national, regional, and district levels, primarily land use plans of urban regions, are outlined, and basic knowledge about district planning as a method for urban planning and regulations, such as the Building Standards Act (collective regulations), is provided as measures for district-level urban development.	3 – 4
Evaluation of Urban Environment	In this course, fundamental knowledge about the water environment, climate, land use and ecology, life and lifestyle of cities and methods to quantitatively measure and evaluate the urban environment (assessment methods) are outlined. In the last week, overall discussion will be held to deepen the understanding about the relationship between global environmental issues and urban environmental issues. We hope that the students reflect on the vision of a city harmonized with the environment.	2 – 4
Urban Disaster Management	After analyzing the characteristics of urban disasters, the mechanisms of the occurrence and spread of various disasters in cities and methods for their anticipation are discussed by referring to cases, and measures for their prevention and methods for proposing urban disaster prevention plans are considered in connection with urban planning.	2 – 4
Transportation Planning	In this course, students will acquire basics such as demand forecasting, network analysis, cost-benefit analysis, and traffic accident analysis for transportation planning and development. We also provide and discuss current policy issues such as mobility management, tourism planning, and public transportation planning.	2 – 4

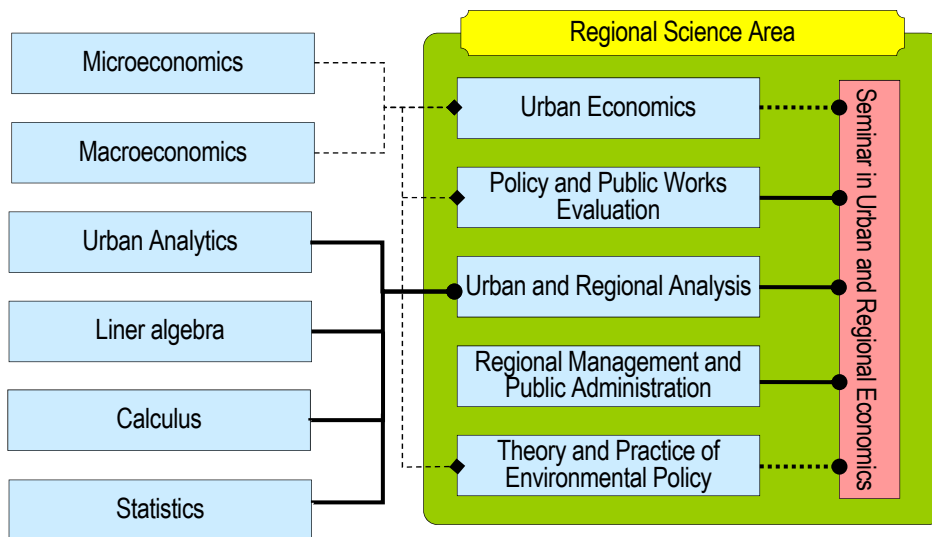


## Regional Science Area

In the Regional Science area, students acquire scientific analysis techniques using mathematical and economic methods for cities, regions, and environments. They learn the basics of the theories needed for policy proposals to address various problems in society. This area consists of the following 5 lecture-based courses and [Seminar in Urban and Regional Economics ]:

Course name	Course description	Target year/years
Seminar in Urban and Regional Economics	The students are expected to acquire viewpoints and methods for analyzing policy issues by performing verification analysis using urban, regional, and environmental economic methods, themes, and data.	3 – 4
Urban Economics	The students will learn the basics of analytical techniques of urban economics and locational theories and acquire knowledge about policies related to intercity, regional, and international trade.	2 – 4
Regional Management and Public Administration	This course aims to have the students acquire the ability to discuss decision making, implementation, and assessment of public policies and desirable forms of future urban/regional revitalization through case studies of national land planning and housing/urban regional policies based on the recent new global trends related to changes in the style of public policies and their bearers and comparisons with European and American nations.	2 – 4
Policy and Public Works Evaluation	The present state of policy assessment is explained by focusing on policies related to cities, regions, and national land. Also, concerning infrastructure improving projects, economic analysis (cost-benefit analysis), financial analysis, and project-related finance are discussed.	2 – 4 (recommended in 2nd-year)
Urban and Regional Analysis	If we abstract the city from a certain point of view, we can regard it as a pattern of dots, lines and planes. Therefore, we discuss the mathematical basis for analyzing these patterns from the aspect of urban function.	2 – 4
Theory and Practice of Environmental Policy *	In this course, students will observe policy measures for environmental conservation and methods for their evaluation mainly from economic perspectives. They will also examine the relationships between various values/disciplines and policy implications to develop diverse perspectives on “environmental problems” and “environmental policies”. Furthermore, they will deepen their understanding of specific environmental issues, such as global warming and waste.	2 – 4

\*: Provided by collaborative staff (from the College of International Studies)



## AY2025 Graduation Thesis Schedule

for 4th-year Students

2025	April	Early	Determining the graduation thesis-related schedule	College Education Conference
	November	Mid	Ordering graduation thesis files Arranging to secure classrooms for graduation thesis presentations	The Chair Instructor in charge of the fourth-year class
	December	Mid	Preparing and posting "Graduation Thesis Submission and Presentation" (for students/faculty) Distributing graduation thesis files/graduation thesis reception tables (original/copy)	Department of School Affairs Department of School Affairs
2026	January	Mid	Requesting the submission of a draft graduation thesis presentation schedule	Chair→Instructor in charge of the fourth-year class
		Late	Adjusting the draft and creating the final graduation thesis presentation schedule	Instructor in charge of the fourth-year class/Chair
			Posting "Graduation Thesis Presentation Schedule"	Department of School Affairs
		20th (Tue)	Graduation thesis submission	
			Classifying the received graduation theses based on faculty, and sending "Graduation Thesis B Evaluation" using an electronic file	Department of School Affairs
			Notifying the receipt of graduation theses	Chair→Each instructor
	February	27th (Tue)	Graduation thesis presentations	
		28th (Wed)	Determining the graduation thesis-related schedule	All faculty
		4th (Wed)	Deadline for reporting results of "Graduation Thesis in Policy and Planning Sciences B"	Each instructor→Chair
		Mid	Preparing and posting "Graduation Thesis in Policy and Planning Sciences B" (for students/faculty)	Department of School Affairs

Note: A more detailed schedule will be posted on the CCPS bulletin board as soon as it is fixed.

Approved by the Curriculum Committee on April 4, 2025.



## Process of Determining Graduation Thesis Topics and Supervisors in AY2026

for 3rd-year Students

2025	April	Early	Determining the graduation thesis supervisor-related schedule	College Education Conference
	October	Mid	Preparing and reporting "Graduation Thesis Supervision Schedule"  Distributing "Graduation Thesis Supervision Schedule" to faculty and posting it  Preparing and distributing "Graduation Thesis Application Form"  Period for interviews and coordination with faculty	Chair/Curriculum Committee members/Faculty Chair/Department of School Affairs Department of School Affairs
	December	12th (Fri)	Deadline for the submission of "Graduation Thesis Application Form" (Each supervisor's stamp of approval is required = determination of graduation thesis supervisors)	Department of School Affairs
2026	March	Early	Creating a list of graduation thesis supervisors in each major / holding a decision-making meeting	Chair/Curriculum Committee
	April	Early	Determining and notifying the laboratory assigned to each student for graduation thesis	College Operations Committee

Note: A more detailed schedule will be posted on the CCPS bulletin board as soon as it is fixed.

Approved by the Curriculum Committee on April 4, 2025.

## Major Assignment Schedule in AY2025

for 2nd-year students

2025	April	Early	Determining the major assignment-related schedule	College Education Conference
			Posting a notification on major assignment guidance	Department of School Affairs
	July	25th (Fri)	Holding an orientation to provide major assignment guidance Creating, posting, and distributing "Major Assignment Application Form"	Curriculum Committee Department of School Affairs
	August	1st (Fri)	Deadline for the submission of "Major Assignment Application Form"	Department of School Affairs
			Tabulating the submitted application forms and creating a summary sheet	Department of School Affairs
			Reporting the status of application for major assignment	College Operations Committee
			Confirming the status of fulfilling the major assignment requirements (such as the number of credits earned) (Entering the contents of grading reports in students' report cards)	Department of School Affairs
	September	Early	Determining major assignment (preparing documents to specify the courses/credits each unsuccessful applicant lacked)	Curriculum Committee
			Notifying (posting) major assignment results after the Curriculum Committee meeting	Department of School Affairs
			Determining and notifying (posting) the major assigned to each student	College Operations Committee/Department of School Affairs

Note: A more detailed schedule will be posted on the CCPS bulletin board as soon as it is fixed.

Approved by the Curriculum Committee on April 4, 2025.

# Supplement to the CPPS Curriculum

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Revised on April 1, 2020

CPPS Curriculum Committee

## 1) Course requirements for graduation thesis

### [students enrolled in and after AY2019]

The requirements to start the graduation thesis are as follows (See the “Handbook for Undergraduate Students” of the year when you were enrolled):

- The total number of credits earned must be 84 or more, including 14 or more from compulsory and elective courses of foundations.

### [students enrolled before AY2018]

The course requirements to start the graduation thesis are as follows (See the “Handbook for Undergraduate Students” of the year when you were enrolled):

- The total number of credits earned must be 84 or more, including 20 or more from compulsory courses of major subjects and those from compulsory and elective courses of foundations.
- You should also have taken TOEFL or TOEIC (also substitutable by ITP) while belonging to the university.

If you meet these requirements in an intermediate year due to repeating a year or other causes, and wish to start the graduation thesis from the next semester, please contact the instructor in charge of each major for fourth-year students. In that case, follow the instructor’s instructions on laboratory assignment.

## 2) Acquisition of qualifications

Students who wish to acquire qualifications, such as those to take teacher or architect licensure examinations (Major in Urban and Regional Planning), need to start planning their course schedules early, in order to complete the prescribed courses. Please carefully consider your course plan from an early stage.

## 3) Early graduation

If the conditions are met, you can apply for early graduation at the end of the second year. If you wish to make such an application, please contact Curriculum Committee members or the instructor in charge of your class for consultation as soon as possible.

## 4) Courses at the graduate school

There is a system for students with especially excellent academic achievements to take some courses at the graduate school while belonging to this college, depending on their document screening results, and acquire credits from these courses after advancing to the graduate school. The active use of this system is particularly recommended to students who wish to advance to the graduate school.

## **5) Application for minor subjects**

Students can also have another major at the College of Policy and Planning Sciences accredited as their minor. If you wish minor accreditation, please be sure to make an application for it to the Department of School Affairs by the deadline specified separately during the semester when you take [Graduation Thesis in Policy and Planning Sciences A]. Application for minor accreditation requires the acquisition of a sufficient number of credits for a major to be accredited.

## **6) Retaking courses**

In principle, retaking courses, from which credits were earned (re-taking the same courses), is not permitted.

## Q&A about courses/advancement

Q. Is there a limit to the number of credits that can be registered in one year?

A. The total number of courses students can register in one year is up to 45 credits. However, courses that meet any of the following conditions are not counted as subject to this upper limit:

- (a) Courses on the teaching profession or museums
- (b) Courses intensively provided during the summer, winter, or spring vacation
- (c) Among “Other qualifications” in the Course Catalog, courses listed in Table 2: “Available Courses Corresponding to the Designated Courses of the Major in Urban and Regional Planning at the College of Policy and Planning Sciences, School of Science and Engineering” for the qualification to take 1st-Class, 2nd-Class and *MOKUZO KENCHIKUSHI* license examinations”, and provided at colleges/schools other than the College of Policy and Planning Sciences.

Q. Is there any possibility for the maximum number of credits that can be registered in one year to increase?

A. Only students meeting the following requirements and transfer students will become able to register up to 55 credits in one year beyond the upper limit (45 credits per year) by making the prescribed application:

- Having acquired 35 credits or more by completing graduation requirement courses in the previous year, and;
- Having achieved “A” or a higher grade in 80% or more of these courses

However, courses corresponding to (a) or (b) in the previous Q&A section are not counted as subject to this measure (allowing to register up to 55 credits in one year).

Q. How many courses should I take in the first year?

A. The standard number of credits to be acquired in the first year is about 40.

Q. Can first-year students take courses of major subjects targeting second to fourth-year students?

A. Yes, they can. However, in terms of learning effects, some courses are not available for first-year students. Even if you take such courses, please be careful not to make your learning plan too hard.

Q. Can I add or delete courses to be registered at any time?

A. Students cannot add or delete courses to be registered at any time, but must complete the course registration procedure on TWINS by the course application deadline. Please read the instructions presented on TWINS carefully, and follow them.

Q. Can I count credits from courses in remedial mathematics ([Analysis (Calculus) Basics] and [Linear Algebra Basics] as common courses at the School of Science and Engineering) to fulfill my graduate requirements?

A. No, you cannot.

Q. Can I decide on my major freely?

A. Yes, you can.

Q. Can I change my major after major assignment? Are there any conditions for this?

A. Yes, you can, and there are no conditions for this. However, you will need to submit a notification of change of major.

Q. In case a student is absent from some classes or final examination due to club activities, can he/she get a permission of absence or take a supplementary examination?

A. In the courses offered by CPPS, any special measures including permission of absence and supplementary examination will NOT be taken for any student's absence from the class(es) or examination(s) due to their club activities.

**[Students enrolled in or after AY2019]**

Q. Is there any timing for major assignment other than the beginning of the fall semester of the second year?

A. Students who do not belong to any major yet are assigned to a major only at the beginning of the fall semester of the second year.

**[Students enrolled in or after AY2019]**

Q. When should I decide on my major?

A. It is usually July (scheduled) of the second year when students must submit a request form for major assignment. Therefore, you should decide on your major by then. (Having submitted a request form for major assignment in July of the second year, you will be notified of your class around September after confirmation of whether you meet the requirements of your major.)

**[Students enrolled in or before AY2018]**

Q. Are there any courses at other colleges/schools accredited/not accredited as free choice courses?

A. There is no distinction between courses at other colleges/schools accredited and not accredited as free choice courses. All courses are accredited. However, you should note the restrictions on taking these courses specified in the remarks column of the List of Available Courses, if any.

**[Students enrolled in or before AY2018]**

Q. The course numbers of special lectures on policy and planning sciences are FH63\*\*\*. Does this mean these courses will be accredited both as elective courses of foundations (FH62/63) and as free choice courses (FH605, 606, 607, 62, 63)? (In the column beneath "Elective Courses", only these courses do not have a course name.)

A. Special lectures on policy and planning sciences will be accredited only as free choice courses.

**[Students enrolled in or before AY2018]**

Q. If I take specialized introductory courses newly available from AY2019 (FH61\*\*\*), will credits from them be counted to fulfill my graduation requirements?

A. Even if students enrolled before AY2018 take specialized introductory courses available at the College of Policy and Planning Sciences, credits from these courses will not be counted fulfill their graduation requirements.

## Curriculum for the Qualification to Take *KENCHIKUSHI* License Examinations in the Major in URP at the CPPS

The qualification to take *KENCHIKUSHI* (Japan's qualified and registered architect) License Examinations is given to those who have graduated after completing the courses related to architecture designated by the Minister of Land, Infrastructure, Transport, and Tourism (MLIT). Details are shown in Table 1.

Students in the Major in Urban and Regional Planning of the College of Policy and Planning Sciences can achieve the qualification to take 1ST/2ND-Class and *MOKUZO*(wooden) *KENCHIKUSHI* License Examinations after graduation by acquiring the prescribed number of credits or more in courses corresponding to those listed in Table 2.

However, in order to obtain an *KENCHIKUSHI* license, it is necessary for applicants to have the experience specified by an Ordinance of the MLIT (having worked in architecture for the prescribed period or longer), in addition to passing these examinations. Courses available at other colleges/schools can also be counted to fulfill graduation requirements as related free choice courses. It is advisable for students who wish to achieve the qualification, to take courses according to the curriculum shown in Table 2.

Please pay attention to notifications, as the courses available at the university listed in Table 2 may be revised every year.

Table 1 Requirements for taking Architect Licensure Examinations and for license registration

Designated subjects	Exam for 1ST-CLASS <i>KENCHIKUSHI</i>			Exam for 2ND-CLASS/ <i>MOKUZO</i> <i>KENCHIKUSHI</i>		
1) Architectural Design Drawing	7 credits			3 credits		
2) Architectural Planning	7 credits			2 credits		
3) Building Environmental Engineering	2 credits					
4) MEP Systems	2 credits					
5) Structural Dynamics	4 credits			3 credits		
6) General Structure of Building	3 credits					
7) Building Materials	2 credits					
8) Building Construction	2 credits			1 credit		
9) Building-related Laws and Regulations	1 credit			1 credit		
Subtotal from 1) to 9) (a)	30 credits			10 credits		
10) Compound or Related Subjects (b)	suitable			suitable		
(a) + (b)	60 credits	50 credits	40 credits	40 credits	30 credits	20 credits
Essential experience years in architectonic business to take the exam	0 year after graduation			0 year after graduation		
Essential experience years in architectonic business for license registration	2 years after graduation	3 years after graduation	4 years after graduation	0 year after graduation	1 years after graduation	2 years after graduation

Recommended to aim at 60 credits or more.

Necessary to aim at 40 credits at the least.

Table 2 Major in URP's Courses Correspondent to the Designated Subjects

Categories of the Designated Subjects		Courses at University of Tsukuba	Credits	Offered by
1ST-CLASS	2ND-CLASS/ MOKUZO			
Architectural Design Drawing (7 credits or more)	Architectural Design Drawing (3 credits or more)	Fundamental Drawing	1	College of Policy and Planning Sciences
		Seminar in Living Environment Design	6	College of Policy and Planning Sciences
		Practice for Facility Design	2	College of Policy and Planning Sciences
Architectural Planning (7 credits or more)	Architectural planning, Building Environmental Engineering or MEP System (2 credits or more)	Design of Urban Space	2	College of Policy and Planning Sciences
		Planning of Housing and Habitat	2	College of Policy and Planning Sciences
		History of Urban Planning	2	College of Policy and Planning Sciences
		Architecture Planning	2	School of Art and Design
		Architectural Design Theory	2	School of Art and Design
		Architectural History	1	School of Art and Design
		Global History of Architecture	2	School of Art and Design
Building Environmental Engineering (2 credits or more)		Architectural Environmental Engineering	2	College of Engineering Systems
		Environmental Planning in Architecture	2	School of Art and Design
MEP Systems (2 credits or more)		Architectural Equipments	2	College of Engineering Systems
		Workshops on Environmental Control System in Architecture	2	School of Art and Design
Structural Dynamics (4 credits or more)	Structural Dynamics, General Structure of Building or Building Materials (3 credits or more)	Introduction to Materials Engineering	1	College of Engineering Systems
		Materials Engineering I	1	College of Engineering Systems
		Advanced Materials Engineering II	2	College of Engineering Systems
		Structural Mechanics I	2	College of Engineering Systems
		Structural Mechanics II	1	College of Engineering Systems
		Theory of Vibration	3	College of Engineering Systems
		Soil Mechanics	2	College of Engineering Systems
		Geotechnical Engineering	1	College of Engineering Systems
		Structural Mechanics in Architecture	2	School of Art and Design
		Structural Planning in Architecture	2	School of Art and Design
		General Structure of Building (3 credits or more)		Reinforced Concrete Structure
Disaster Reduction Engineering	2			College of Engineering Systems
Steel Structure	1			College of Engineering Systems
Building Construction	2			School of Art and Design
Seminars: Building Constructions	1			School of Art and Design
Building Materials (2 credits or more)		Concrete Engineering	2	College of Engineering Systems
		Introduction to Material Science for Engineers	1	College of Engineering Systems
		Advanced Material Science for Engineers	1	College of Engineering Systems
		Mechanics of Composite Materials	2	College of Engineering Systems
		Building Materials	2	School of Art and Design

Categories of the Designated Subjects	Courses at University of Tsukuba	Credits	Offered by
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1ST-CLASS	2ND-CLASS/ MOKUZO			
Building Construction (2 credits or more)	Building Construction (1 credit or more)	Independent Study: Building Economy	1	College of Policy and Planning Sciences
		Building Construction	1	College of Policy and Planning Sciences
Building-related Laws and Regulations (1 credit or more)	Building-related Laws and Regulations (1 credit or more)	Independent Study: Related laws and regulations on building	1	College of Policy and Planning Sciences
Others (suitable)	Others (suitable)	New Wave of Urban Planning	2	College of Policy and Planning Sciences
		Seminar in Information Systems: Urban and Regional Planning	3	College of Policy and Planning Sciences
		Principles of Urban Planning	2	College of Policy and Planning Sciences
		Landscape and Environmental Planning	2	College of Policy and Planning Sciences
		Urban Disaster Management	2	College of Policy and Planning Sciences
		Urban Land Use Planning	2	College of Policy and Planning Sciences
		Introduction to Urban and Regional Planning	1	College of Policy and Planning Sciences
		Ethics for Engineers	1	College of Engineering Systems
		Landscape Design	2	School of Art and Design
		Introduction to Architectural Design	1	School of Art and Design
		Introduction to Environmental Design	1	School of Art and Design
		Introduction to World Heritage Studies	1	School of Art and Design
		General Lectures on Design History A	1	School of Art and Design
		General Lectures on Design History B	1	School of Art and Design
		Design Studies	1	School of Art and Design
		Urban Design	2	School of Art and Design
		Architectural design and society	1	School of Art and Design
		Community based Social Action	2	School of Art and Design