

Programs
for full-time
workers



東京都市大学

TOKYO CITY UNIVERSITY

Graduate School of Integrative
Science and Engineering



Students in full-time work

Social infrastructure management

- Teaching **practical management skills** in the area of social infrastructure.
- **Accelerated** program with most lectures and classes on weekends.
- **Small classes with discussion-driven focus** held at satellite class just near Shibuya station.
- Tuition fees **discounted** by **50%** for master's course and **90%** for doctoral course.

Training leaders

to build communities and shape our nation.

Acquire the **management skills**

to create the social infrastructure of tomorrow.

Social infrastructure plays an important role in shaping our communities, our regions and the nation as a whole. Ongoing social infrastructure development is necessary not only in terms of economic activity but also for the environmental benefits it can provide. Creating good-quality social infrastructure requires a combination of management skills: the technical expertise to create safe and secure facilities that fulfill the stated requirements; an understanding of key issues and challenges in society; a clear vision of how to proceed; and the ability to analyze multiple options and identify the best solution. This is the type of expertise that would be expected of a middle-level engineer with several years of experience in the field. Tokyo City University offers masters and doctoral programs that teach an equivalent level of expertise in social infrastructure management. Both programs are designed to equip future leaders with the practical skills and knowledge to contribute to the ongoing economic growth and international engagement of our nation, as well as a broad appreciation of the workings of modern society.



About the programs

- Systematically designed curriculum covering key management skills including planning, scheduling, execution, and maintenance
- Comprehensive examination of fundamental theories of social infrastructure including its role and purpose in society
- Weekends classes designed to accommodate busy workers, held at the conveniently located Shibuya class facility
- Small class sizes allow more time for direct interaction with instructors to develop hands-on management skills
- Master's program comprises 18 units (equivalent to nine subjects), doctoral course comprises four units (two subjects) *
- April and September commencement **

* As well as separate research-based components

** C program available from April only

Entrance examination

Selection criteria

● Working experience

* Applicants must have at least two years of working experience as at the point of application. The application process consists of document submission followed by an interview.

Master's program ---- (1) Application documents (2) Interview

Doctoral program ---- (1) Application documents (2) Interview

	B program	C program	Entrance examination for September commencement
Applications close	Mid July	Mid January	Late May
Examination	Early September	Late February	Early July
Venue	Setagaya campus		
Results released	Mid September	Early March	Mid July
Cut-off date	Mid October	Mid March	Early August

* Specific dates are shown in the application guidelines.

Fees and charges

Enrollment fee	¥240,000
Tuition fees (per annum)	Masters: ¥1,190,000 Doctorate: ¥1,190,000

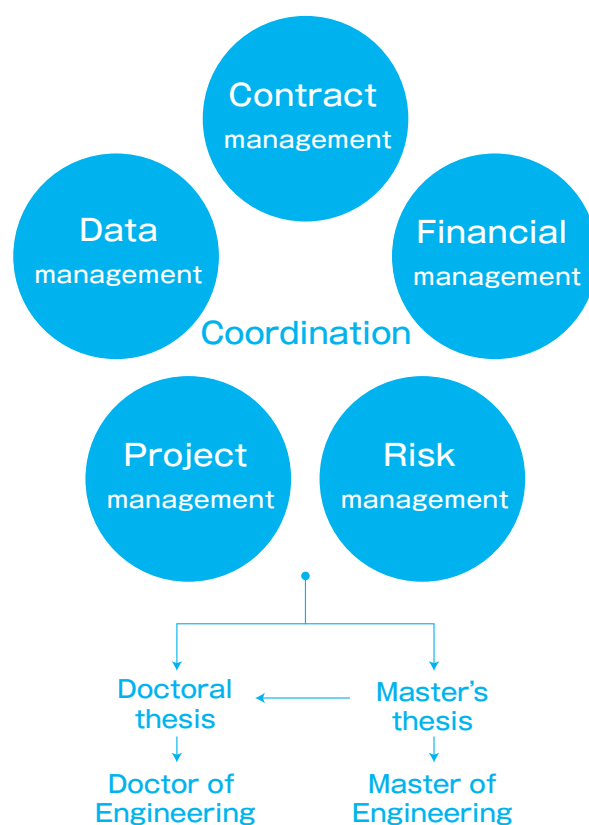
Tuition fee discounts of 50% for the Master's program and 90% for the Doctoral program are available to full-time working students who satisfy the selection criteria.

Social infrastructure management

Practical skills in social infrastructure management

The industry around social infrastructure development in Japan emerged during the post-war reconstruction phase and enjoyed remarkable growth and development, particularly in terms of technical standards, during the subsequent period of rapid economic growth. But in today's world, with an increasingly emphasis on international collaboration and diversity of views, the purpose of social infrastructure has shifted from a sole focus on promoting industry, towards the ideal of providing enduring social capital for the benefit of all citizens. This program covers a wide range of topics, from construction contracts and management to ICT advances such as BIM and CIM, infrastructure project management models such as PPP and PFI, and mathematical modeling techniques typically applied to challenges pertaining to social infrastructure. With a strong weighting towards practical aspects of research, the program is designed to provide qualified engineers with new skills for shaping the future of society.

Social infrastructure management program



Subject overview

The outline of each subject

01 Construction project management

Covers skills and techniques for managing overseas construction projects as well as practical management skills for domestic construction projects in an international environment.

02 International construction management

Contrasts the different types of management skills required for domestic and international construction projects, examining topics such as ODA, the international construction industry, WTO compliance, market openness, project organization theory, and contract theory.

03 International construction contracts

Based on the course created by Nippon Koei and Japanese universities for the Japan Bank for International Cooperation, covering topics such as ODA procurement guidelines, provisions of FIDIC international construction contracts, tendering and evaluation processes and dispute resolution.

04 Construction project management systems

Covers scheduling, cost management, productivity management using PM software such as MS Project with PMBOK.

(Note: includes seminar component)

05 Social infrastructure data management

Examines the fundamentals of BIM (Building Information Modelling) and evaluating the life cycle cost of social infrastructure at the planning stage. Includes real-world exercises using BIM process planning systems.

06 IT project management

Covers the theory and practical skills for planning, design, deployment and ongoing operation of IT systems. Includes a real-world component that involves designing an IT project in a social infrastructure related industry, then presenting the project management component for debate and discussion.

07 Risk management

Examines disaster risk evaluation and mitigation strategies for urban infrastructure with a particular focus on earthquakes and civil disturbance, and uses both theoretical study and real-life examples to investigate real-world challenges and their solutions. Topics include probability theory and analysis of uncertainties associated with disasters; risk evaluation for urban infrastructure; and disaster mitigation investment in the context of finance theory.

08 Applied mathematical statistics

Considers the modern challenge of identifying important or necessary data from the vast array of available sources. Mathematical statistics techniques are a useful tool for manipulation and interpretation of data, and an understanding of the theoretical basis for these techniques is necessary in order to extract maximum benefit from the results. This subject covers both theory and application of mathematical statistics, with a particular focus on multiple regression analysis.

(Note: Students are assumed to have a basic understanding of mathematical statistics already.)

09 Social infrastructure and economic analysis

Examines the concept of infrastructure as a public good and the economic role of infrastructure in the context of the national economy, based on a study of the economic benefits of roads. Also covers economic analysis techniques for measuring and evaluating costs and benefits, and examines a number of real-life examples of infrastructure around the world.

10 PPP and PFI schemes

An introduction to the basic principles of private-public sector partnership schemes for public works projects, such as PFI (Private Finance Initiative) and PPP (Public Private Partnerships) and how they are set up. A selection of real-world examples is used as the basis for exploring the theoretical background of the PFI/PPP model as well as basic concepts around structuring, technical analysis, financial analysis and funding.

(Note: Should be taken in combination with Subject 09 Social infrastructure and economic analysis)

11 International engineering consultants

Considers the contribution of international construction consultants to international projects by examining a selection of real-world international construction projects, looking in particular at management and execution inputs and methodologies. Understanding the differences between Japan and other countries with respect to contractual arrangements, quality control and process management is an important aspect of social infrastructure management. This subject uses practical exercises to examine the theory and application of social infrastructure management.

Lecturers

Full-time lecturers



Osamu Maruyama

Professor of Urban and Civil Engineering,
Faculty of Engineering, Tokyo City University

Maruyama has a particular interest in the use of probability theory in reliability analysis of urban infrastructure facilities, and is currently working on building maintenance decision-making frameworks based on quantitative evaluation of earthquake risk.



Ikumasa Yoshida

Professor of Urban and Civil Engineering,
Faculty of Engineering, Tokyo City University

Yoshida worked as an electrical consultant in the construction industry for over 20 years before joining Tokyo City University as a professor. He specializes in data analysis and has published a number of papers on mathematical statistics.



Takashi Goso

Associate professor of Urban and Civil Engineering,
Faculty of Engineering, Tokyo City University

Goso has been involved in the construction industry for many years and has published a number of papers contrasting construction management techniques in Japan and other countries. He brings an important real-world element to the graduate school program.



Masaru Minagawa

Professor of Urban and Civil Engineering,
Faculty of Engineering, Tokyo City University

Minagawa is closely involved in social infrastructure research studies and surveys encompassing CALS/EC and BIM/CIM, including Ministry of Land, Infrastructure, Transport and Tourism CIM tripartite schemes involving the public, private and academic sectors. He is currently pursuing research into social infrastructure data and management.



Ryuichi Imai

Associate professor of Urban and Civil Engineering,
Faculty of Engineering, Tokyo City University

Formerly a consultant to major construction companies and official at the Ministry of Land, Infrastructure and Transport, Imai boasts a wealth of experience with public-private-academic projects and research into the use of IT in social infrastructure, particularly in relation to CALS/EC and data-driven execution systems.

Part-time lecturers

(五十音順)



Kazumasa Ito

Head of Engineering, International Division,
CTI Engineering Visiting professor at Tokyo City University

Ito teaches mature-age courses for working graduates. He boasts considerable experience consulting to clients in Japan and elsewhere and many years of academic study into cutting-edge ICT solutions. He provides consulting and training services to clients in the Middle East and Asia.



Shunji Kusayanagi

Visiting professor at Tokyo City University

Kusayanagi worked for a major construction firm supervising projects all over the world before switching to the academic sector. He is now one of the leading researchers in Japan working in the field of project management.



Narimichi Hatao

Head of Engineering, Technical Supervision Office, Nippon Koei

Hatao is a leading figure in the domestic construction sector, providing a unique perspective as both an engineer and a manager, drawing on his experience as a consultant on a great many overseas projects over the years.



Kazuaki Miyamoto

Visiting professor at Tokyo City University

A prominent figure member of domestic and international academic bodies in the field of social capital development, serving on countless PFI and PPP committees and project teams at the national and prefectural level.

Guest lecturers

(五十音順)



Kazumasa Ozawa

Visiting professor at Tokyo City University
Professor, Graduate School of Engineering, University of Tokyo

Ozawa is a leading figure in the fields of construction management, public procurement and international project management, boasting considerable experience in system design for public procurement.



Rikuo Katsumata

Senior consultant, Japan Development Institute
Visiting professor at Tokyo City University

After working at a major construction company, he decided to pursue a career as an international development consultant, starting with the development of the first special economic zone in Cambodia. He has since served as a special advisor on special economic zones to JICA and technical consultant to the World Bank.



Seiya Kinoshita

Professor of Risk Management, School of Risk Management, Nihon University
Visiting professor at Tokyo City University

After a distinguished career at the Ministry of Land, Infrastructure and Transport working in construction management, disaster mitigation and crisis management, and rivers and water resources, Kinoshita crossed over to the academic sector where he has since become a preminent administrator and researcher in the field.



Shinya Tsujioka

Lawyer
Visiting professor at Tokyo City University

After graduating in civil engineering, Tsujioka joined a major construction company working on design and research projects. He currently works as a lawyer specializing in dispute resolution on construction projects, and as a first-class registered architect restoring historical buildings.



Patricia D. Galloway

CEO, Pegasus Global Holdings, Inc.
Visiting professor at Tokyo City University

A former chair of the American Society of Civil Engineers, Galloway currently heads a U.S. based consulting firm specializing in corporate strategic consulting and dispute resolution in the construction industry.



Rizal Z. Tamin

Professor, Bandung Institute of Technology (Indonesia)
Visiting professor at Tokyo City University

One of Southeast Asia's foremost researchers in construction management, Tamin is a key member of the International Construction Management Forum in Asia (ICMFA) and runs personnel training and technical transfer programs.

FY2018 timetable (subject to change)

Fiscal year 2018 Schedule

Date	Base subject
April 28 (Sat)	Construction project management
April 29 (Sun)	Construction project management
May 26 (Sat)	Construction project management
May 27 (Sun)	International construction management
June 23 (Sat)	International construction management
June 24 (Sun)	International construction management
July 28 (Sat)	Construction project management systems
July 29 (Sun)	Construction project management systems
August 25 (Sat)	Construction project management systems
January 26 (Sat)	Social infrastructure and economic analysis
January 27 (Sun)	Social infrastructure and economic analysis
February 23 (Sat)	Social infrastructure and economic analysis

Date	Applied subjects
April 28 (Sat)	International engineering consultants
April 29 (Sun)	International engineering consultants
May 26 (Sat)	International engineering consultants
May 27 (Sun)	Social infrastructure data management
June 23 (Sat)	Social infrastructure data management
June 24 (Sun)	Social infrastructure data management
July 28 (Sat)	IT project management
July 29 (Sun)	IT project management
August 25 (Sat)	IT project management
August 26 (Sun)	Applied mathematical statistics
September 29 (Sat)	Applied mathematical statistics
September 30 (Sun)	Applied mathematical statistics
November 24 (Sat)	Risk management
November 25 (Sun)	Risk management
December 8 (Sat)	Risk management

Date	Applied subjects
August 26 (Sun)	Guest lecturer series: Introduction to contractual liability/Dispute resolution mechanisms in the construction sector
September 1 (Sat)	Special Lecture
September 2 (Sun)	Special Lecture
September 29 (Sat)	Guest lecturer series: Introduction to contractual liability/Dispute resolution mechanisms in the construction sector
September 30 (Sun)	Guest lecturer series: Introduction to contractual liability/Dispute resolution mechanisms in the construction sector
October 27 (Sat)	International construction contracts
October 28 (Sun)	International construction contracts
November 24 (Sat)	International construction contracts
November 25 (Sun)	PPP and PFI schemes
December 8 (Sat)	PPP and PFI schemes
December 9 (Sun)	PPP and PFI schemes
January 12 (Sat)	Guest lecturer series: Ministry of Land, Infrastructure, Transport and Tourism bureaucracy
January 13 (Sun)	Guest lecturer series: Ministry of Land, Infrastructure, Transport and Tourism bureaucracy
March 9 (Sat)	Special Lecture
March 10 (Sun)	Special Lecture

* Classes will be held either from periods 1 to 5 (9:00 am to 6:40 pm) or from periods 1 to 4 (9:00 am to 4:50 pm).



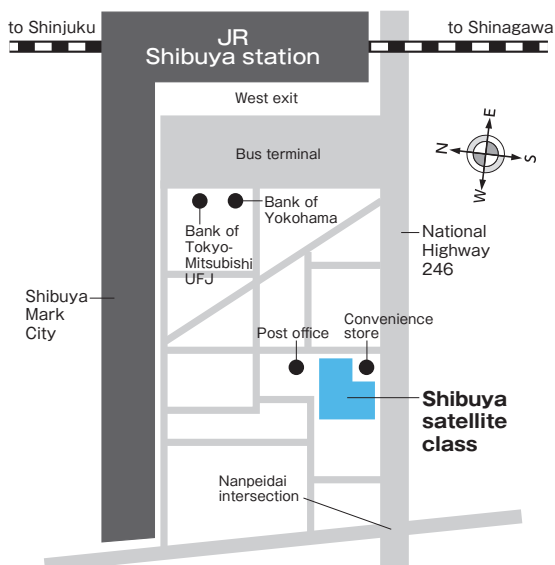
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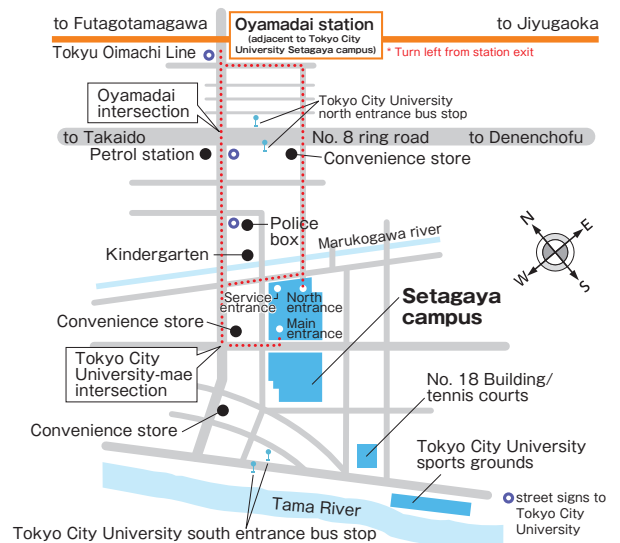
Graduate School of Integrative Science and Engineering

Shibuya satellite class



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Setagaya campus



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