Yokohama National University (National)
Graduate School of Urban Innovation



◆ **Program name**

Department of Infrastructure and Urban Society,
Specialization in International Infrastructure (IGSI)

◆ **Degrees:**

a. Master of Engineering
b. Master of Philosophy

◆ **Credit and years needed for graduation:**

a. 30 Credits, 2 Years
b. 30 Credits, 2 Years

◆ **Address:**

79-1 Tokiwadai, Hodogaya-ku, Yokohama 240-8501 Japan

Features of University https://www.ynu.ac.jp/english/

History and unique features

Yokohama National University (YNU) was established in 1949. It has developed into a comprehensive university with five faculties - Education, Economics, Business Administration, Engineering Science, and Urban Sciences - and six graduate schools – Urban Innovation, Education, International Social Sciences, Engineering Science, Environment and Information Sciences, and Innovative and Practical Studies. The university boasts over 1,000 faculty staff and more than 10,000 students. Around 10% of students are international students, and YNU is recognized as one of the top national universities that accept international students in Japan.

YNU is on a green hilltop northwest of the city center. Since the opening of Yokohama Port in the middle of the 19th century, trade and international business have prospered. Deeply rooted in this cosmopolitan city, YNU has developed internationally-oriented educational and research activities.

At YNU, all faculty, administrative staff, and students share a mission to create and disseminate knowledge to future generations. The university is dedicated to fulfilling its role as a higher education institution entrusted by the international community.

YNU is seeking sustainable development for the world and Japan by focusing our attention on emerging economies in Asia and beyond. To be successful in this new global age requires a thorough understanding of the cultures, religions, and systems of emerging economies. What will be critical in this context is education and research that integrate the humanities, social sciences, and natural sciences. YNU houses its humanities and social science colleges and its science and engineering colleges on the same campus, so the university has great potential to offer education and conduct research suited to the new global age.

Furthermore, YNU maintains a strong connection with its local community in Yokohama City, Kanagawa Prefecture. Yokohama presents significant potential for innovation while also facing challenges such as environmental issues and demographic shifts, including an aging population and declining birthrate. Many of these challenges are also shared by other parts of the world. YNU is confident that paying attention to and addressing the issues of Yokohama will, in fact, develop a global perspective: a unique viewpoint that can simultaneously consider both the local and the global. Harnessing the merits of having a single campus that brings together the humanities and the sciences and that is home to many international students from emerging economies, YNU will develop human resources that are equipped to thrive in the new global age.

Features of Graduate School https://www.urban.ynu.ac.jp/english/

The Graduate School of Urban Innovation was to train those creative, highly-specialized future professionals whose work will involve a variety of urban innovation projects (M.A. Program) and those future global leaders who, having trained to possess multiple viewpoints, will themselves be the underpinnings of the global expansion of urban innovation research (Doctorate Program).

In April 2011, YNU, which aims to be an international focal point of practical scholarship, established a new Graduate School, “Graduate School of Urban Innovation (GSUI),” with “City” as its theme. This is Japan’s first graduate school where graduate school students specializing in architecture, art, civil engineering, social science,

etc., eventually cooperate in the area of “City” while deepening their quest for their respective specializations.

GSUI was established because “city” is the major challenge that humankind must address in the 21st century, such as the worsening problems of environment and energy due to the enormous growth of urban areas; turmoil in the political, economic, and cultural values in cities around the world; problems posed by the aging population, declining birth rate, and excessive computerization; the exodus of population and activities from small and medium-sized cities, and the resultant reduction of the city itself; and the problems of quantitative and qualitative fulfillment of livelihood and social infrastructure posed by rapid economic growth and changes in the industrial structure of emerging and developing countries. We face various challenges concerning the city and are consequently required to achieve innovation in a city that meets these challenges.

Against this backdrop, GSUI fosters the growth of advanced professionals having practical skills in both the fields such as architecture and building science and civil engineering that form the structural side (or the hardware) of the city and fields such as humanities, social sciences, the international community and culture/art that comprise the non-structural side (or the software) of the city. To that end, we provide a multifaceted research environment that facilitates the cross-sectoral study of both fields (mainly in the Master’s Program). Finally, we want to be an incubator for the globally competitive next generation of leaders who have the ability to take a variety of approaches regarding the theme of urban innovation (mainly in the Doctoral Program).

■*Academic Schedule*

The entrance of the program･･･ the beginning of October

Intermediate examination of the research:

The first intermediate examination ･･･ the final week of the spring semester
(typically, from the last week of July to the first week of August)

The second intermediate examination ･･･ the third week of February in the 2nd year

Final examination of the research･･･ the first week of August in the 2nd year

The graduation of the program･･･ the final week of September in the 2nd year

Features of the Program



GSUI provides two departments for the Master’s degree, one of which is the Department of Infrastructure and Urban Society for JDS Fellows. In the department, students will train to become 1) an expert with the ability to analyze and design development of and solutions to specific areas of the globe, paying attention to each area’s engineering and social infrastructure, or 2) a leader who is capable of making contributions in addressing urban problems and community development in emerging and developing countries in such organizations as central governments, local governments, international aid organizations, private corporations, and NGOs. The Master’s degree in either Engineering or Philosophy will be awarded. There is one course and one school inside this department.

JDS Fellows are expected to join the International Graduate School of Infrastructure (IGSI) in the department.

All of the academic staff, including assistant professors, have a wealth of experience in international activities, e.g., presentations at international conferences. Moreover, all of the lectures for IGSI students are carried out in English, and all professors can supervise in English.

In addition to coursework and seminars, by extensively utilizing a studio-teaching format*, the IGSI trains students to gain useful knowledge of planning, which they put to actual use when they confront various urban problems in emerging and developing countries.

(i) In coursework, students are expected to obtain basic knowledge and theory on planning / civil engineering / architecture / development study.

(ii) In studio*, students analyze data and develop urban/rural/regional development plans or conduct research or experiments in the actual field. They are expected to understand the knowledge and theory obtained in the coursework deeply.

(iii) In technical tours, students see the construction site and have discussions with the specialists in charge. They are expected to learn about issues and find a solution.

(iv) In seminars, students conduct research and write a master thesis on issues in transportation infrastructure development, urban development, or management and maintenance of infrastructures. They are expected to obtain knowledge and the ability to resolve issues on the subject.

*studio, studio-teaching format; ‘studio’ is YNU’s original educational method. In the studio, students work jointly

on developing urban / rural /regional development plans or conduct research and develop proposals in the actual field under the supervision of professors. By this studio-teaching method, students are expected to obtain more practical knowledge and skills.

Regarding research works in the field of transportation infrastructure, we have done a lot of research in the various fields of civil engineering, such as transportation planning, urban planning, structural engineering, geotechnical engineering, and concrete engineering. Our outstanding achievement in this field is that we have extensive research targeting developing countries. Additionally, we have conducted much research on urban development around a station. Therefore, our research has covered transportation infrastructure development comprehensively.

In the research field of disaster risk reduction and disaster prevention, we have also achieved many achievements in the various fields of natural disasters, such as earthquakes, tsunamis, typhoons, heavy rains, etc. Our outstanding achievement in this field is that we have extensive research targeting actual disasters, not only for the disasters that occurred in the past but also for those that will happen in the future. Additionally, several research topics about disaster prevention in developing countries are ongoing by our academic staff.

Necessary Curriculum to Obtain the Degrees

Credits for IGSI

Course		**Minimum number of credits required**
Common Lectures		6
Practical Courses	Studio Internship	8
Major Courses	Lectures	8
	Seminars	8
Thesis		Thesis

Common Lectures	Credits
Geotechnical and Geo-environmental Engineering in Urban Area	2
Cross-border Societies and Region	2
Seismic and Durability Design	2
Structural Dynamics and its Application to Design	2
Transportation System Engineering	2
Water Disaster Prevention Engineering	2
Developing Policy and Alternatives	2
Gender and Development: Theory and Practice	2
Practical Courses (Studio and Internship)	
Studio for Infrastructure 4	4
Studio for Infrastructure 2	2
International Project Management Studio	4
Short-term Practicum and Training Program	2
International Infrastructure Studio in Basic Japanese	2
Major Courses (Lectures and Seminars)	
Advanced Theory of Disaster Prevention System Design	2
Theory of Geotechnical Design	2
Environmental Processes in Inland and Coastal Waters	2
Urban Transportation Planning	2
Theory of Regional Planning	2
Theory of Steel Structure Design	2
Design of Concrete Composite Structure	2
Urban Disaster Prevention	2
Wind Resistance Design of Structure	2
Seminar on Urban and Regional Studies 1	2
Seminar on Urban and Regional Studies 2	2
Seminar on Urban and Regional Studies 3	2
Seminar on Urban and Regional Studies 4	2

List of faculty members capable of guiding JDS Fellows

Faculty members in IGSI (all the members listed here are capable of guiding JDS Fellows)

Professors
FUJIYAMA, Chikako, D.Eng.
Concrete engineering, Structural design, Steel-concrete composite structure
HAYANO, Kimitoshi, D.Eng.
Geotechnical Hazard, Soil Structure, Ground Improvement, Soil Investigation
HOSODA, Akira, D.Eng.
Concrete Engineering, Maintenance Engineering, Construction Materials
KATSUCHI, Hiroshi, D.Eng.
Structural Engineering, Bridge Aerodynamics, Wind Engineering
MATSUYUKI, Mihoko, D.Eng.
Urban and Regional Planning
SUZUKI, Takayuki, D.Eng.
Coastal Engineering, Hydraulic Engineering
TANAKA, Shinji, D.Eng.
Transportation Engineering, Transportation Planning
CUI, Ying, D.Eng.
Geotechnical Engineering, Tunnel Engineering, Ground Disaster Prevention

Associate Professors
ABE, Ryosuke, D.Eng.
Transportation planning, Transportation policy, Civil Engineering Planning
HIGA, Hiroto, D. Env
Environmental processes in inland and coastal waters
KOMATSU, Satoshi, D.Eng.
Concrete Engineering, Seismic Design, Urban Disaster Mitigation
TAMURA, Hiroshi, D.Eng.
Structural engineering, Bridge engineering, Fracture mechanics
SATO, Itsuki, D.Eng.
Geotechnical Engineering, Ground Improvement, Ground Disaster Prevention

Lecturer
WANG, Jiaqi, D.Eng.
Bridge engineering, Wind engineering

Other Faculty members in Graduate School of Urban Innovation
HIKOE Tomohiro
INUI Kumiko
KAWABATA Masaya
KIYOTA Tomonori
KURENUMA Norihisa
MATSUMOTO Yuka
NISHIZAWA Ryue
ONO Satoshi
ONISHI Maki
SUGAWA Akiko
TANAKA Ineko
CARPENTRAS Fabien
EGUCHI Toru
FUJIWARA Teppei
FUJIOKA Yasuhiro
HIRAKURA Kei
INAGAKI Keiko
ISHIDA Takanori

MORITA Masashi
NAKAGAWA Katsushi
NOHARA Taku
SUGIMOTO Kuniyoshi
TERADA Mariko
YOSHIDA Satoshi
KIYONO Tomoki
YABUKI Kenichi
ODAWARA Nodoka
FUJIKAKE Yoko
KOMIYA Masayasu
MATSUMOTO Hisashi
OSUKA Fumikazu
SAITO Asato
HASEGAWA Hideki
KAMAHARA Yuta
MIURA Rinpei
PARK SangMi
HIRANO Keiko
HASEGAWA Kenji
YOON JANGSHIK
ONISHI Naoki
TSUKUDA Haruka
NITTA Shingo

The students are advised to decide her/his supervisor shortly after the Entrance in October.

Academic Schedule https://www.ynu.ac.jp/english/student/calendar/calendar2026/

The entrance of the program	the beginning of October
Intermediate examination of the research:	
The first examination	the final week of the spring semester (typically, from the last week of July to the first week of August)
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The graduation of the program	the final week of September in the 2nd year

Facilities https://www.ynu.ac.jp/english/student/housing/ooka/

Ooka International Residence is a quality housing complex for the international community of students, researchers, faculty, and administrative staff of YNU. It aims to promote multicultural exchanges and mutual understanding. It is comprised of the men's dormitory and the women's dormitory with lounges and other areas for sharing and interchange. Maximum occupancy is 252 students, 29 faculty and administrative staff, and all rooms are individual rooms, including washbasins, toilets, beds, desks, chairs, lockers, and other amenities. Rooms in Ooka International Residence will be allocated to JDS Fellows as a priority, and they can stay there for the whole two years.

Message for Applicants

Yokohama is one of the most progressive cities in terms of urban development in Japan. Yokohama City has redeveloped a coastal industrial area into modern offices and shopping; the residential district called Minato Mirai while conserving a large agricultural area. Thus, Yokohama City has both urban and rural faces and has successfully integrated the two aspects into its plans. Yokohama is the most appropriate city to study planning.

The faculty member for the program has sufficient experience in educating international students from developing countries for almost 30 years both in the Japanese government’s Special Program for International Infrastructure Engineering since 1989 and World Bank’s Infrastructure Management Program since 1995. Now 45 international

graduate students from various countries are studying in our department. We are confident that we can provide excellent education with international students in the field of civil engineering and urban and regional planning. One Philippian graduate is now leading academia as an associate professor at Philippines University.

Yokohama National University has educated almost 140 JDS fellows since 2001, and most of the graduates became leading administrative officials in their countries. Currently, 4 Philippines students are studying in our program, and 3 of them are JDS fellows. Through systematic education by professors and friendly support by Japanese tutors, they are acquiring knowledge and skills. Additionally, we have great experience in field research in the Philippines.

As noted above, about 10% of our students are international students, and we are proud of the following services to support international students;

For student life

- Priority leasing in an international dormitory
- Guidance for international students
- “Information for International Students” by YNU Learning Management System
- Field trip for international students
- Many extracurricular events by international exchange club
- Many extracurricular events by citizen volunteers
- Special care for Muslim students (pray spaces, Halal food at the cafeteria, chilled Halal food in a refrigerator)
- Counseling services at the Center for Health Service Sciences are available upon request.

Education

- 343,198 books in English in libraries, 90,864 electronic journals in English
- A variety of Japanese classes and Japanese culture classes offered by an international educational center
- The student-tutor system (A Japanese ‘tutor’ is assigned to each international student.)
- Several English graduate programs curried out in English

International Network

- International alumni network

With these services available, our international students can smoothly settle in Japan.

Moreover, YNU is located in one of the prominent cosmopolitan cities in Japan, Yokohama city. Yokohama has a number of foreign residents and provides an environment that is hospitable to them. All of the international students who have studied and are now studying at YNU, including JDS Fellows, have gotten used to life in Japan soon and enjoyed/are enjoying their life in Japan healthfully and comfortably.

As stated above, YNU brings a definite advantage to international students. We are willing to offer practical education that suits students’ needs. We are delighted to welcome more students from the Philippines as they are expected to study earnestly, diligently, and in a friendly manner.

As JDS Fellows approach the completion of their master's program, we often look back on the time when they first began their studies with us. Some of them looked anxious, not yet fully understanding what was expected of them in graduate education or what it meant to pursue a master's degree. In less than two years, however, we have watched them grow into confident researchers who can clearly communicate their research results, often exceeding our expectations. We also see confidence in their faces. Faculty members and other audiences now listen carefully to their presentations and learn from their work. For all students, the end of the second year marks the gateway to new opportunities and possibilities in their future careers. For most JDS Fellows, it also represents a renewed commitment to building a better future for their home countries. By then, they realize that they have gained far greater knowledge, abilities, and insights than they had just two years earlier. If you decide to join us, this could be the future you will see for yourself in just two years—a very small fraction of your lifetime, yet one that can profoundly shape the rest of it.