



Yokohama National University
Graduate School of Urban Innovation
Joint Japan/World Bank Graduate Scholarship Program

Infrastructure Management Program Curriculum Overview

Introduction

The Infrastructure Management Program is administered by the Graduate School of Urban Innovation, but it is jointly planned and conducted by all of YNU's graduate schools.



Degree Requirements

Degree titles can be selected from the following:

- ◆ Master of Philosophy
- ◆ Master of Philosophy in Infrastructure Management

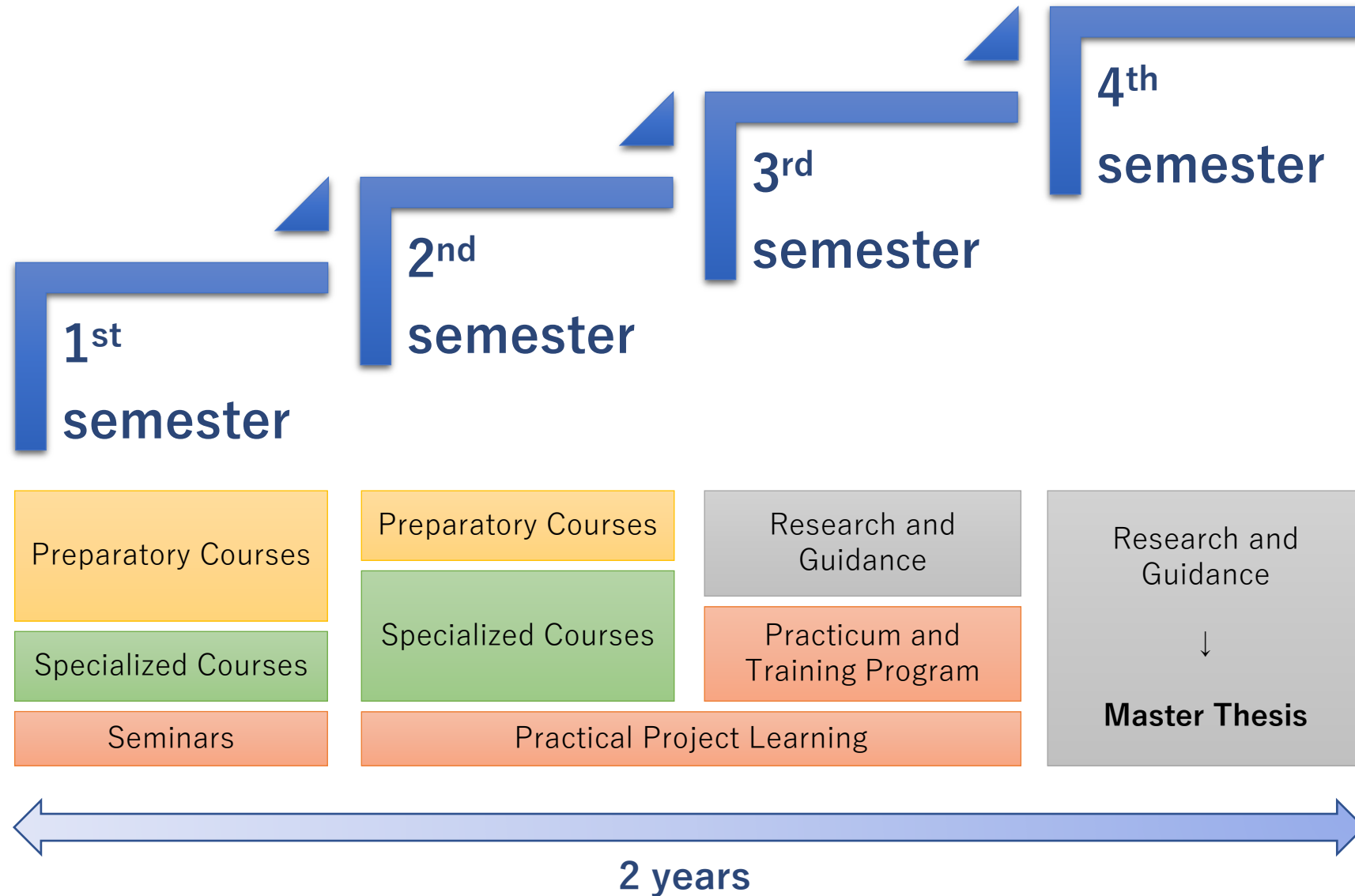
A total of 30credits, divided as follows, are required to obtain the degree from Graduate school of Urban Innovation:

◆ Specialized Courses	18(minimum)
◆ Practicum and Training Program	4 (minimum)
◆ Field Trips	2
◆ Seminar	2
◆ Thesis (Research and Guidance)	4

Total

30

Program Summary



Preparatory Courses (Non-Credit)

Basic Japanese I

Basic Japanese II

English Writing

English for Academic Purposes

Calculus and Linear Algebra

Statistics

Introduction to Networks

Japan's Development Experience

Japanese Culture and History

- ◆ The preparatory training period includes nine noncredit courses designed to convey basic analytical and language skills as well as provide an introduction to Japanese culture and the history of development in Japan.

Specialized Courses (2 Credits)

Geotechnical and Geo-environmental
Engineering in Urban Area

Geotechnical and Pavement Design

Theory of Regional Planning

Water Disaster Prevention Engineering

Advanced Theory
of Disaster Prevention System

Theory of Infrastructure
Durability Design

Transportation System Engineering

Urban transportation Planning

Economic Development

International Economics
and Public Policy

Applied International Trade

Public Administration and Management

Environmental Risk Management
for Infrastructure

Environment and Development

Urban Disaster Prevention

Sustainable Health and Environment

International Public Administration

International Project Management*

***1 Credit**

***4 Credits**

Mandatory Courses

Mandatory Courses (2 Credits)

Seminars

Practical Project Learning

- ◆ YNU offers special seminars on current issues given by staff members of the various development assistance institutions.
- ◆ YNU offers site observation tour for various infrastructure development and management to understand the issues and actual operations.

Mandatory Courses (4 Credits)

Practicum and Training Program

- ◆ Students can choose an training program offered by government agencies, private firms, or JICA in order to be exposed to the actual operations of infrastructure management.

Mandatory Courses

Mandatory Courses (2 Credits)

Research and Guidance I

Research and Guidance II

- ◆ The degree requires the writing of a master's thesis.
- ◆ In the first year, students complete most of the specialized courses, and in the second year, they write their thesis in parallel with practical training and experiments.

Examples of recent master's thesis titles:

- ◆ Improving Thermal Crack Control System For RC Abutments Using Artificial Neural Networks
- ◆ Comparison of Workability and Strength of Fly Ash-Based Geopolymer Concrete by Partially Replacement of Silica Sand with Bottom Ash
- ◆ Clarification on the Effect of Internal Horizontal Cracks in an Existing RC Bridge Deck Slab
- ◆ A Study on Supporting the Acceleration of Electric Vehicle Program: A Case Study in Jakarta
- ◆ Micro-Mechanism Investigation into the Impact of Particle Size on Contact Erosion

We hope IMP will help you to further your success.

