NAGOYA

UNIVERSITY

GLOBAL

ENVIRONMENTAL

LEADERS

PROGRAM

Nagoya University Global Environmental Leaders Program

NUGELP
NAGOYA UNIVERSITY
The Global Environmental Leaders Program

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名古屋大学
Nagoya University

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What is happening in the world now…

Economy, Population and Natural Resources

By the year 2050, the world population is expected to be more than 10 billion, compared to the current population of 7.5 billion.

The economic and population growth in newly industrialized countries such as BRICs has been increasing the demand for resources such as oil, natural gas, rare metals, and more over, food and so on.

The world might be only one step away from a reality of intense conflicts over available natural resources. In addition, here, the sufferers are the poor.

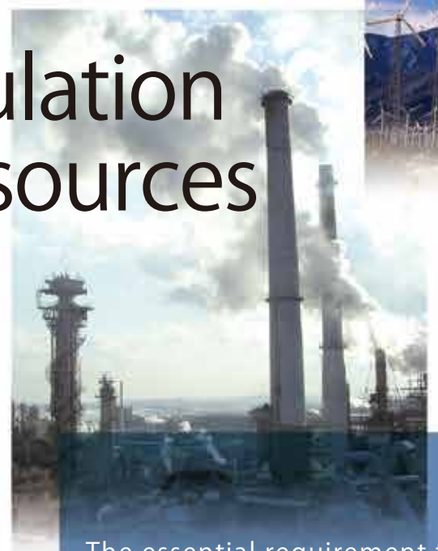
Urbanization, Water and Waste

Seventy percent of the world population is expected to live in cities by 2030.
The demand for water in cities will increase rapidly, and the pollution of rivers, lakes, and the sea from wastewater will be more serious.

An increase of waste generated from cities contributes to substantial impacts on public health and the destruction of nature.

Moreover, we also face the risks of being affected by sea level rise and drought due to global warming.

It is time to tackle the water resource crises and the challenge to recycle and conserve environmental resources.



The essential requirement for dealing with environmental problems is to develop experts with innovative knowledge and practical skills. Their progressive ideas will create effective policy and technology. In the new century, the challenge that we face is to foster such experts who can take the lead in solving environmental problems.

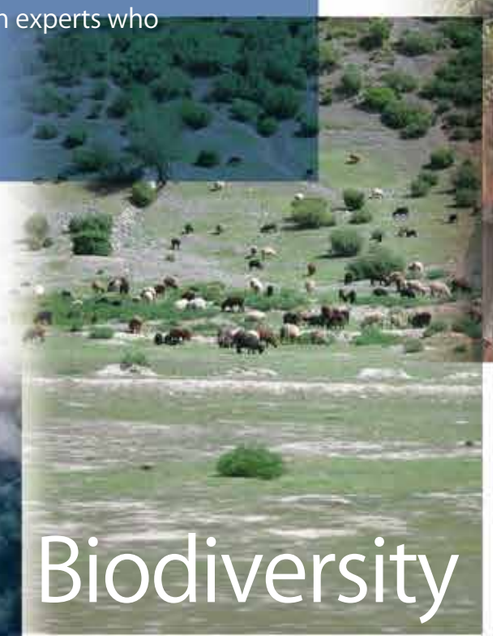
Global Warming, Energy and CO_2

The earth is experiencing various adverse effects due to climate change.

In the prevention of the worsening effects of global warming, all available systems and technologies need to be applied, for instance, the introduction of effective policies such as emission trading and clean development mechanism, and technology development for green energy utilization and energy-efficient technology.

On the other hand, in developing countries, energy consumption is increasing rapidly along with economic growth.

There is a need for societies to decrease carbon emissions in 50 to 100 years time.



Biodiversity

Biodiversity is being lost at an alarming rate. Many ecosystems, species, and genes are endangered. In addition, there exist conflicts over biological and genetic resources, as economic values of such resources are recognized.

An overall approach, such as inter-linkage between biodiversity conservation and climate change and water resources management, is needed.

Developing human resources in solving environmental problems

Global Environmental Leaders Program

Nagoya University has been conducting the Nagoya University Global Environmental Leaders Program(NUGELP) since 2008 with the support of the Special Coordination Funds for Promoting Science and Technology by MEXT, the Ministry of Education, Culture, Sports, Science and Technology.

This program is to foster future environmental leaders who can propose concrete solutions to various environmental problems around the world.

We look forward to motivated participants from abroad especially from Asia and Africa besides Japanese students in our future-focused program.

President of Nagoya University
Seiichi Matsuo

Unique education program to develop global environmental leaders

Approach to problem solution
Through interdisciplinary education, students will be able to understand issues, acquire technological know-how, and design policies and institutions.

Education through cross-faculty partnership
Students will enroll in lectures and seminars provided by the Graduate School of Environmental Studies and the Graduate School of Engineering. Students can also take related lectures offered at the Graduate School of Bioagricultural Sciences, the Graduate School of International Development, etc. according to their interests.

Networking with external organizations
Through networking and coordinating with local companies, NPOs, overseas universities and international organizations, Global Research Internship will be provided. Students can acquire practical know-how as well as more comprehensive learning.

Developing international human resources
Lectures and seminars are provided in English. The international and interactive program allows both international and Japanese students to improve their communication skills and global perspective.

Program Eligibility

For the Master's course and the Doctoral course, students of Sustainable Development Course, Department of Environmental Engineering and Architecture, in the Graduate School of Environmental Studies, and the Department of Civil and Environmental Engineering in the Graduate School of Engineering are eligible to apply for this program.

Degree

Students who complete the program will acquire a prescribed degree, Master of Environmental Studies or Master of Engineering. In addition, a special certificate will be awarded upon acquiring credits in courses specified by NUGELP and composing the master's thesis in English.

Curriculum at a Glance

Master's Course

Year One Expanding one's knowledge of selected study area

- Students will enroll in educational programs (lectures, seminars, etc.) provided by the Department of Environmental Engineering and Architecture (the Graduate School of Environmental Studies) and the Department of Civil and Environmental Engineering (the Graduate School of Engineering).
- Lectures are also provided through active contribution by prominent external practitioners from companies and government bodies in the Nagoya-Chubu Region.

Year Two Global Research Internship at companies, local governments or international organizations in order to obtain further knowledge and practical experience in the selected study area

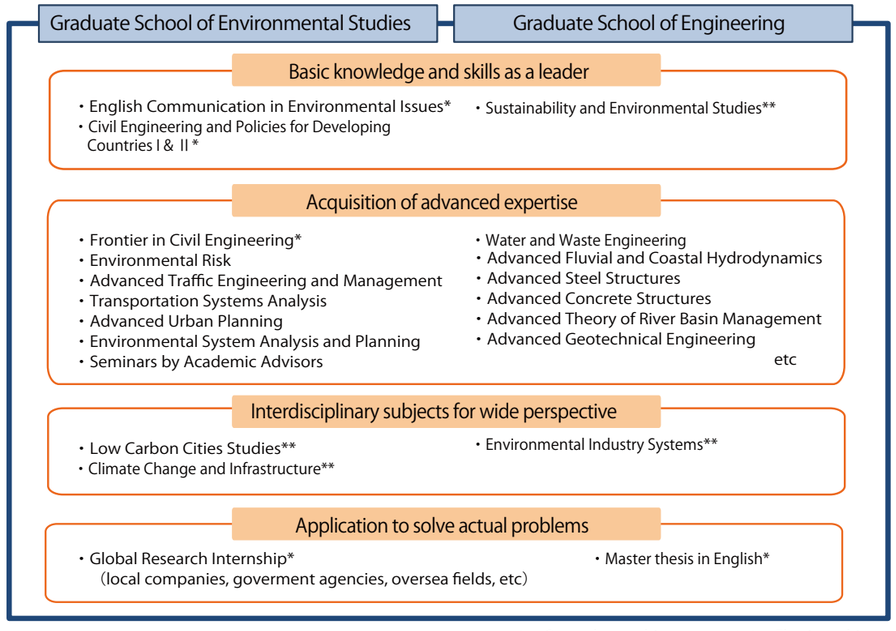
Master's Thesis
In addition to lectures and seminars, students shall work on their master's thesis, which will be dedicated to solving present global environmental problems. Data collection and analysis through domestic and overseas field studies will be an important process of composing the master's thesis.

Study Tour

Students can participate in a domestic tour (two days and one night) and an overseas tour (about a week).

Curriculum Model

A comprehensive set of lectures, seminars, and internships is provided so that students can acquire advanced specialized knowledge on civil and environment engineering to become future environmental leaders who can propose creative solutions to disaster and environmental problems . It is possible to meet the requirement of 30 credits for the master's degree by taking courses offered in English.



＊：Compulsory subjects　＊＊：Elective subjects

Doctoral Course

Doctoral students will be able to cultivate more professional and global views benefiting from the strength of the integral Environmental Studies Course in the Graduate School of Environmental Studies.

Through University-Wide Support and Regional Partnerships

Promotion of the Program

Nagoya University Center for Global Environmental Leaders

Nagoya University established the Nagoya University Center for Global Environmental Leaders in order to promote the development of environmental specialists who will lead environmental policy and measures in the coming decades. Through the cooperation and coordination of university-wide faculties, and also with the participation of external specialists, a comprehensive curriculum for environmental human resource decelopment will be established to promote interdisciplinary education.
Besides the program teaching staff, faculty members mainly from the Graduate School of Environmental Studies and the Graduate School of Engineering are involved in the educational program.

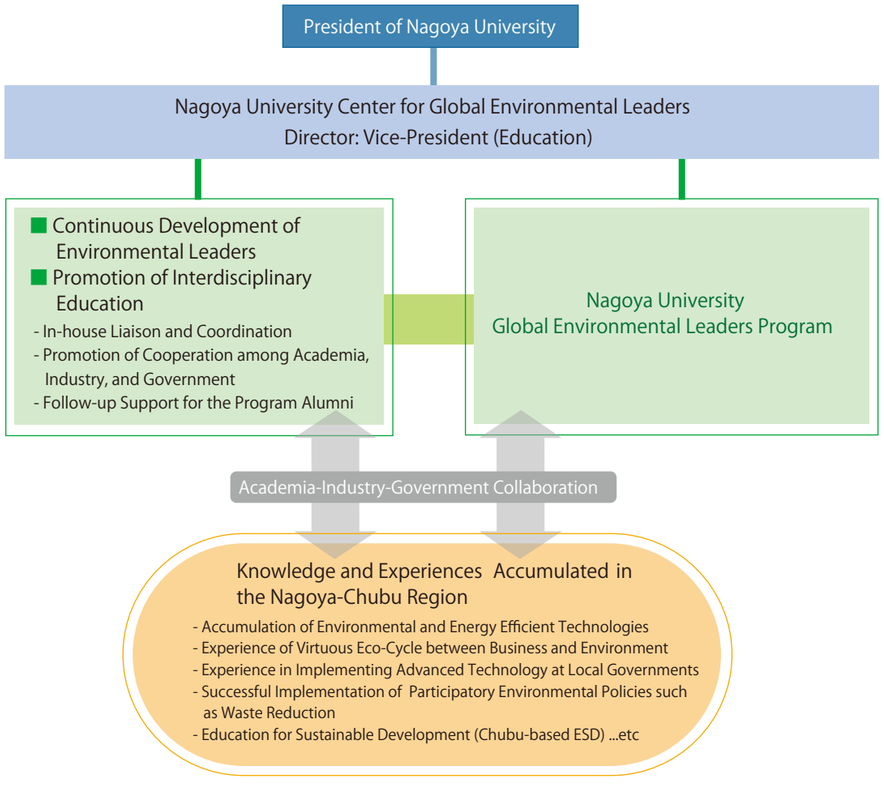
Vice-President of Nagoya University Center Director
Akira Fujimaki

Partnership among academic, industrial and governmental sectors

In order to promote the development of global environmental leaders, cooperation among academic, industrial and governmental sectors will be established. Lecutures based on practical experiences will be provided by specialists from companies, government bodies, etc. Through internships at cooperating organizations, students can also learn the most advanced environmental technologies and policies available.

Associate Professor, Graduate School of Environmental Studies
Program Leader
Miho Iryo

Center and Program System Structure



The faculty

Graduate School of Environmental Studies
Department of Environmental Engineering and Architecture (Sustainable Development Course)

Hiroki Tanikawa Professor
Environmental Systems Engineering

Hideki Nakamura Professor
Transportation Engineering

Hirokazu Kato Professor
[Education and Research Center for Sustainable Co-Development]
Transport and Environmental Planning
Strategy for Local Transport Systems

Takashi Hibino Professor
Solid Ionicus Materials
Inorganic Functional Material

Hidekazu Kurimoto Professor
[Institute of Liberal Arts and Sciences]
Process Systems
Management and Informatics

Yasuhiro Mori Professor
Structural Reliability
Risk Management

Takayuki Morikawa Professor
[Institute of Innovation for Future Society]
Transportation Systems Analysis

Takashi Tomita Professor
Land and Infrastructure Design
Coastal Disaster Management

Sho-ichi Iwamatsu Associate Professor
Nanocarbon (Fullerene)
Host-guest Materials

Anatoly Zinchenko Associate Professor
Nanomaterials and Nanotechnologies
Environmental Cleanup

Hiroaki Shirakawa Associate Professor
Environmental Economics

Nagahisa Hirayama Associate Professor
[Disaster Mitigation Research Center]
Environmental and Sanitary Engineering
Environmental Emergency Management

Satoru Iizuka Associate Professor
Architectural and Urban Environmental Engineering
Computational Fluid Dynamics

Fuminobu Ozaki Associate Professor
Architectural and Urban Environmental Engineering

Miho Iryo Associate Professor
Transportation Engineering and Planning

Masahiro Nagao Lecturer
Biomass Utilization
Sensing Technology

Graduate School of Engineering Department of Civil and Environmental Engineering

Kazuo Tateishi Professor
Steel Structures
Maintenance Engineering

Hikaru Nakamura Professor
Steel Structures

Junji Kato Professor
Computational Mechanics
Optimal Design

Norimi Mizutani Professor
Coastal and Ocean Engineering

Yuji Toda Professor
River Engineering
Eco-Hydraulics

Masaki Nakano Professor
Geotechnical Engineering

Toshihiro Noda Professor
[Disaster Mitigation Research Center]
Geotechnical Engineering

Toshiyuki Yamamoto Professor
[Institute of Materials and Systems for Sustainability]
Transportation Planning

Arata Katayama Professor
[Institute of Materials and Systems for Sustainability]
Microbial Ecological Engineering
Environmental Engineering

Kiichiro Hayashi Professor
[Institute of Materials and Systems for Sustainability]
Energy and environmental policy
Environmental assessment

Takeshi Hanji Associate Professor
Steel Structures
Bridge Engineering

Yoshihito Yamamoto Associate Professor
Concrete Mechanics
Structural Engineering

Tomoaki Nakamura Associate Professor
Coastal Engineering

Ryota Tsubaki Associate Professor
Hydraulics
River Engineering

Kentaro Nakai Associate Professor
Geotechnical Engineering

Tomio Miwa Associate Professor
[Institute of Materials and Systems for Sustainability]
Transportation Planning

Shinichiro Nakamura Associate Professor
Land and Infrastructure Design
Hydrology