

## WISE Program

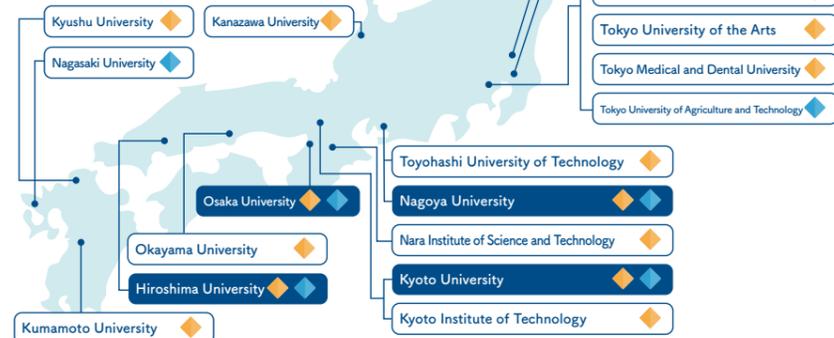
### “Doctoral Program for World-leading Innovative & Smart Education (WISE Program)”

“WISE Program” proposed by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) creates hubs to continuously expand new collaborative research by cultivating exceptional doctoral talent in various sectors such as “leading researchers of world-class academia”, “prominent innovators in industry”, “entrepreneurs who lead the social implementation of new knowledge”, and “public sector personnel in Japan and around the world who initiate policy proposals”. Its purpose is to promote innovation encompassing the entire graduate school by systematic collaborations with outside organizations, including top overseas universities and private corporations. These endeavors will build a five-year integrated doctoral degree program that leverages world-class education and research faculties. In the first academic year, 54 applications were submitted (44 from 28 national universities and 10 from 10 public and private universities). Of these, 15 applications (14 from 12 national universities and 1 from a private university) were selected.

MEXT certifies universities with top-level education and research.

Selected universities in the first academic year (AY2018).

Nagaoka University of Technology



Universities selected for Top Global University Project (21 national universities)

Universities selected for WISE Program for the first academic year (12 national universities)

#### Top Global University Project

This program provides extensive support for top Japanese universities with world-class education and research through collaborations with outstanding overseas universities.

#### Our University's program

#### The Education Program for Innovative Global Engineers

~Toward the development of an integrated global campus with collaboration between industries, academia, business and government ~

#### WISE Program

This project produces exceptional doctoral talent through a five-year integrated doctoral degree program that leverages world-class educational and research capabilities using our university's strengths and systematic collaborations with organizations in Japan and around the world.

#### Our University's program

#### Global Pro-Active Root Technology Program

### President's Message

The University was designated as the SDG hub for Goal 9 in 2018. Since then, the University has become an academic leader to realize innovations for a sustainable society. In addition to the WISE program, we simultaneously initiated other projects such as the Super Global University. Through these initiatives, we are strengthening our research and education to lead the world in Monozukuri (manufacturing). WISE program graduates are knowledge professionals and leaders around the world. Therefore, not only the University faculty, but also corporations, universities, governments, and governmental agencies within and outside Japan are promoting the program collaboratively. We train talent who can flexibly deal with unanticipated changes and are invaluable in any situation. Our current students have an outstanding reputation in society, and I expect them to mentor newly entering students and continue to realize high achievements.

President **Shigeharu Kamado**



Sustainable mobility

Smart factory

Clean manufacturing



MEXT WISE Program  
Global Pro-Active Root Technology Program

Become a world-class leader in manufacturing technology!

# Accepting applications for the WISE Program

WISE program participants are selected among applicants who passed the entrance examination for Graduate School of Engineering.



This program is the Five-year Integrated Doctoral Program. To achieve SDGs, the program fosters professionals with profound knowledge of "root technology", which is the basis of modern business and industries related to the integration of materials science and power engineering. The program cultivates the following four categories of international-level faculties.

**WISE Program**

- Department of Science of Technology Innovation
- Master's Program – Doctoral Program

Maximum number of admissions: 15 per year

Degree: Doctor (Engineering)

**WISE Program**  
**Global Pro-Active Root Technology Program**

Fields expected to benefit from the program

Informatics	Materials Science	Environment	AI
Electronics	Control	Manufacturing	Energy

- Pioneering power in academic fields**  
where doctoral researchers cultivate their original research ideas
- Leading-edge IT capacity**  
where knowledge continuously progresses instead of impromptu cramming
- Pioneering human power**  
where unknown areas are explored through broad human networks
- Social implementation and execution abilities**  
where challenges facing various industries and businesses are solved

The common keyword in 1-4  
**Global Pro-Active Education**

**Benefits of participating in the WISE program**

WISE participants receive considerable financial support so they can concentrate on education and research due to the additional course load beyond the curriculum in Graduate School of Engineering. This support includes:

- Monthly stipend upon being accepted to the program**  
The monthly allowance of approximately 50,000 to 80,000 yen in the first two years increases to 130,000 – 170,000 yen in the last three years. However, the stipend does not apply to those who are in the program and continue to work.
- Overseas travel cost support**  
airfare, accommodations, etc.

## Global Pro-Active Education Infrastructure

For the Pro-Active Education in this Program, we set up a consortium with overseas practical education universities and research institutions, corporate research labs, and cooperative factories in collaboration with public organizations in order to provide research opportunities such as open innovation campus, creative hubs and business accelerators.

### University Collaboration

**The International Engineering Practical Education Consortium**

Initial Collaboration Universities

- ◆ Mutual Internships
- ◆ Joint Short-term School Programs
- ◆ Place to Revise Educational Methods from International Perspectives
- ◆ Guidance for International Collaborative Research

Overseas consortium universities

- University Deusto (Spain)
- TH Köln – Technology, Arts, Sciences (Germany)
- University of Antwerp (Belgium)
- University of Bordeaux (France)

Additional Universities

- Aalto University (Finland)
- Indian Institute of Technology Madras (India)

Collaborations with world-leading universities  
Aim to become a world-renowned practical educational institution

### Industry Collaboration

**Infrastructure for Open Innovation Campus**

Infrastructure to participate as an R&D leader in undeveloped industrial fields, producing solutions in collaboration with multiple corporations

Joint venture support among competitors for a specific cause

Funds Matching fund method

10% of the entire research space in the University

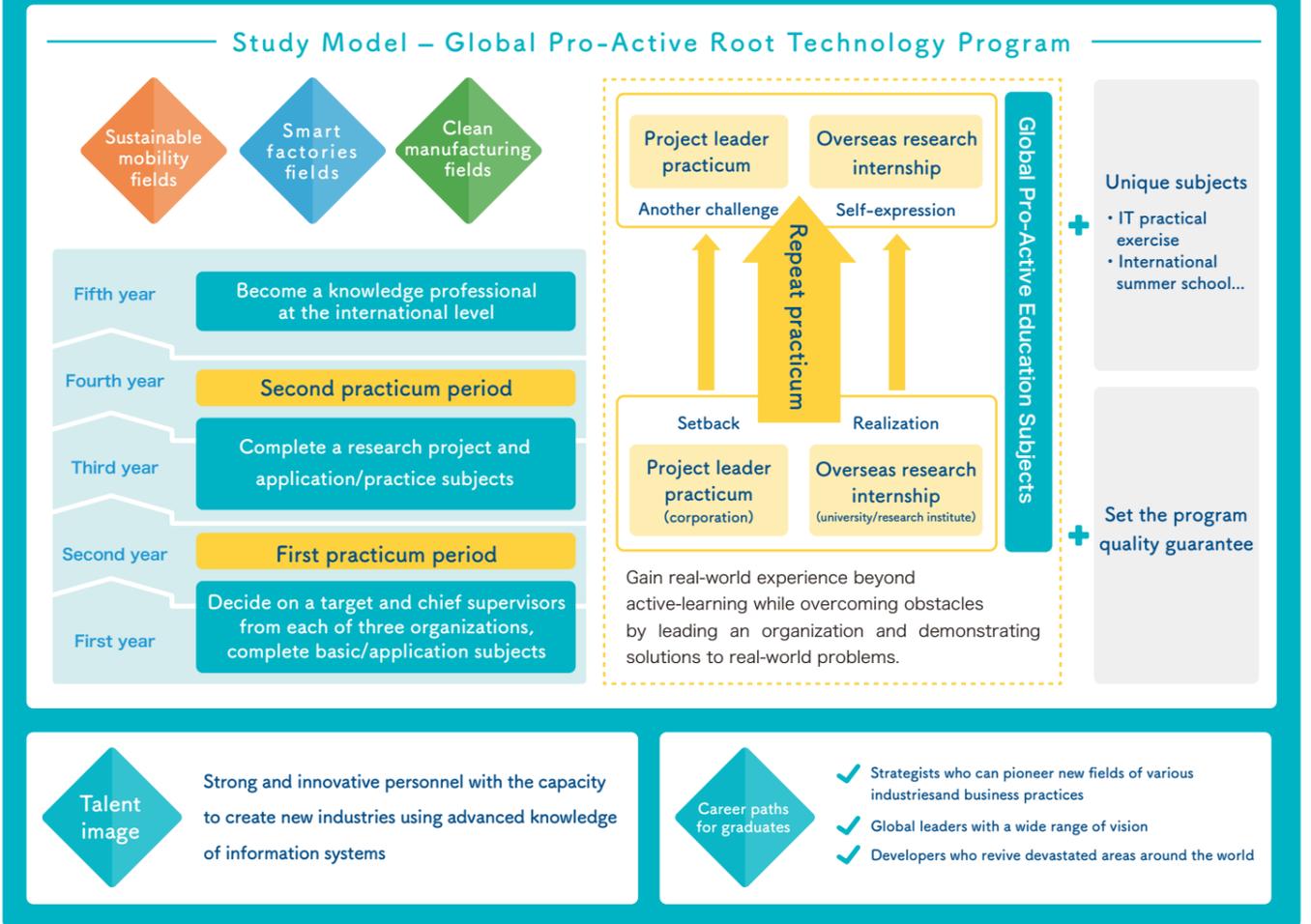
Development and Utilization of the Researcher Matching System

The goal is to achieve a campus that is seamlessly integrated with industry.



MEXT WISE Program  
**Global Pro-Active Root Technology Program**

Global Pro-Active Education ... It goes beyond self-initiated active-learning. Instead, experiences are gained while learning from failure, leading teams through obstacles, and demonstrating problem-solving skills in international settings. It is extremely important to learn to overcome setbacks, rather than simply staying overseas or at a company for an extended time. Students re-learn in a subsequent stay called a "repeat practicum" to address issues after reflecting on the initial experience.



## Sustainable Development Goals (SDGs) Initiative at Nagaoka University of Technology

SDGs are international goals set for 2016–2030 according to the 2030 Agenda for Sustainable Development adopted by the United Nations (UN) General Assembly in September 2015. They are the successor of the Millennium Development Goals (MDGs) established in 2001.



Nagaoka University of Technology has been appointed as the SDG Hub for Goal 9 by the UN, and its "GIGAKU SDG Institute" was certified as UNESCO Chairs Programme.



Sharing a Culture of Intellectual Social Responsibility

Member of United Nations Academic Impact  
<https://en.academicimpact.jp/nagaokaut/>

- A commitment to the opportunity for every interested individual to acquire the skills and knowledge necessary for the pursuit of higher education
- A commitment to building capacity in higher education systems across the world
- A commitment to promoting sustainability through education