Student Education Programs

Tohoku University promotes the following educational programs with support from the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

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

These five-year integrated doctoral programs make use of the world's most outstanding education and research capabilities, and are run in cooperation with outside organizations. In addition to fostering individuals with excellent doctorate degrees, this program also promotes efforts to create outstanding hubs where the development of talented individuals, exchanges and the creation of new joint research can be continually promoted.

Year	Department	Program	Contents
FY2018 - FY2024	13 graduate schools and institutes, including the Graduate School of Medicine and Graduate School of Dentistry	Advanced Graduate Program for Future Medicine and Health Care	This program aims to foster excellent professionals who are capable of promoting interdisciplinary approaches to integrate medicine, healthcare, engineering, economics and social sciences in order to develop, implement and lead the next-generation of medicine – "Future Medicine supported by Data Science, Technology and Society (DTS)" that Tohoku University is proposing, and contribute to building a sustainable aging-friendly society where aged people are able to live self-sufficiently while maintaining their quality of life.
FY2018 - FY2024	10 graduate schools and institutes, including the Graduate School of Engineering and Graduate School of Information Sciences	WISE Program for AI Electronics	This program aims to drive the doctoral student to acquire the "vision" to examine all technological layers in AI Electronics (AI spin device "hardware layer", AI data science "software layer", and AI processor "architecture layer") and all spaces from the "physical space" to "cyber space", and to gain practical skills for implementing solutions for social problems and the creation of new values taking into consideration business-academia collaboration. As a result, this program has the potential to produce talented doctors who can produce continuous innovations by combining technologies from different fields.
FY2019 -FY2025	11 graduate schools and institutes, including the Graduate School of Science and Graduate School of Engineering	WISE Program for Sustainability in the Dynamic Earth	In order to build a safe, secure, and sustainable society, we will develop talented individuals who are able to respond to a variety of risks, including not only those of an environmental nature but also information, social, and economic factors. They will possess cutting-edge knowledge and practical skills, endowing them with a seamless understanding of everything from the earth to humankind.
*Tohoku University's original program			
FY2022 -	Graduate School of Engineering, Graduate School of Science, and 3 other departments	Graduate Program for Green and Digital Innovation	By combining specialized education and doctoral research with informatization and technological socio-engineering education, we nurture human resources with originality, practical skills, and a bird's-eye view that can contribute to the realization of an environmentally harmonious and carbon-neutral society.

The Program for Leading Graduate Schools

To guide excellent students to become global leaders able to work in the wide industry-university-government sectors, this program constructs and develops credit programs that guarantee interdisciplinary world-class education, supports far reaching reforms of postgraduate education and promotes the forming of graduate schools worthy of a top educational institution.

Year	Department	Program	Contents
FY2012 - FY2018	Graduate School of Engineering, Graduate School of Science, Graduate School of Art and Letters, International Research Institute of Disaster Science etc., 12 graduate schools and institutes	Inter-Graduate School Doctoral Degree Program on Science for Global Safety	This program aims to produce leaders for global safety capable of contributing in protecting human lives, society and industry from global disasters such as the Great East Japan Earthquake, not only in the academic field, but also in other fields such as global enterprises and international organizations.
FY2013 - FY2019	Graduate School of Engineering, Graduate School of Science etc., 11 graduate schools and institutes	Interdepartmental Doctoral Degree Program for Multi-dimensional Materials Science Leaders (MD Program)	The objective of the MD Program is to cultivate human resources through creating leaders whose understanding of materials is based on a diverse range of perspectives and a firm grasp of the fundamentals of materials science. When combined with extensive research experience, these leaders will be able to envision how their concepts of materials for the future will change society and to bring about those changes.

Sustainable Industry-Academia Cooperation Program for Human Resource Development

In order to promote open innovation which goes beyond the boundaries of individual companies and industries, we aim to develop a virtuous cycle of learning and social activity in which working adults can move back and forth freely between academia and society, including brushing up on what they already know. The aim is to build a system to develop talented individuals through industry-academia collaboration that can respond to the demands of society in the medium to long term and on a sustainable basis.

Year	Department	Program	Contents
FY2019 - FY2023	Institute for Excellence in Higher Education	Business to Academia Teaching Innovation System	In order to pursue practical, wide-ranging, and deep learning through industry-academic collaboration, to realize a society where students and working adults can continue to learn and challenge themselves, and to develop forward-looking talented individuals in a range of fields, this program will train faculty members with careers in their specialism who will play a central role in connecting learning and society at the university.

Human Resources Development Industry-Academia Collaboration Project to Accelerate Open Innovation and AI Research and Development in the Field of Health Care

This project aims to promote efforts to form centers for the purpose of training medical personnel who will engage in the research and development of AI for use in the field of healthcare, taking into account the needs and knowledge of the medical field. The centers will be established mainly at universities with medical faculties, and the project will involve the cooperation of private companies and other organizations.

Year	Department	Program	Contents
FY2020 - FY2024	University Hospital	Clinical AI Human Resources Development Program	With the goal of "fostering individuals who can gather a wealth of information on medical issues characteristic of the region and design creative solutions using AI", we have established a doctoral program focusing on human resource development across the country in collaboration with universities, research institutes, private enterprises and local governments.

(FY = Fiscal Year/ Financial Year)

Next-Generation Cancer Professional Training Plan

The purpose is to further promote cancer treatment in Japan through the training of outstanding cancer professionals who can, in line with the fourth term of the Basic Plan to Promote Cancer Control Programs (Phase 4), address emerging issues in the field of cancer treatment, contribute to the promotion of cancer prevention, and develop new treatment methods.

Year	Department	Program	Contents
FY2023 - FY2028	Graduate School of Medicine	Tohoku Next-Generation Cancer Professional Training Plan	This program seeks to ameliorate and solve issues related to cancer treatment in the six prefectures of the Tohoku region and Niigata. It develops students' knowledge, skills, and ability to advance research, which are all necessary to address emerging issues and to carry out the latest cancer treatments. The program, in collaboration with other organizations, trains cancer specialists who can deal with the various medical necessities that may arise in personalized cancer care, the treatment of rare and intractable cancers, and interdisciplinary fields related to cancer.

Tohoku University is also implementing the following initiatives on its own. Initiatives for Distinctive Education

In order to develop global human resources, the Division for International Joint Graduate Programs provide various types of support, such as long-term overseas training programs under the joint guidance of overseas partner institutions.

Year	Department	Program	Contents
FY2015 -	Advanced Graduate School	International Joint Graduate Programs	The Division for International Joint Graduate Programs has selected fields utilizing the strengths of the university, allowing it to lead the global community and contribute to vital human development; at the same time, it implements joint education through spreading Tohoku University's expertise beyond the bounds of the department and strong collaboration with influential universities overseas, with the aim of contributing to and cultivating global talent.

In order to promote the training of young researchers, the DIARE selects outstanding students as "DIARE master's course students" and "DIARE doctoral course students", and provides financial aid and an improved research environment.

Year	Department	Program	Contents
FY2007 -	Division for Interdisciplinary Advanced Research and Education (DIARE), Advanced Graduate School	DIARE master's course DIARE doctoral course	The DIARE is active in the international arena, and provides university-wide education and research support to develop young world-class researchers equipped with distinguished knowledge and the ability to create "comprehensive intelligence" in new interdisciplinary research areas.