# STUDENT ADMISSION INFORMATION

# FOR 2024 (Second Selection)

# MASTER'S PROGRAMS

in

# MEDICAL SCIENCES

# DISABILITY SCIENCES

# SCHOOL OF PUBLIC HEALTH

Application	① Nov 1(Wed), 2023 – Nov 8(Wed), 2023 Pre-Screening		
period	② Dec 1(Fri), 2023-Dec 15(	② Dec 1(Fri), 2023-Dec 15(Fri), 2023Web site, Documents	
Entrance examination	Documentary and oral examination	To be conducted from December 25th, 2023 to January 11th, 2024 in each department you applied for.	
	Written examination	January 18th(T	'hu), 2024
Announcement of successful applicants	February 8(Thu), 2024		
Registration for admission	April 1, 2024		

# TOHOKU UNIVERSITY GRADUATE SCHOOL OF MEDICINE

October 2023

The English translations are provided only for reference purposes to aid in the understanding of the Japanese originals. In the case of a discrepancy between the Japanese original and its English translation, the former shall take precedence.



#### Admissions Policy

[Graduate School of Medicine]

The Tohoku University Graduate School of Medicine aims to nurture world-class outstanding researchers and professionals with a high level of specialized knowledge and skills in the field of medicine, a strong spirit of inquiry, a strong sense of mission and ethics, and the ability to specifically promote solutions to problems in the medical field in an advanced, interdisciplinary, and creative manner. Specifically, we seek students who aspire to become researchers, advanced professionals, or educators possessing rich humanity that contribute to new developments in the medical field with the aim of improving the health and welfare of people in Japan and around the world through specialized knowledge and skills supported by a strong spirit of inquiry and a strong sense of mission and ethics.

For this reason, we conduct entrance examinations through general admission, special admission for working adults (only for the PhD Degree Program (4-year course) ), special admission for international students (only for the PhD Degree Program (4-year course) and the PhD Degree Program (3-year course)) and special admission (only for some courses in the Master's Degree Program of School of Public Health), and select students based on whether or not they have the high ability and qualities necessary for conducting research in accordance with these educational principles and goals.

#### Medical Sciences

We select students based on English proficiency evaluated using the applicants' scores on external examinations, the written examination evaluating their specialized knowledge and thinking ability, and the screening of documents evaluating basic academic ability, motivation for application and aptitude, with special emphasis on those who aim to become researchers or educators who will contribute to the development of the fields of basic medicine and industrial medical sciences. University graduate-level English language proficiency, basic specialized knowledge, thinking ability in relation to the applicant's major and field of study, specificity of motivation, and aptitude for study are necessary to exceed the criteria set by the Graduate School, and the results of the screening of documents are especially important in the selection process.

Note that students are expected to have acquired basic specialized knowledge and English language skills prior to admission.

#### **Disability Sciences**

We select students based on English proficiency evaluated using the applicants' scores on external examinations, the written examination evaluating their specialized knowledge and thinking ability, and the screening of documents evaluating basic academic ability, motivation for application and aptitude, with special emphasis on those who aim to become researchers, advanced specialists, or educators who will contribute to academic research and social practice in the field of disability science and rehabilitation-related fields. University graduate-level English language proficiency, basic specialized knowledge, thinking ability in relation to the applicant's major and field of study, specificity of motivation, and aptitude for study are necessary to exceed the criteria set by the Graduate School, and the results of the screening of documents are especially important in the selection process.

Note that students are expected to have acquired basic specialized knowledge and English language skills prior to admission.

### Health Sciences

We select students based on English proficiency evaluated using the applicants' scores on external examinations, the written examination evaluating their specialized knowledge and thinking ability, and the screening of documents to evaluate basic academic ability, motivation, and aptitude, with special emphasis on those who aim to become researchers or educators who will contribute to the international community and have the ability to conduct research activities related to nursing or radiological/medical technology sciences independently. University graduate-level English language proficiency, basic specialized knowledge, thinking ability in relation to the applicants' major and field of study, specificity of motivation, and aptitude for study are necessary to exceed the criteria set by the Graduate School, and the results of the screening of documents are especially important in the selection process.

Note that students are expected to have acquired basic specialized knowledge and English language skills prior to admission.

## School of Public Health

In the general selection examination, we select students based on English proficiency evaluated using the applicants' scores on external examinations, the written examination evaluating their specialized knowledge and thinking ability, and the screening of documents to evaluate basic academic ability, motivation, and aptitude, with special emphasis on those who aim to become researchers, advanced specialists or educators who will contribute to academic research and social practice in the field of public health. University graduate-level English language proficiency, basic specialized knowledge, thinking ability in relation to the applicants' majors and fields of study, specificity of motivation, and aptitude for study are necessary to exceed the criteria set by the Graduate School, and the results of the screening of documents are especially important in the selection process.

Tohoku University Graduate School of Medicine is seeking students for the Master's Program according to the following guidelines:

## 1. NUMBER OF OPENINGS FOR STUDENTS

MAJOR	NUMBER OF OPENINGS
I Medical Sciences	A few
II Disability Sciences	19
III School of Public Health	A few

## 2. COURSE

MAJOR	COURSE
	(1) General Course
	(2) International Course of "Public Health Science for Human Security" (English medium course)
I Medical	(3) Quantum Biology and Molecular Imaging Educational Course
Sciences	(4) Medical Physicists Training Course
	(5) Disaster Medicine and Health Care Course
	(6) Basic Medicine Course (English medium course)
II Disability Sciences	General Course
	(1) General Course
	(2) Course to Train High-Level Clinical Research Administrators
III School of Public Health	(3) One-Year Course to train Physicians and Dentists for Clinical Research
	(4) Course in Public Health and Genetic Counseling
	(5) Leadership Training Course in Medical Ethics and Public Health
	(6) Disaster Medicine and Health Care Management Course
	(7) International Course of "Public Health Science for Human Security" (English medium course)

\*For offered fields (education and research field), please refer to the Tohoku University Graduate School of Medicine website.

https://www.med.tohoku.ac.jp/english/about/laboratory/

# 3. ADMISSION REQUIREMENTS

Applicants for the master's programs must satisfy one of the following conditions:

- (1) Those who have graduated from a university (including those who are expected to graduate by March 2024)
- (2) Those who have been conferred a baccalaureate degree (including those who are expected to be conferred the degree by March 2024) as stipulated by Article 104, Paragraph 4 of the School Education Act (Act No. 26 of 1947, hereafter referred to as "the Law")
- (3) Those who have completed 16 years of education in a foreign country (including those who are expected to complete this education by March 2024)
- (4) Those who have completed 16 years of education in a foreign country through

correspondence courses provided in Japan by a foreign school of said country or who are expected to have completed said courses by March 2024

- (5) Those who have completed or are expected to complete a program in an educational facility in Japan designated separately by the Ministry of Education, Culture, Sports, Science and Technology that provides courses from a foreign university within the school system of a foreign country by March 2024 (this applies solely to those who have completed 16 years of education in said foreign country)
- (6) Students who have been conferred a degree equivalent to a bachelor's degree upon completion of a curriculum that has a course term of three years or longer at a university or other school (limited to schools whose overall educational and research activities have been evaluated by the relevant country's government or a government-approved individual, or are designated separately as having met this requirement by the Minister of Education) in a foreign country (including cases in which the student completed the curriculum by taking subjects conducted by said school via distance learning while the student resided in Japan, and cases in which the student has completed a curriculum at an educational facility that is positioned within that country's educational system as per the previous item)( including those who are expected to acquire a Bachelor degree by March 2024)
- (7) Those who have successfully completed or, by the date designated by the Ministry of Education, Culture, Sports, Science and Technology, are expected to complete a specialized course specifically designated by the Ministry of Education, Culture, Sports, Science and Technology at a vocational school (whose minimum period required for graduation is four years or longer and that also satisfies other conditions specified by the Ministry of Education, Culture, Sports, Science and Technology) by March 2024
- (8) Those designated by the Ministry of Education, Culture, Sports, Science and Technology (refer to Public Notice of the Ministry of Education No. 5 of 1953)
- (9) Those who have been enrolled in a university for at least 3 years, those who have completed 15 years of formal education in countries other than Japan, those who have completed 15 years of education in a foreign country through correspondence courses provided in Japan by a foreign school of the said country, or those who have completed a program in an educational facility in Japan designated by the Ministry of Education, Culture, Sports, Science and Technology to provide courses from a foreign university within the school system of a foreign country (this applies solely to those who have completed 15 years of education in said foreign country), and those who have been recognized by this graduate school as having acquired the specified credits with outstanding performance by March 2024
- (10) Those who entered another graduate school in compliance with the provisions of Article 102, Paragraph 2 of the Law and who are recognized by this graduate school as having academic ability appropriate for receiving postgraduate education
- (11) Those who will be at least 22 years old by March 2024 and whom this graduate school has authorized, through individual screening of entrance qualifications, as having abilities that are at least equivalent to those of a university graduate

#### (EXPLANATORY REMARKS)

1. You may register up to your third choice of department (if you do not wish to be assigned to a department other than your first choice, you do not need to register), but please make sure you fully understand the research content of the departments you wish to apply for and contact the professor of "all departments" directly before applying to obtain their approval for your application.

2. In the case of a foreigner, please confirm the entrance qualification to the Graduate Academic Affairs Section, Graduate School of Medicine before submitting the application form.

3. Applicants eligible for "One-Year Course to train Physicians and Dentists for Clinical Research" in School of Public Health are either medical doctor or dental doctor in Japan who finished their clinical training authorized by Japan Government.

4. A university listed in item (1), (9) and (11) refers to a 4-year university in Japan.

5. Applicants who satisfy the conditions for item (6), (9), (10) or (11), must pass the preliminary screening for admissions.

- a. Application Period for preliminary screening
  - November 1(Wed), 2023-November 8(Wed), 2023
- b. Those who wish to take the preliminary screening should contact the Graduate Academic Affairs Section, Graduate School of Medicine before applying.

\* Refer to the Tohoku University Graduate School of Medicine website "Concerning the Application for Examination of Qualifications for Admission".

https://www.med.tohoku.ac.jp/english/admissions/graduate/apply/

# 4. APPLICATION PROCEDURE

## (1) ONLINE APPLICATION PROCEDURE

Applicants are required to complete the application procedures by the online application system, The Admissions Office (hereinafter referred to as TAO), within the application period. The outline is as follows.

Confirmation of application guidelines and obtaining necessary documents
• Please carefully check this application guideline for application qualification ns (pages 4 to 5) and necessary documents for application (pages 7 to 9).
• Please ask your university or college to issue certificates of graduation (or expected graduation), transcripts and other documents for your application in advance.
Payment of examination fee
• Please follow the instructions on page 8 of this application guideline and transfer the money to the designated bank account using an ATM (financial institution, convenience store), Internet banking, etc. A handling fee will be charge d (to be borne by the applicant).
• After transferring the money, please upload a PDF or image file of the ATM sta tement or Internet banking transfer completion screen that shows the payee inf ormation, amount and transfer date on the TAO (application website).
[NOTE] Application registration or payment of the application fee is not
enough to complete the application procedure.
Apply on the TAO application website
<ul> <li>Please visit TAO (The Admissions Office) website, create an account and enter the required information, <u>https://admissions-office.net/</u></li> </ul>
• Uploading of certificates and other documents is also available at the TAO.
•Once you have registered, <u>you cannot make any changes to your registration</u> . Wh en registering, please do so carefully and make sure that there are no errors.
The temporary save function is available, please use it effectively for checking.

The application procedure is completed by both paying the application fee and registering th e application information on the Internet.

Please note that the application procedure is not completed only by paying the examination f ee or registering the application information on the Internet.

In addition, please submit the "English Score Sheet" as described on page 9 within the applic ation period.

### (2) APPLICATION PERIOD <u>From December 1 (Fri), 2023 to December 15 (Fri), 2023 [Strict Deadline]</u>

#### (3) CONTACT INFORMATION :

Graduate Academic Affairs Section, Academic Affairs Office Tohoku University Graduate School of Medicine 2-1 Seiryo-machi, Aoba-ku, Sendai 980-8575 Japan Tel: (+81) 22-717-8010 Email Address: m-daigakuin@grp.tohoku.ac.jp

#### (4) APPLICATION DOCUMENTS

-Applicant mormation registration on the TAO.			
DOCUMENTS	PARTICULARS		
Photograph Data of The Applicant	Upload a photo of the applicant by TAO. *The photo must be taken within 3 months prior to the application, with the upper half of the body, without a headband, facing front. *Available data must be in jpeg or png format and between 100 KB and 5 MB in size.		
Transcript of Academic Records	Prepared by the Dean of your home university (faculty). Please convert it to PDF or image data and upload it by TAO. *For those who graduated from School of Medicine, it is not required.		
Certificate of Completion (Expected Completion), etc.	Certificate of the completion (expected completion) of a bachelor's degree or a certificate of the conferral (expected conferral) of a bachelor's degree. Please convert it to PDF or image data and upload it by TAO. *For those who graduated from School of Medicine, it is not required.		
Examination Information	Please check the information on the TAO and enter the pledge date, name, and other necessary information.		
A Copy of Residence Card (ONLY for International Student)	Applicants who stay in Japan (whose stay is over 90 days) must submit your copy of residence card (both front and back) at the application. Please convert it to PDF or image data and upload it by TAO.		

• Applica	ant inform	ation reg	ristration	on the	TAO
- ipplice			auton	on une	1110.

	The application fee is ¥30,000.
	Please transfer the examination fee to the bank account below
	using an ATM (financial institution, convenience store) or Internet
	banking.
	"The applicant must register his/her own name as the payee of the
	The transfer foc is to be paid by the applicant
	Application Fee : V20.000
	Due Date : December 15 [Strict Decelling]
	Due Date · December 15 [Strict Deadline]
	Bank: 二夌UFJ銀行 (Bank Code: 0005)
	Branch:わかたけ支店 (Branch Code: 809)
	Deposit Type:Savings Account
Application Fee, ¥30,000	Account Number: 2 2 5 9 1 3 1
	Account Holder:国立大学法人東北大学
	Katakana Name: ダイ) トウホクダイガク
	① MEXT Scholarship students are not required to pay the
	examination fee
	Those who apply for the application fee exemption for the victims
	of disastors occur 2023 in Japan are not required. These who are
	of disasters occur 2025 in Sapan are not required. Those who are
	engible should complete the procedures at the following website.
	nttps://www.tnc.tonoku.ac.jp/exempt.pnp
	Applicants who live overseas can pay by credit card.
	annlying
	After the transfer, please convert the ATM statement, Internet
	banking transfer completion screen, etc., which shows the payee
Confirmation Document of	account information, amount, transfer date, etc., into PDF or
Payment	image data and upload it by IAO.
	*These who apply for the application for exampling for the wisting
	of disastors occur 2023 in Japan are not required
	of ulsasters occur 2025 in Japan are not required.

## • Necessary documents:

DOCUMENTS	PARTICULARS	
Aspirations, Motives, Reasons and Ambitions	A Graduate School prescribed form.(Download from the website) *Approximately 500 words long Please submit the document to the prospective supervisor before the document screening (December 25(Mon), 2023 to January 11(Thu), 2024).	
Educational Background, work and research experience, etc.	Please output the date of Educational Background, work and research experience, etc. from TAO and submit the document to the prospective supervisor before the document screening (December 25(Mon), 2023 to January 11(Thu), 2024).	

	Please submit the official document(s) verifying that the result(s) of your TOEIC® Listening & Reading Test, TOEFL iBT®, TOEFL iBT® Home Edition, IELTS or Duolingo English Test you have taken after December 1, 2021 to (3) CONTACT INFORMATION.
	*We don't return your score sheets submitted in principle.
	Only the TOEFL® Test Taker Report will be returned if requested at the time of application.
	*Result from non-public tests will not be accepted.(ex:TOEFL ITP®, TOEIC IP®)
English score record. * < Your foreign language (English) proficiency is evaluated on TOEIC <sup>®</sup> , TOEFL <sup>®</sup> , IELTS or Duolingo	*In case of the TOEIC® taken after April 2023, please submit a PDF file of the official digital certificate via TAO. In case of TOEIC® taken before March 2023, please submit the original official certificate. In case of IELTS, please submit the original official result transcript. In case of TOEFL®, submit the original Test Taker Report or original Official Score Report.
English Test>	*Our DI Code of the TOEFL® is "3332".
< Must arrive by December 15>	*In case taking the Duolingo English Test, you will be asked to select the school to which you want to apply, please select our Graduate school in that section. <u>Sometimes it will take a</u> <u>long time to get a result or the test may not be approved, so</u> <u>please take the test with enough time to spare.</u>
	* If it is difficult to submit the original official score certificate by deadline, we accept a copy, such as web-caption of the score etc, as a special measure. However, all applicants MUST submit the original score certificate (must be paper-printed) when it becomes available.
	*We do not accept any updates/ replacement of the score of the English test once it's submitted.
	(TOEFL®, TOEFL iBT®, TOEFL ITP® and TOEIC® are registered trademarks of Educational Testing Service (ETS).)

#### (5) IMPORTANT REMINDER

- ① Any blank spaces or irregularities found in applications may result in rejection of the application so applicants should exercise great care when filling out the application form.
- 2 If any of the information in an application is found to be false, it may result in cancellation of admission if the applicant is initially accepted.
- ③ If an applicant has committed serious misconduct before enrollment, the school may cancel acceptance or revoke admission even after the applicant has been enrolled.
- ④ The application fee is non-refundable under any circumstances.
- <sup>(5)</sup> Applicants who have satisfied the conditions for entry through preliminary screening should convert the acceptance notification to PDF or image data and upload it by TAO.
- <sup>(6)</sup> The University does not accept the application withdrawal after the reception and the modification of contents of applications.

# 5. SCREENING

(1) Applicants will be evaluated based on the following perspectives.

- ① Document screening
- ② Written examination
- ③ The official score certificate of the English proficiency test (TOEIC®, TOEFL®, IELTS etc.) official score certificate

In the oral examination, the applicant's professional knowledge, ability to think, motivation for application, and aptitude will be evaluated.

## (2) ENTRANCE EXAMINATION DATE/TIME & SUBJECTS

TYPE OF TEST	EXAMINATION CONTENTS
Document and oral screening	To be conducted from December 25, 2023 to January 11, 2024 in each department you applied for.
Written examination	From 11:00 to 12:00, January 18(Thu), 2024 Venue; At Seiryo campus, Tohoku University.

Document and oral screening will be conducted in each department you applied for. For details on examination dates and content, etc., please confirm with the department you applied for after December 25 by yourself.

List of departments https://www.med.tohoku.ac.jp/english/about/laboratory/ \* We will announce the Written exam details later.

#### (3) EVALUATION OF FOREGIN LANGUAGE (ENGLISH)

The score of TOEIC<sup>®</sup>, TOEFL<sup>®</sup>, IELTS etc. submitted at the application is converted into the normal score. If several score records are provided, the highest record is used for evaluation.

#### (4) Department Assignment

Although there is no limit set on the quota to each department, we must limit the number of students we accept in the event of too many applicants applying for one department.

If you will not be assigned to the department of your first choice, but wish to be assigned to another department, please be sure to fill in your second and subsequent choices on the application form. (If you do not wish to be assigned to other than your first choice, you do not need to fill in the form.)

Please note that the entry of your second and subsequent choices will not affect your placement in the department of your first choice at all.

## 6. EXAMINATION LOCATION

Written Examination will be held at School of Medicine/Graduate School of Medicine in Seiryo campus, Tohoku University. We will announce the details later. Please note that you will not be admitted if you have a fever, sore throat, fatigue, abnormal sense of taste or smell, or any other physical condition at the reception desk on the day of the examination.

\*Applicants who live in abroad country can take the Written examination on-line.

# 7. ANNOUNCEMENT OF SUCCESSFUL APPLICANTS & PROCEDURE FOR ADMISSION

- (1) The identification numbers of the successful applicants will be published on the website at 10:00a.m. on February 8 (Thu), 2024. The results of examination will be noticed on the TAO as well. We cannot answer the examination result on the phone or via email.
- (2) Admission documents will be mailed to successful applicants around early March 2024. Original of transcripts, graduation certificates, etc. must be submitted at the time of admission procedures.
- (3) Fees for admission are as follows:
  ①Admission fee: ¥282,000 (expected)
  ②First semester tuition: ¥267,900 (annual tuition: ¥535,800) (expected)
  (Explanatory Remarks)
  - 1. The amounts mentioned above may change if the fees are revised at school entry or during the period of the applicant's enrollment, in which case the new payment system will be applicable.
  - 2. Information on exemptions from payment of admission or tuition fees or deferment of fees will be provided in the admission procedure document packet.
- (4) Applicants who are employed at the time of admission must submit a letter of consent from their employer.
- (5) In order for international students to obtain "Student" visa and stay in Japan, they must submit an application for Certificate of Eligibility (COE) to the Sendai Immigration Bureau. The examination period at the Immigration Bureau usually takes one to three months, so please proceed with the procedures as soon as you receive the "Acceptance Letter".
- (6) The date of registration for admission is April 1, 2024.

## 8. OTHER INFORMATION

- (1) Previous entrance exams can be viewed in front of our office. Please note that only one exam of the previous year is available, and the contents of the exam cannot be taken out or copied. For those who live far away, we also send the previous exam by e-mail. If you have any questions, please contact us at the address below, indicating the major and course you wish to view.
- (2) Handling of personal information

1) Personal information held by the University will be handled in compliance with the "Act on the Protection of Personal Information.(Law No. 57 of 2003)" and other laws and regulations, as well as in accordance with the relevant regulations of Tohoku University, such as "Regulations on Protection of Personal Information at National University Corporation Tohoku University", to ensure the protection of personal information.

2) Personal information, such as examination results used for the selection of applicants, will be used for the selection of applicants, admission procedures, preenrollment education, surveys such as follow-up surveys etc., post-enrollment student support (scholarships, tuition exemptions, health care, etc.), educational purposes such as academic guidance, tuition collection, etc., and surveys and research (improvement of entrance examinations, survey and analysis of applicant trends, etc. For enrolled students, this includes analysis along with personal information after enrollment.).

3) Work related to admissions and educational affairs may be performed by contractors entrusted by Tohoku University (hereinafter referred to as "contractors"). When outsourcing work, in case all or part of the personal information are provided to the contractors, we will take necessary measures to ensure that personal information is handled appropriately in accordance with the relevant regulations of Tohoku University, such as "Regulations on Protection of Personal Information at National University Corporation Tohoku University".

4) Applicants to the Tohoku University Graduate School of Medicine are understood to be in agreement with the content of the statement above.

(3) Applicants requiring special care during the examination procedures and subsequent schooling should request advice in advance by contacting the Graduate Academic Affairs Section, Graduate School of Medicine. Please submit your "special care" requirement with prescribed form to Academic Affairs Section during November 1 and November 8, 2023.

TOHOKU UNIVERSITY GRADUATE SCHOOL OF MEDICINE Graduate Academic Affairs Section 2-1 Seiryo-machi, Aoba-ku, Sendai 980-8575 Japan Tel: (+81) 22-717-8010 Email Address: <u>m-daigakuin@grp.tohoku.ac.jp</u>

## DESCRIPTION OF GRADUATE SCHOOL PROGRAM

#### 1. OBJECTIVE AND MISSION

I Master's Program in Medical Sciences Aims at cultivating researchers and educators in medical sciences, and human resources with expertise in medical sciences who can respond to industrial needs in the field of medical sciences.

II Master's Program in Disability Sciences

For students who graduated in an area other than medical-related such as physical education, liberal arts and engineering, aims at cultivating human resources including researchers, teachers, and administrative officials who can make international contributions. For medical specialists such as physical therapists, occupational therapists, and speech therapists, aims at cultivating of leaders such as teachers who can take charge of graduate school education for medical related occupations or who can perform specialized medical rehabilitation.

III Master's Program in Health Sciences

While forming the research and educational base at a global level on health science, aims at contributing to the maintenance and improvement of health as a right of human beings in an advanced welfare society. Accordingly aims at cultivating researchers and educators in health sciences, and advanced medical professionals.

IV Master's Program in School of Public Health

Aims at formulating the education-research center of public health at the world's best standard, and aims at contributing to an advancement of health and welfare for people in Japan as well as all over the world. Aims at training researchers, professionals and leaders, who have a broad background of public health and a high standard of job specialty and ethics.

#### 2. COURSE OF STUDY AND CURRICULUM

In order to complete the master's programs and receive a degree, students must enroll in the program for two years or longer, and take a predetermined course of studies to acquire 30 credits or more, and have the necessary research supervision, complete a master's thesis and pass the final examination.

- I Master's Program in Medical Sciences Master's degree (Medical Sciences)
- II Master's Program in Disability Sciences Master's degree (Disability Sciences)
- III Master's Program in Health Sciences

Course of Nursing Master's degree (Nursing) Course of Radiological Technology Master's degree (Health sciences) Course of Medical Laboratory Science Master's degree (Health sciences)

IV Master's Program in School of Public Health Master's degree (School of Public Health)

#### 3. RESEARCH SUPERVISION

All students who are admitted into the graduate program will be given research guidance in accordance with the research themes of the departments the students belong to.

Please refer to the Tohoku University Graduate School of Medicine website. List of departments https://www.med.tohoku.ac.jp/english/about/laboratory/

#### (Explanatory Note)

Departments indicated with "※" will not be recruiting students at this time. If you have any questions about these departments, please contact the Graduate Academic Affairs Section.

#### 4. ENTRANCE FEE/TUITION EXEMPTIONS

(1) Exemption of Entrance Fee

Students recognized as being in severe financial difficulties are eligible to apply for exemption from payment of the admission fee (complete or part exemption).

#### (2) Exemption of Tuition

Students recognized as being in severe financial difficulties are eligible to apply for tuition exemption (complete or part exemption) if they have an excellent academic record.

\*Please refer to the Tohoku University website "The application for admission fee waiver" and "The application for tuition fee waiver". https://www2.he.tohoku.ac.jp/menjo/

#### 5. INTRODUCTION OF THE PROGRAMS

# I Introduction Medical Sciences Master's Programs [No recruitment at this time]

#### Goals and distinctive features

The goals are to raise educators and researchers who can contribute to the development of medicine and medical fields in Japan and international society, and to foster advanced medical professionals who will help realize safe and healthy society, where people can live in relief even when they are sick. To achieve the goals, we address bringing up people who have wide knowledge, flexible ideas, advanced information processing ability, a noble-minded sense of ethics, and practical techniques, unifying basic and clinical medicine education, Especially, the curriculum is composed so that even if the student is a graduate from other than faculty of medicine or related to medicine, he or she can harness the accumulated knowledge and skills, and develop it in the medicine and medical fields.

#### (1)General

#### Course Features

Many faculty members in the Graduate School of Medicine are available for guidance. The Graduate School of Medicine has faculty members in all fields related to medicine and medical care. It is possible to learn how to solve problems from a medical point of view from such faculty and to apply what you have learned in your undergraduate education to medicine and medicine. In order to be able to take a bird's eye view of medicine from multiple perspectives, multiple faculty members are in charge of advising papers.

#### **Contents of Education**

The curriculum is designed so that students can have a diverse and organic knowledge and practical techniques on basic and clinical medicine, and can determine their way after graduation according to their ability and direction. The students can broadly choose their carrier options.

The curriculum is divided into the following three subjects.

#### Career Plans after Graduation

 $\cdot$  Entrance into the Graduate School of Medicine, Department of Medical Sciences (Doctoral Program).

• Employment at medical treatment and pharmaceutical institutions, and foodrelated and medical equipment development companies, and public offices (especially medical-related), etc.

 $\cdot$  By occupation, they are a medicine researcher, biostatistician, clinical research coordinator, people responsible for medical information, clinical psychologist, psycho oncology specialist, etc.

#### (2) International Course of "Public Health Science for Human Security" <u>Course Features</u>

After the cold was ceased in the early 1990's, the concept of "Human Security" has become the primary common concern of international society. The new concept addresses the issues of security of "people", instead of "nations", such as illnesses, disasters, poverty, conflicts and so forth. Particularly in developing countries such as some nations in Asia, people's lives and dignity have been threatened by diseases and injuries which are basically not curable because of poverty, natural disasters, poor environmental hygiene, malnutrition and so on. In addition, epidemics and environmental pollution jeopardize human security by crossing border perspectives based on interdisciplinary views and scientific knowledge.

The International Course of "Public Health Science for Human Security" is designed to develop students' comprehension of the closely related factors which affect peoples' lives and also their ability to produce solutions, by integrating the latest knowledge of medical science and international health with the method of the humanities and social sciences. The course further aims to nurture researchers and public health leaders in international society who will contribute to the realization of human security by taking leadership in solving security problems in public health.

This course is based on the "International Post-Graduate in Human Security," and is conducted in collaboration with three other graduate schools (Agricultural Science, International Cultural Studies and Environmental Studies), from among which students may select elective courses. All elective and obligatory courses are lectured in English.

#### Contents of Education

Special Lectures on Human Security A,B, etc.

**Career Plans after Graduation** 

Entrance into the Graduate School of Medicine, Department of Medical Sciences (Doctoral Program). public offices (especially medical-related), etc (3) Quantum biology and molecular imaging educational course  $\underline{Course\ Features}$ 

Molecular imaging examines behaviors of in-vivo biological systems including genes and proteins. It is involved with new boundary/interdisciplinary areas of medicine, pharmaceutical sciences and engineering. Molecular imaging uses positron emission tomography (PET), magnetic resonance imaging (MRI), optical imaging, etc. Molecular imaging allows viewing changes of biological systems on a molecular base and understanding them dynamically and quantitatively. It is anticipated as a measure to diagnose cancer and dementia such as Alzheimer's disease in a very early stage.

To establish an extremely early diagnosis method based on molecular imaging, there are various technological challenges, e.g., developing equipment and devices in an engineering area, molecular probes in an area of pharmaceutical sciences, and diagnostic modalities in areas of medicine and dentistry.

The course on "molecular imaging" deals with research and education relating to molecular imaging. It targets developing advanced diagnostic modalities by integrating molecular imaging with up-to-date science and technology through not only advanced medicine including radiology, nuclear medicine, pharmacology, oncology, psychiatry, etc., but also through interdisciplinary approaches in the fields of pharmaceutical sciences, engineering and dentistry.

Some programs of this course are conducted in collaboration with the National Institute of Radiological Sciences (NIRS).

#### **Contents of Education**

As in the general course, Medical Ethics, Exercise of Research Design, Rotation Training, Internship Training, Examination in Interval, and Thesis Research are required. In addition, this course requires Advanced Molecular Imaging I and II, and offers courses in the Molecular Medical Science Program.

#### Career Plans after Graduation

Entrance into the Graduate School of Medicine, Department of Medical Sciences (Doctoral Program).

Employment at medical treatment and pharmaceutical institutions, and foodrelated and medical equipment development companies, etc.

#### (4) Medical Physicists Training Course

#### Course Features

High-precision radiation therapy is rapidly spreading, and there is a need for full-time personnel such as medical physicists who are dedicated to quality control. This course is aimed at training medical physicists who are capable of performing appropriate quality control of radiotherapy equipment and radiotherapy at radiotherapy facilities. The course also aims to train students to be able to conduct research on medical physics related to radiotherapy, to participate in academic conference activities, and to present papers. In addition, a sub-course is available for students who wish to become a professional nuclear medicine physicist who can be responsible for dose calculation in nuclear medicine treatment after they are certified as a medical physicist. If you wish to enroll in the sub-course "Nuclear medicine physicists sub-course", please indicate the name of the sub-course in the designated field on the application form.

#### Contents of Education

This course provides education for graduates of the Department of Radiological Technology and the Department of Science and Engineering. In addition to systematic lectures, students take a practical training for medical physicists who can conduct research, educate future generations, and practice team medicine with other professionals involved in cancer treatment and other areas of specialty. Career Plans after Graduation

Entrance into the Graduate School of Medicine, Department of Medical Sciences (Doctoral Program).

Medical, pharmaceutical, and food-related companies, medical equipment development companies, and governmental agencies (especially in the medical field), etc.

University hospitals, public hospitals, etc.

\*This course is currently under application for the Next Generation Cancer Professional Development Plan under the Strategic Funds for the Revitalization of University Education by the Ministry of Education, Culture, Sports, Science and Technology, and will start in the 2024 academic year.

#### (5) Disaster Medicine and Health Care Course

#### Course Features

This course is designed to provide the opportunity to scientifically study disaster medicine and health care during and after disasters, such as earthquakes, tsunamis, pandemics, and disasters involving chemical agents, biological agents, radiation/nuclear attacks, or explosives (CBRNE). This course is open mainly to nurses, pharmacists, medical administrative officers, and other medical professionals. Students in this course not only acquire knowledge of disaster-related medical and scientific issues, but also the ability to conduct research related to disaster and humanitarian response through the acquisition of a master degree of medical sciences. This course is designed mainly for Japanese students and is taught only in Japanese.

#### Educational Content

Disaster medicine and health care seminar, disaster medicine and health care training, disaster sciences

#### **Career Plans after Graduation**

An enhanced career in students' respective medical professions Entrance into doctoral programs in medicine and medical sciences

(6)Basic Medicine (the course by English for students studying abroad) <u>Course Features</u>

The purpose of this course is instructions of fundamental knowledge and skills of medicine and medical sciences.

Education including every lecture and direction of thesis is conducted in English.

Many lecturers belong to Graduate School of Medicine. Their professional territories cover all aspect of medical research. They instruct students how to learn problem solution approaches through the position of medicine, as well as to expand what students have learned to medical field. Two professors are assigned for thesis advisers for developing diversified mindset.

#### Contents of Education

Education of this course is comprised of two parts, lectures (including classroom lectures and practical training) and writing a thesis. At classroom, students learn basic medical knowledge and technique. At practical training, students are able to visit different laboratories to learn more about method for medical research. There are chances to present research results at the midpoint to take advises.

#### Career Plans after Graduation

• Advancement to doctoral course

• Company related to medical service, drug discovery, food. Public office, especially related to medicine.

• Researchers about medicine or pharmacology. Developers or person in charge of quality control at pharmaceutical company, food company etc.

#### II Introduction Disability Sciences Master's Programs

#### **Course Features**

As technology advances and develops, current healthcare enables life prolongation of patients with refractory diseases. However, the number of people with physical/cognitive dysfunctions is rapidly increasing, and such patients suffer from complicated/multiple disabilities. In this situation, rehabilitation is required to cope with a large variety of diseases, and its methods and roles are changing. Rehabilitation needs new ideas from different viewpoints. Aiming to increase and develop human resources with higher levels of knowledge and rich humanity who can respond to complicated/multiple disabilities, we need to establish an interdisciplinary scientific field incorporating conventional rehabilitation medicine. In this department, we make efforts to respond to social needs so that those with disabilities can achieve functional recovery, reduced need of nursing care, social rehabilitation and resettlement. We also attempt to explore new treatment, rehabilitation and nursing care techniques and establish new healthcare systems including analysis, assessment and prevention of various disabilities. In order to attain these goals, we introduce medicine & science in sports & exercise, physical engineering, neuroscience, neuropsychology, epileptology, behavioral medicine, musical acoustic medicine, and biomechatronics into conventional rehabilitation medicine, in order to unify the basic and clinical fields. In this manner, we promote a wider range of educational/research activities.

The educational distinction is to give graduate school education on "disability sciences" to the following students:

those who graduate from specialized areas other than medical fields such as gymnastics, pharmacology, life science, agricultural science, health science, nursing, nutritional science, psychology, education, liberal arts, engineering, music etc.

those who work as healthcare professionals such as physiotherapists, occupational therapists, speech therapists, clinical laboratory technicians and nurses, and music therapists.

Since its establishment in 1994, this department has been positioned as the only department of disability sciences among the medical research courses of graduate schools in Japan. In this department, researchers have been consistently engaged in various scientific programs focusing on the identification of causes of physical/cognitive dysfunctions, prevention of disabilities and rehabilitation. We aim to develop human resources that can continue to promote research activities independently and contribute to international society by learning new disability sciences, receiving rehabilitation education, and accumulating the ability needed for the provision of healthcare. In this department, we promote research activities aimed at developing the confidence of researchers/instructors/administrators who are familiar with these fields and senior instructors who can provide professional rehabilitation.

#### Contents of Education

Introduction and training of Medicine and Science in Sports and Exercise, Behavioral Medicine, Physical Medicine and Rehabilitation, Restorative Neuromuscular Rehabilitation, Epileptology, Internal Medicine and Rehabilitation Science, Behavioral Neurology and Cognitive Neuroscience, Fetal Pathology, etc.

#### Career Plans after Graduation

The employment opportunities for the graduates are satisfactory because our globally unique research activities focusing on disability sciences perfectly match current social needs. Many seniors have already been engaged in various professional fields and have played important roles in universities and research institutes in Japan and foreign countries.

- (1) Researcher of disability sciences
- (2) Educator/leader of disability sciences
- (3) Researchers of neuroscience and medical science
- (4) 4-year university teaching staff for medical related occupations (physical therapist, occupational therapist, nurse, etc.)
- (5) Administrative official who has professional expertise in disability sciences
- (6) Pharmaceutical companies, general companies, public servants

# III Introduction Health Sciences Master's Programs[No recruitment at this time]

The students aim to be advanced professionals, and educators and researchers. We accept students from other fields as well as graduates from the health sciences fields.

There are many students from the workforce entering this Department, and we support them with such as long-term learning, lectures at night and seminars. There is a way to qualify to take the entrance examination by the preliminary review prior to the graduate school examination for those who graduate from a medical junior college and have work experience.

The Department of Health Sciences is divided into three courses by the curriculum.

For completion, the student must obtain 30 credits in core and elective subjects in lectures and master's thesis preparation (thesis research).

In each course, the student must acquire more than two credits from the common elective subjects including the subjects specified in each course.

Thesis research is ten credits. Select the field to major in and the instructor for the thesis. The remaining credits are acquired from the special subjects in each field. Students of the nursing course need to acquire more than eight credits and those of the radiological technology course and the Medical Laboratory Science course need to acquire more than ten credits.

#### (1)Nursing Course:

#### ①General

#### Course Features

The General Nursing Course is divided into the two domains of Advanced Nursing Practice and Health Development Nursing, and Family Nursing, which are then subdivided into the 12 specialties of Science of Nursing Practice, Nursing Education and Administration, Gerontological and Home Healthcare Nursing, Nursing Science of Community Health Care System, Community Health, Public Health Nursing, Adult Health Nursing, Oncology Nursing, Palliative Nursing, Child Health Nursing, Psychiatric Nursing, Department of Women's Health Nursing & Midwifery. Advanced Nursing Practice and Health Development Nursing is the domain for research and education on development and assessment of nursing skills, construction of nursing theory needed for promoting public health and supporting independent life, management of nursing education, the establishment of nursing ethics, promotion of the individual, group and community health. Family Nursing is the domain for research and education on the methods for retaining, improving and supporting the family function on the basis of family unit as the target of nursing and the properties and life events of the family unit. Access our website, etc. for the research detailed research in each field. Students who have nurse licenses and aim to be certified nurse specialists, can study through the curriculums of oncology nursing, pediatric nursing and psychiatric nursing.

#### Contents of Education

Nursing Research Methodology, Nursing Science, Medical Ethics, Nursing Ethics, Medical and Nursing Policy, Medical Education, Statistics for Nursing Research, Medical Statistics, etc.

#### **Career Plans after Graduation**

 $\cdot$  Enter the Doctoral Program of Graduate School of Medicine, or other Department or doctoral programs in other university

 $\cdot$ Teachers at universities

•Health nurse, birth attendant, nurse, clinical radiologist, clinical laboratory technologist at a university hospital or public hospital

#### <sup>(2)</sup>Course of Public Health Nurse Training

#### **Course Features**

The qualifications and skills required for a public health nurse working in local communities change with each generation. In the present day where health issues are becoming increasingly complex as our lifestyles and values are more diversified, public health nurses need to have even more advanced practical and research skills to analyze the factors of these issues from their relation with society and the environment, and endeavor to resolve and improve them with the cooperation of local residents and professional groups. Also required is the capability to work as a high-level professional demonstrating leadership in carrying out support activities for disaster-affected areas of the Tohoku coastal region. From April 2014, Tohoku University is offering a Public Health Nurse Training Course in the Graduate School Doctor of Health Sciences Course (first term two-year program) for people aiming to become public health nurses or who want to improve their skills as public health nurses.

#### Contents of Education

Public health nursing, community care system nursing, epidemiology, health statistics, public philosophy, practical training (administration, school, industry), problem research, etc.

#### **Career Plans after Graduation**

• Enter the Doctoral Program of Graduate School of Medicine, or other Department or doctoral programs in other university

 $\cdot As$  a public health nurse, the local public body (health and medical welfare administrative organization)

#### (2) Radiological Technology Course:

#### (1)General

#### Course Features

The Radiological Technology Course is divided into two domains of Fundamental Radiological Science and Clinical Radiological Science, which are subdivided into seven specialties of Noninvasive Diagnostic Imaging, Radiological Imaging and Informatics, Clinical Radiological Science, Diagnostic Image Processing, Diagnostic Image Analysis, Radiological Examination and Technology, and Therapeutic Radiology. Fundamental Radiological Science promotes the basic and applied research required to develop diagnostic imaging device, medical treatment equipment, and their applied technologies. Clinical Radiological Science is the domain to research and educate on broad diagnostic technologies used for various clinical diagnostic imaging, nuclear medicine technologies as functional diagnosis, quality control and assurance in radiodiagnosis and radiotherapy, and medical physics of a radiotherapy planning system, oncology, and radiobiology. Refer to the Website, etc. for detailed research in each field. Students aim to be a medical physicist, can learn by the curriculum centering on therapeutic radiology.

#### Contents of Education

In the common elective courses, students learn a wide range of specialized knowledge in medicine and health science. Also, Students can take more specialized courses such as Advanced Medical Physics, Advanced Image Informatics, Advanced Medical Image Engineering, Advanced Image Diagnostics, Advanced Image Analysis, Radiology, and Radiotherapy, as well as more clinical training in diagnostic imaging techniques and radiology. In thesis research, students will receive research guidance from the faculty member in charge and compile a master's degree thesis to acquire professional research skills.

#### Career Plans after Graduation

 $\cdot$  Enter the Doctoral Program of Graduate School of Medicine, or other Department or doctoral programs in other university

- •Teachers at universities
- $\cdot$  Clinical radiologist, at a university hospital or public hospital
- Engineer at a local public body or pharmaceutical company

#### <sup>2</sup>Medical Physicists Training Course

#### **Course Features**

High-precision radiation therapy is rapidly spreading, and there is a need for full-time personnel such as medical physicists who are dedicated to quality control. This course is aimed at training medical physicists who are capable of performing appropriate quality control of radiotherapy equipment and radiotherapy at radiotherapy facilities. The course also aims to train students to be able to conduct research on medical physics related to radiotherapy, to participate in academic conference activities, and to present papers. In addition, a sub-course is available for students who wish to become a professional nuclear medicine physicist who can be responsible for dose calculation in nuclear medicine treatment after they are certified as a medical physicist. If you wish to enroll in the sub-course "Nuclear medicine physicists sub-course", please indicate the name of the sub-course in the designated field on the application form.

#### **Contents of Education**

This course provides education for graduates of the Department of Radiological Technology and the Department of Science and Engineering. In addition to systematic lectures, students take a practical training for medical physicists who can conduct research, educate future generations, and practice team medicine with other professionals involved in cancer treatment and other areas of specialty.

#### Career Plans after Graduation

 $\cdot$  Clinical radiologist, at a university hospital or public hospital

\*This course is currently under application for the Next Generation Cancer Professional Development Plan under the Strategic Funds for the Revitalization of University Education by the Ministry of Education, Culture, Sports, Science and Technology, and will start in the 2024 academic year.

(3)Medical Laboratory Science Course:

#### **Course Features**

The Medical Laboratory Science Course is divided into two domains of Laboratory Medicine and Science, and Laboratory Medicine and Clinical Science, which are subdivided into seven specialties of Molecular and Functional Dynamics, Medical Microbiology, Mycology and Immunology, Endocrinology and Applied Medical Science, Pathology and Histotechnology, Clinical Physiology, Molecular Hematology, and Pathophysiology. Laboratory Medicine and Science is the domain for fundamental research and education for laboratory medicine and science including basic research in the areas of molecular biology, molecular genetics, analytical chemistry, infection and immunity, endocrinology and metabolism, and applied research that lays emphasis on basic research.

Laboratory Medicine and Clinical Science is the domain especially for advanced research and education aiming at clinical applications in areas that meet more clinical settings such as pathology and histotechnology, clinical physiology, pathophysiology. Refer to the website, etc. for detailed research in each field.

#### Contents of Education

It consists of seminars I and II in each field for the acquisition of research ability and expertise, special lectures and experimental training for the acquisition of experimental techniques.

#### Career Plans after Graduation

 $\cdot$  Enter the Doctoral Program of Graduate School of Medicine, or other Department or doctoral programs in other university

- $\cdot$ Teachers at universities
- ·Clinical laboratory technologist at a university hospital or public hospital

· Engineer at a local public body or pharmaceutical company

#### IV Introduction to the School of Public Health Master's Program

#### **Course Features**

Health issues are becoming more diverse and complex, and genomic science is making rapid progress. On the other hand, there is a shortage of human resources to promote advanced clinical research. Under these circumstances, there is an urgent need to develop human resources who have the skills to understand and solve individual health problems from the perspective of the social environment and a sense of mission to achieve better health for both individuals and society - a background in public health. The Department of Public Health aims to contribute to the improvement of the health and welfare of people in Japan and around the world by forming an educational and research center of the world's highest standards in public health. The department aims to train researchers with a background in public health and a high level of professionalism and professional ethics, as well as leaders and practitioners, especially leading-edge interdisciplinary researchers in public health.

In the School of Public Health, we have two divisions, Information Health Medicine and Public Health Medicine, with eight full-time department and several collaborative department. Information and Health Medicine consists of four dedicated department (Epidemiology, Biostatistics, Medical Informatics and Medical Genetics) and two collaborative department (Disaster Public Health, from International Research Institute of Disaster Science (IRIDeS), and Personalized Prevention and Epidemiology). The Public Health Medicine Division consists of four dedicated department (Health Administration and Policy, Environmental Medicine and Molecular Toxicology, Forensic Medicine and Medical Ethics) and from 2017, the Department of International Cooperation for Disaster Medicine and Disaster Psychiatry were newly added from IRIDeS.

In this department, the seven courses described below are designed to develop human resources. Students will pursue advanced expertise in a wide range of fields by integrating lectures and exercises in fields related to public health and collaborating with other fields. We also provide practical education in the disaster areas, university hospitals, and Tohoku Medical Megabank Organization, and from 2017, we are mutually transmitting lectures to the Human Security International Education Course.

Upon completion of the master's program in public health, students receive the MPH (Master of Public Health) degree, which is required for active work in the field of health care administration and clinical research all over the world.

The department has its own website (http://www.sph.med.tohoku.ac.jp/), so please refer to it for details.

#### (1)General

#### **Course Features**

This course is the basis of this major. Applicants are assigned to one of the eight department in this major. And students take required subjects related to "public health," such as epidemiology, medical statistics, and medical ethics, and furthermore, they focus on curricula related to their field of study.

#### Contents of Education

Introduction to Epidemiology and Research Design, Medical Ethics 1, Social Medicine Seminar, Introduction to Medical Statistics, Introduction to Behavioral Medicine, Health Care Administration, and Environmental Medicine are required subjects. Students will write a master's thesis as thesis research.

#### Career Plans after Graduation

Enter research and educational institutions (relating to the 13 fields of this major), pharmaceutical companies, think tanks, etc. Medical Administration, International Health Organization Enter the Graduate School of Medicine, Doctoral Program (Medical Course)

#### (2)Course to Train High-Level Clinical Research Administrators

#### Course Features

In Japan, recognition of necessity of infrastructure for medical research of clinical trial and transformer rational research has risen since the latter half of the 90's. But it has been insufficient yet and we have to promote talents who support these very fast. In this course, we promote specialists who support medical research, such as a clinical research coordinator (CRC), a data manager, a drugs' cosmetics and medical instrument specialist, an IT specialist, at the departments of Epidemiology, Biostatistics, and Medical Informatics while we cooperate with the Clinical Research, Innovation, and Education Center (CRIETO), TAMRIC, the Tohoku University Hospital.

You can take not only systematic lectures on medicine but a practice (training) for your specialties from the early stages of the course, so that you can take advantage of contents learnt in the lectures. We attempt to promote 'Advanced Medical Research Supporter' who make the best use of individual specialty and can well cooperate with other medical researchers.

#### Contents of Education

Introduction to Epidemiology and Research Design, Medical Ethics I, Introduction to Medical Statistics, Introduction to Behavioral Medicine, Health Care Administration, and Environmental Medicine are required classes. In addition, in the required Clinical Research Practice I, students participate in planned or ongoing clinical research, and practice making plans and questionnaires, managing actual data, and analyzing data using statistical packages. In addition, students will take multiple elective classes.

#### Career Plans after Graduation

· Entrance into the Graduate School of Medicine, Department of Medical Sciences

(Doctoral Program).

• Employment at medical treatment and pharmaceutical institutions, and foodrelated and medical equipment development companies, and public offices (especially medical-related), etc.

 $\cdot$  By occupation, they are a medicine researcher, biostatistician, clinical research coordinator, people responsible for medical information, clinical psychologist, psycho oncology specialist, etc.

(3)One-Year Course to train Physicians and Dentists for Clinical Research This course is designed mainly for Japanese students, and are taught only in Japanese.

#### (4)Course in Public Health and Genetic Counseling Course Features

This course is for training students to become Certified Genetic Counselors (CGC, Academic Board Certification). It is designed to cultivate genetic counselors as highlevel medical professionals that can work together with patients and families with an understanding of their position, and who have excellent communication skills and the latest knowledge on genomes to provide genetic counseling. Lectures are conducted in partnership with genetic medicine and various clinical departments, as well as hospitals and other research departments. Our program has been accredited for its professional development program by the Japanese Board of Genetic Counseling (jointly established by the Japan Society of Human Genetics and the Japanese Society for Genetic Counseling). This course is designed mainly for Japanese students, and are taught only in Japanese.

<u>Contents of Education</u> Genetic Counselors

<u>Career Plans after Graduation</u> Genetic Counselors

#### (5) Leadership Training Course in Medical Ethics and Public Health <u>Course Features</u>

The purpose of this course is to train leadership in medical ethics and public health and develop capable educator-researches who can support diverse ethics-related activities in various areas including healthcare institutions and research facilities. This course is designed to educate undergraduate graduates who want to learn biomedical ethics and public health ethics in postgraduate level. The course is also offered to healthcare professionals and individuals who are expected to support ethics-related activities including ethics committee and ethics consultation in their own workplaces. Students belong to the Department of Medical Ethics and learn philosophical basis of biomedical ethics, its history, major problems in biomedical ethics, research ethics and public health ethics, as well as research methods in this field. They are also expected to join research ethics committees and ethics consultations as an observer. This course is designed mainly for Japanese students, and are taught only in Japanese.

#### Contents of Education

•Research Ethics and Ethics Committee: This course provides comprehensive educational program concerning research ethics with humans. Students observe research ethics reviews in Tohoku University Graduate School of Medicine and Tohoku University Hospital.

•Clinical Ethics and Case study : This course provides students with comprehensive educational regarding practical clinical ethics. Students also participate in clinical ethics consultation held in Tohoku University Hospital and other healthcare institutions

• Introduction to Ethics and Bioethics : This course examines major fundamental theories, principles, concepts, and controversies in ethics and bioethics. The course is intended to serve as a basis of all other courses.

·Descriptive Ethics and Empirical Study : This course is intended to serve as an opportunity to read various types of empirical research papers in the field of biomedical ethics in major international journals. The course focuses on detailed methodologies applied in these published studies.

· Public Health Ethics : This course examines major ethical issues in public ethics as well as national healthcare system

• Medical Humanities (Medical Ethics 2): This course presents students commercial films as case involving ethical dilemmas and the students discuss identified moral problems in a small group from the medical humanities' standpoint of view.

Students will also learn the basics of medicine, life science, and public health through essential and elective courses.

#### Career Plans after Graduation

Entrance into the Graduate School of Medicine, Department of Medical Sciences (Doctoral Program).

Researchers of biomedical ethics at academic institutions

Ethics committee members in healthcare institutions

Biomedical ethics educators in healthcare institutions

#### (6) Disaster Medicine and Health Care Management Course **Course Features**

This course is designed to provide the opportunity to learn about not only emergencies but also long-term medical and health care management during and after disasters, such as earthquakes, tsunamis, pandemics, and disasters involving chemical agents, biological agents, radiation/nuclear attacks, or explosives (CBRNE). This course is open mainly to nurses, pharmacists, medical administrative officers, and other medical professionals. Students in this course acquire knowledge of public health and disaster-related medical and scientific issues through the acquisition of a master degree of public health. This course is designed mainly for Japanese students and is taught only in Japanese.

#### **Educational Content**

Disaster medicine and health care seminar, disaster medicine and health care training, disaster sciences, public health

#### **Career Plans after Graduation**

An enhanced career in students' respective medical professions Entrance into a doctoral program in medicine and medical sciences

#### (7) International Course of "Public Health Science for Human Security" **Course Features**

After the cold was ceased in the early 1990's, the concept of "Human Security" has become the primary common concern of international society. The new concept addresses the issues of security of "people", instead of "nations", such as illnesses, disasters, poverty, conflicts and so forth. Particularly in developing countries such as some nations in Asia, people's lives and dignity have been threatened by diseases and injuries which are basically not curable because of poverty, natural disasters, poor environmental hygiene, malnutrition and so on. In addition, epidemics and environmental pollution jeopardize human security by crossing border perspectives based on interdisciplinary views and scientific knowledge.

The International Course of "Public Health Science for Human Security" is designed to develop students' comprehension of the closely related factors which affect peoples' lives and also their ability to produce solutions, by integrating the latest knowledge of medical science and international health with the method of the humanities and social sciences. The course further aims to nurture researchers and public health leaders in international society who will contribute to the realization of human security by taking leadership in solving security problems in public health. This course is based on the "International Post-Graduate in Human Security," and is conducted in collaboration with three other graduate schools (Agricultural Science, International Cultural Studies and Environmental Studies), from among which students may select elective courses. All elective and obligatory courses are lectured in English.

<u>Contents of Education</u> Exercise on Human Security A,B, etc.

Career Plans after Graduation

Entrance into the Graduate School of Medicine, Department of Medical Sciences (Doctoral Program).

public offices (especially medical-related), etc.