

2025

Enrollment in April 2025

Enrollment in October 2024

[General admission examination]

[Special admission examination for international students]

Graduate School of Pharma-Medical Sciences (Doctoral Course)

Graduate Program of Pharmaceutical Science and Technology

Graduate Program of Applied Natural Medicine

Graduate Program of Cognitive and Emotional Neuroscience

Graduate Program of Medical Design

June 2024

University of Toyama

In the event of an unexpected situation, the contents of the student application guidelines, including the examination schedule, may be changed. If it is necessary to make such changes, we will inform you on our website, and please be sure to check the latest information.

<https://www.u-toyama.ac.jp>

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For the Graduate Programs of “Pharmaceutical Science and Technology”, “Applied Natural Medicine”, “Cognitive and Emotional Neuroscience”, and “Medical Design” (Doctoral Course) offered by The Graduate School of Pharma-Medical Sciences, the student recruitment (for entry in April 2025) will be implemented twice. If the first recruitment reaches the maximum number of applicants, the second recruitment may not be implemented.

The availability of the second recruitment will be announced on our website around November 2024.

-To All Working Adults-

The Graduate School of Pharma-Medical Sciences welcomes working people to encourage recurrent education.

Although no special admission examination for working adults is prepared, the General Admission Examination is also suitable to working people.

In addition, special measures can be taken to enable persons currently in employment to study without leaving their jobs, by applying the “Special Measures for Educational Methods based on Article 14 of the Standards for Establishment of Graduate Schools.”

Overview of Selection for Admission to the Graduate School of Pharma-Medical Sciences (Doctoral Course)

Number of students to be admitted in April 2025

Program name	Number of students to be admitted	
	General Admission Examination	Admission Examination for International Students
Graduate Program of Pharmaceutical Science and Technology	3	A few
Graduate Program of Applied Natural Medicine	3	A few
Graduate Program of Cognitive and Emotional Neuroscience	4	A few
Graduate Program of Medical Design	2	A few
Total	12	

Number of students to be admitted in October 2024

Program name	Number of students to be admitted	
	General Admission Examination	Admission Examination for International Students
Graduate Program of Pharmaceutical Science and Technology	A few	A few
Graduate Program of Applied Natural Medicine	A few	A few
Graduate Program of Cognitive and Emotional Neuroscience	A few	A few
Graduate Program of Medical Design	A few	A few

(Note)The number of students to be admitted to each program is an approximate number.

Schedules related to admission examination

Items	Graduate School of Pharma-Medical Sciences (Graduate Programs of Pharmaceutical Science and Technology, Applied Natural Medicine, Cognitive and Emotional Neuroscience, and Medical Design)	
	Enrollment in April 2025 [The first recruitment] and Enrollment in October 2024 General admission examination and Admission examination for international students	Enrollment in April 2025 [The second recruitment] General admission examination and Admission examination for international students
Deadline for inquiry about Examination of Eligibility for Application (Only for relevant applicants)	Thursday, July 4, 2024	Friday, January 10, 2025
Notification of the examination results of eligibility for application (Only for relevant applicants)	By Thursday, July 11, 2024	By Friday, January 17, 2025
Application period	Friday, July 12 to Friday, July 19, 2024	Monday, January 20 to Monday, January 27, 2025
Issue of Examination Voucher	Wednesday, August 7, 2024 (provisional)	Friday, February 14, 2025 (provisional)

Examination date	<ul style="list-style-type: none"> Graduate Program of Pharmaceutical Science and Technology Graduate Program of Applied Natural Medicine Graduate Program of Cognitive and Emotional Neuroscience Friday, August 23, 2024	Thursday, February 27, 2025
	<ul style="list-style-type: none"> Graduate Program of Medical Design Thursday, August 22, 2024	
Announcement of successful applicants	Tuesday, September 3, 2024	Friday, March 7, 2025
Admission Procedure (Deadline date)	(Enrollment in October 2024) Friday, September 13, 2024 (Enrollment in April 2025) Wednesday, January 22, 2025 (provisional)	Friday, March 14, 2025 (provisional)

(Note) If the first recruitment reaches the maximum number of applicants, the second recruitment may not be implemented.

The availability of the second recruitment will be announced on our website around November 2024.

I. Admission Policy

Admission Policy of the Graduate School of Pharma-Medical Sciences

Based on its purpose and policy on completion certification and degree conferment (diploma policy), the Graduate School of Pharma-Medical Sciences welcomes the persons who have strong interest and basic ability in the research field of Pharmaceutical Science and Technology, Applied Natural Medicine, Cognitive and Emotional Neuroscience or Medical Design, have logical thinking ability and creativity, and have the will to contribute to the development of human and environmental health culture.

Therefore, as a basic policy of our enrollment selection, we offer various kinds of admission examinations which provide multiple admission opportunities to diversified applicants.

Admission Policy of Graduate Program of Pharmaceutical Science and Technology

Based on its purpose of human resource development shown in the policy of completion certification and degree conferment (diploma policy), Graduate Program of Pharmaceutical Science and Technology welcomes the persons who aim to be researchers and engineers' rich in creativity with good comprehensive judgment and desire to learn the basis of medicine discovery and pharmaceutical preparation.

[Basic policy on selection (admission examination types and their evaluation methods)]

General Admission Examination

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Special Admission Examination for International Students

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Admission Policy of the Graduate Program of Applied Natural Medicine

Based on its purpose of human resource development shown in the policy of completion certification and degree conferment (diploma policy), Graduate Program of Applied Natural Medicine welcomes the persons who aim to be researchers, educators and engineers' rich in creativity with good comprehensive judgment and desire to learn the basis of applied natural medicine.

[Basic policy on selection (admission examination types and their evaluation methods)]

General Admission Examination

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Special Admission Examination for International Students

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Admission Policy of Graduate Program of Cognitive and Emotional Neuroscience

Based on its purpose of human resource development shown in the policy of completion certification and degree conferment (diploma policy), the Graduate Program of Cognitive and Emotional Neuroscience welcomes the persons who aim to be researchers and engineers rich in creativity with good comprehensive judgment and desire to learn the basis of Cognitive and Emotional Neuroscience.

[Basic policy on selection (admission examination types and their evaluation methods)]

General Admission Examination

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Special Admission Examination for International Students

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Admission Policy of Graduate Program of Medical Design

- The Program seeks those who are interested in medical and welfare engineering and are motivated to acquire basic and advanced knowledge of: medicine; pharmacy; medical practice; welfare; and science and engineering.
- The Program seeks those who are willing to contribute to society in various fields such as medical practice, welfare, and healthcare as highly specialized professionals and researchers who have majored in medical engineering.
- The program seeks those who have the basic abilities necessary to carry out advanced research and development in the fields of medical practice, welfare, and healthcare.

[Basic policy on selection (admission examination types and their evaluation methods)]

General Admission Examination

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

Special Admission Examination for International Students

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination, oral examination, and academic transcript.

II General Admission Examination

1. Summary of Admissions Selection Schedule

Enrollment in April 2025 (The first recruitment) and Enrollment in October 2024

Program	Application period	Examination date	Date of announcement of successful applicants	Admission procedures (deadline date)	
Graduate Program of Pharmaceutical Science and Technology	Friday, July 12 to Friday, July 19, 2024	Friday, August 23, 2024	Tuesday, September 3, 2024	(Enrollment in October 2024)	
Graduate Program of Applied Natural Medicine				Friday, September 13, 2024	
Graduate Program of Cognitive and Emotional Neuroscience		Thursday, August 22, 2024		(Enrollment in April 2025)	
Graduate Program of Medical Design				Wednesday, January 22, 2025 (provisional)	

Enrollment in April 2025 (The second recruitment)

Program	Application period	Examination date	Date of announcement of successful applicants	Admission procedures (deadline date)
Graduate Program of Pharmaceutical Science and Technology	Monday, January 20 to Monday, January 27, 2025	Thursday, February 27, 2025	Friday, March 7, 2025	Friday, March 14, 2025 (provisional)
Graduate Program of Applied Natural Medicine				
Graduate Program of Cognitive and Emotional Neuroscience				
Graduate Program of Medical Design				

(Note) If the first recruitment reaches the maximum number of applicants, the second recruitment may not be implemented.

The availability of the second recruitment will be announced on our website around November 2024.

2. Number of Students to be Admitted

Program name	Enrollment in April 2025 Number of students to be admitted	Enrollment in October 2024 Number of students to be admitted	Remarks
Graduate Program of Pharmaceutical Science and Technology	3	A few	The number of applicants includes the admission quota (a few) for Special Admission Examination for International Students.
Graduate Program of Applied Natural Medicine	3	A few	The number of applicants includes the admission quota (a few) for Special Admission Examination for International Students.
Graduate Program of Cognitive and Emotional Neuroscience	4	A few	The number of applicants includes the admission quota (a few) for Special Admission Examination for International Students.
Graduate Program of Medical Design	2	A few	The number of applicants includes the admission quota (a few) for Special Admission Examination for International Students.

(Note) Applicants for admission should consult with the relevant academic advisors in the field of their choice in advance regarding the direction of education, research, etc. You cannot apply if you have not decided who you want to be your academic advisor.

3. Eligibility for Application

Applicants must fulfill any of the following requirements:

- (1) A master's degree or a professional degree (a professional degree prescribed in Article 5-2 of the Degree Regulations (1953, Education Ministry Ordinance No. 9) pursuant to Article 104, paragraph 1 of the School Education Law. The same shall apply hereinafter).
- (2) Persons who have been conferred a master's degree or a degree equivalent to a professional degree in a foreign country, and those who expect to be conferred such a degree by the end of the month preceding the month in which they wish to enter the university.
- (3) Persons who have received a master's degree or a degree equivalent to a professional degree in Japan by completing correspondence courses offered by foreign schools, and those who expect to receive such a degree by the end of the month preceding the month in which they wish to enter the university.
- (4) Persons who has completed the courses of an educational institution that is positioned in Japan as a school that offers courses for a foreign graduate school in the school education system of that country and is designated separately by the Minister of Education, Culture, Sports, Science and Technology (herein after referred to as MEXT) and received a degree equivalent to a Master's degree or professional degree and a person who is expected to receive the degree by the end of the month preceding the month in which they wish to enter the university.
- (5) Persons who designated by the Minister of MEXT (Ministry of Education Announcement No. 118 of 1989)
 - a. Those who have been engaged in research at a university or research institute for two years or more after graduation from a university, and who are recognized by the Graduate School as having academic ability equivalent or superior to a person who holds a master's degree based on the results of said research.
 - b. A person who has completed 16 years of school education in a foreign country or 16 years

of correspondence courses provided by a foreign school in Japan, and who has been engaged in research at a university or research institute for 2 years or more, and who is recognized by the Graduate School as having academic ability equivalent or superior to a person who holds a master's degree.

- (6) Persons who have received a degree equivalent to a bachelor's degree from a university or other foreign school in a foreign country after completing a course of 5 or more years of study (limited to courses in medicine, dentistry, pharmacy, or veterinary medicine), or those who expect to receive such a degree by the end of the month preceding the month in which they wish to enter the university.
- (7) Persons who holds or expects to obtain a Master's degree or equivalent by the end of the month preceding the month in which they wish to enter the university, through course completion at the United Nations University (hereinafter referred to as UNU) as prescribe in Article 1 paragraph 2 of the Act on Special Measures Incidental to Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the UNU (Act No. 72 of 1976), which was established under the December 11, 1972 resolution of the General Assembly of the United Nations.
- (8) Persons who have completed a course of study at a school in a foreign country, an educational institution designated under item 4, or the UNU, and have passed an examination and screening equivalent to those stipulated in Article 16-2 of the Standards for the Establishment of Graduate Schools and are recognized as having academic ability equivalent or superior to a person who holds a master's degree.

(Note) Applicants who wish to apply under (5) and (6) will be screened for eligibility in advance. Please refer to "3. Examination of Eligibility for Application " on page 32 and follow the prescribed procedures.

4. Use of External English Test

The Graduate Program of Cognitive and Emotional Neuroscience and the Graduate Program of Medical Design do not require a written examination in a foreign language (English). The score of the submitted external English examination is converted into the maximum score of 100 points and the score is used as the grade.

In the Graduate Program of Pharmaceutical Science and Technology and the Graduate Program of Applied Natural Medicine, students who submit scores from an external English examination are not required to take a written examination in a foreign language (English). The score will be calculated based on the 100-point scale. Applicants who cannot submit the score of the external English examination will take the written examination of English as a foreign language.

If an applicant has taken more than one test, the one with the highest converted score will be used.

Only the scores of the tests taken on and after December 1, 2021 are valid and acceptable.

* Those who are expected to complete the Master's Course of the Graduate School of Medicine and Pharmaceutical Sciences, the master's Course of the Graduate School of Pharma-Medical Sciences or the master's Course of the Graduate School of Science and Engineering or Graduate program of Psychology in the Graduate School of Humanities, Arts, and Social Sciences in the month before the month in which you wish to enroll are not required to submit the application.

Score conversion method

- TOEFL-iBT

70 or more = 100 points

If less than 70

Converted point = $100 \times (\text{TOEFL-iBT score})/70$

- TOEFL-ITP

525 or more = 100 points

If less than 525

Converted point = $100 \times \{(\text{TOEFL-ITP score}) - 310\}/215$,

310 or less = 0 point

- TOEIC L&R, TOEIC L&R-IP

730 or more = 100 points

If less than 730

Converted point = $100 \times (\text{TOEIC score})/730$

- IELTS

6.0 or more = 100 points

If less than 6.0

Converted point = $100 \times \{(\text{IELTS score}) - 1\}/5$

5. Short-term Completion Program for Working Adults

(1) Outline of the "Short-term Completion Program for Working Adults

The Doctoral Course of the Graduate School of Pharma-Medical Sciences at the University of Toyama offers a short-term completion program* for working adults with a certain level of research achievement, starting with students admitted in April 2025.

This system is based on the recognition of "outstanding research achievements" as defined in the Graduate School of Pharma-Medical Sciences Regulations, which is the the doctoral degree by reducing the standard three-year period of the doctoral program to a minimum of one year.

* The entrance examination for this program is conducted within the framework of the general entrance examination.

However, as a result of the screening of your performance in the entrance examination, you may be accepted to the regular Doctoral Course (standard term of study: 3 years) instead of the Short-term Completion Program for Working Adults.

*2 Article 16, Paragraph 5 of the Graduate School of Pharma-Medical Sciences Regulations, University of Toyama (Excerpt)

The requirements for completion of the Doctoral Course are enrollment in this course for at least three years, acquisition of the prescribed credits listed in Appendix Table 4-5 to Appendix Table 4-8, necessary research guidance, and passing the doctoral dissertation review and examination. However, with regard to the period of enrollment, for those who have made outstanding achievements, it is sufficient to enroll in this course for at least one year (three years including the period of enrollment for those who have completed the master's course or the pre-doctoral course after enrolling in the master's course for less than two years).

(2) Application Eligibility and Application Procedure

This is a special system established for The Doctoral Course of the Graduate School of Pharma-Medical Sciences. In addition to the General Admission Examination requirements , applicants must also meet the application requirements for this program.

Please note that meeting the application requirements does not guarantee admission to the Short-term Completion Program for Working Adults.

[Application Requirements]

Applicants must meet one of the following requirements and have had prior consultation with their academic advisor in the field of their choice regarding the direction of their education and research, and have obtained the approval of their academic advisor in the field of their choice.

1. At least two academic papers that are the basis for a dissertation, published or accepted for publication in an academic journal, in which the degree applicant is the first author (including a statement that the applicant's contribution is equivalent to that of the first author).

*Only one of the academic papers published (or to be published) that clearly states that the applicant has made a contribution equivalent to that of the first author shall be treated as the first author.

2. The applicant must be the first author (including a statement of contribution equivalent

to that of the first author) of at least one academic paper that forms the basis of the dissertation and that has been published or accepted for publication in a journal with an IF of 5 or higher.

The IF must be the latest at the time of submission to the journal.

3. At least one academic paper that is the basis for the dissertation, which is published or accepted for publication in an academic journal with a site score percentile of 90% or higher, in which the degree applicant is the first author (including a statement that the applicant is making a contribution equivalent to that of the first author).

The site score percentile should be the latest at the time of submission to the journal.

The "academic paper" must meet the definition of an academic paper at the University of Toyama (as decided by the Board of Directors of the University of Toyama).

Please refer to page 30 to 31 for detailed application documents.

Other matters (application period, etc.) are the same as those for the general entrance examination.

6. Selection Method for Admission to Graduate Program of Pharmaceutical Science and Technology

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 11), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences, the master's course of the Graduate School of Pharma-Medical Sciences or the master's Course of the Graduate School of Science and Engineering in the month before the month in which you wish to enroll are not required to take the written examination.

Foreign Language (English)

*2 Applicants other than *1 who use an external English examination are not required to take a written examination in a foreign language (English).

Short essay and aptitude test

- The aptitude test requires basic knowledge of your desired field.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Friday, August 23, 2024	From 9:30 to 10:30	Foreign Language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination*3	

Enrollment in April 2024(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 9:30 to 10:30	Foreign Language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination*3	

*3 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

7. Selection Method for Admission to Graduate Program of Applied Natural Medicine

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 11), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences Master's Program, the master's course of the Graduate School of Pharma-Medical Science or the master's Course of the Graduate School of Science and Engineering in the month before the month in which you wish to enroll are not required to take the written examination.

Foreign Language (English)

*2 Applicants other than *1 who use an external English examination are not required to take a written examination in a foreign language (English).

Short essay and aptitude test

- The aptitude test requires basic knowledge of your desired field.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Friday, August 23, 2024	From 9:30 to 10:30	Foreign Language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination*3	

Enrollment in April 2024(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 9:30 to 10:30	Foreign Language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination*3	

*3 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

8. Selection Method for Admission to Graduate Program of Cognitive and Emotional Neuroscience

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 11), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences Master's Program, the master's course of the Graduate School of Pharma-Medical Science or the master's Course of the Graduate School of Science or Engineering or Graduate program of Psychology in the Graduate School of Humanities, Arts, and Social Sciences in the month before the month in which you wish to enroll are not required to take the written examination.

Short essay and aptitude test

- We will ask you about your motivation, research plan, interest in cognitive and affective brain science research, and ethical viewpoints.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Friday, August 23, 2024	From 11:00 to 12:00	Short essay and aptitude test*1	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

Enrollment in April 2025(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 11:00 to 12:00	Short essay and aptitude test*1	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

*2 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

9. Selection Method for Admission to Graduate Program of Medical Design

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 11), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences Master's Program, the master's course of the Graduate School of Pharma-Medical Science or the master's Course of the Graduate School of Science and Engineering in the month before the month in which you wish to enroll are not required to take the written examination.

Short essay and aptitude test

- The aptitude test requires basic knowledge of your desired field.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, August 22, 2024	From 11:00 to 12:00	Short essay and aptitude test*1	Gofuku Campus University of Toyama 3190 Gofuku, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

Enrollment in April 2025(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 11:00 to 12:00	Short essay and aptitude test*1	Gofuku Campus University of Toyama 3190 Gofuku, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

*2 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

III Special Admission Examination for International Students

1. Summary of Admissions Selection Schedule

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Program	Application period	Examination date	Date of announcement of successful applicants	Admission procedures (deadline date)
Graduate Program of Pharmaceutical Science and Technology	Friday, July 12 to Friday, July 19, 2024	Friday, August 23, 2024	Tuesday, September 3, 2024	(Enrollment in October 2024) Friday, September 13, 2024
Graduate Program of Applied Natural Medicine				(Enrollment in April 2025) Wednesday, January 22, 2025 (provisional)
Graduate Program of Cognitive and Emotional Neuroscience		Thursday, August 22, 2024		
Graduate Program of Medical Design				

Enrollment in April 2025(The second recruitment)

Program	Application period	Examination date	Date of announcement of successful applicants	Admission procedures (deadline date)
Graduate Program of Pharmaceutical Science and Technology	Monday, January 20 to Monday, January 27, 2025	Thursday, February 27, 2025	Friday, March 7, 2025	Friday, March 14, 2025 (provisional)
Graduate Program of Applied Natural Medicine				
Graduate Program of Cognitive and Emotional Neuroscience				
Graduate Program of Medical Design				

(Note)If the first recruitment reaches the maximum number of applicants, the second recruitment may not be implemented.

The availability of the second recruitment will be announced on our website around November 2024.

2. Number of Students to be Admitted

Program name	Number of students to be admitted	Remarks
Graduate Program of Pharmaceutical Science and Technology	A few	This admission quota is included in that for General Admission Examination.
Graduate Program of Applied Natural Medicine	A few	This admission quota is included in that for General Admission Examination.
Graduate Program of Cognitive and Emotional Neuroscience	A few	This admission quota is included in that for General Admission Examination.
Graduate Program of Medical Design	A few	This admission quota is included in that for General Admission Examination.

(Note) Applicants for admission should consult with their academic advisors in the field of their choice in advance regarding the direction of education, research, etc. You cannot apply if you have not decided who you want to be your academic advisor.

3. Eligibility for Application

Those who have foreign nationality and satisfy any of the following requirements are eligible to apply.

- (1) A person who has received or will receive by the end of the month prior to the month in which he/she wishes to enroll, a degree equivalent to a master's degree or a special professional degree from a foreign country.
- (2) Applicants who have been admitted to the program with a degree equivalent to or higher than a master's or professional degree and who have reached the age of 24 at the time of admission by individual admission screening.

(Note) Applicants who wish to apply with the eligibility (2) are screened for eligibility in advance. Please refer to "3. Use of Examination of Eligibility for Application" on page 32.

4 Use of External English Test

For the Graduate Program of Cognitive and Emotional Neuroscience, and Medical Design, no written foreign language (English) test is conducted, and the applicant's proficiency is judged based on the score of the submitted external English test, which is converted on a 100-point scale basis.

For the Graduate Programs of Pharmaceutical Science and Technology, and Applied Natural Medicine, no written foreign language (English) examination is conducted on a person who has submitted a score of the external English test, and the applicant's proficiency is judged based on the score of the submitted external English test, which is converted on a 100-point scale basis. For a person, who cannot submit the score of the external English tests, a written language (English) examination is conducted.

If you have taken two or more English tests, use one with a higher converted score.

Only the scores of the tests taken on and after September 1, 2021 are valid and acceptable.

- * Those who are expected to complete the Master's Course of the Graduate School of Medicine and Pharmaceutical Sciences, the master's Course of the Graduate School of Pharma-Medical Sciences or the master's Course of the Graduate School of Science and Engineering or Graduate program of Psychology in the Graduate School of Humanities, Arts, and Social Sciences in the month before the month in which you wish to enroll are not required to submit the application.

Score conversion method

- TOEFL-iBT

70 or more = 100 points

If less than 70

Converted point = $100 \times (\text{TOEFL-iBT score})/70$

- TOEFL-ITP

525 or more = 100 points

If less than 525

Converted point = $100 \times \{(\text{TOEFL-ITP score}) - 310\}/215$

310 or less = 0 point

- TOEIC L&R, TOEIC L&R-IP

730 or more = 100 points

If less than 730

Converted point = $100 \times (\text{TOEIC score})/730$

- IELTS

6.0 or more = 100 points

If less than 6.0

Converted point = $100 \times \{(\text{IELTS score}) - 1\}/5$

5. Selection Method for Admission to Graduate Program of Pharmaceutical Science and Technology

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 19), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences, the master's course of the Graduate School of Pharma-Medical Sciences or the master's Course of the Graduate School of Science and Engineering in the month before the month in which you wish to enroll are not required to take the written examination.

Foreign Language (English)

*2 Applicants other than *1 who use an external English examination are not required to take a written examination in a foreign language (English).

Short essay and aptitude test

- The aptitude test requires basic knowledge of your desired field.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Friday, August 23, 2024	From 9:30 to 10:30	Foreign language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination *3	

Enrollment in April 2025(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 9:30 to 10:30	Foreign language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination *3	

*3 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

6. Selection Method for Admission to Graduate Program of Applied Natural Medicine

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 19), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences Master's Program, the master's course of the Graduate School of Pharma-Medical Science or the master's Course of the Graduate School of Science or Engineering or Graduate program of Psychology in the Graduate School of Humanities, Arts, and Social Sciences in the month before the month in which you wish to enroll are not required to take the written examination.

Foreign Language (English)

*2 Applicants other than *1 who use an external English examination are not required to take a written examination in a foreign language (English).

Short essay and aptitude test

- The aptitude test requires basic knowledge of your desired field.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Friday, August 23, 2024	From 9:30 to 10:30	Foreign language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination *3	

Enrollment in April 2025(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 9:30 to 10:30	Foreign language (English) *2	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 11:00 to 12:00	Short essay and aptitude test	
	From 13:30	Oral examination *3	

*3 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

7. Selection Method for Admission to Graduate Program of Cognitive and Emotional Neuroscience

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 19), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences Master's Program, the master's course of the Graduate School of Pharma-Medical Science or the master's Course of the Graduate School of Science or Engineering or Graduate program of Psychology in the Graduate School of Humanities, Arts, and Social Sciences in the month before the month in which you wish to enroll are not required to take the written examination.

Short essay and aptitude test

- We will ask you about your motivation, research plan, interest in cognitive and affective brain science research, and ethical viewpoints.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Friday, August 23, 2024	From 11:00 to 12:00	Short essay and aptitude test*1	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

Enrollment in April 2025(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 11:00 to 12:00	Short essay and aptitude test*1	Sugitani Campus (Medicine and Pharmaceutical) University of Toyama 2630 Sugitani, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

*2 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

8. Selection Method for Admission to Graduate Program of Medical Design

For admission selection, the applicant's motivation, enthusiasm and academic ability, motivation, ability, etc. equivalent to completion of a master's degree program, based on essay, aptitude test, foreign language (English) examination (refer to "4. Use of External English Test" on page 19), oral examination, and academic transcript.

(1) Written examination

*1 Applicants who are expected to complete the Graduate School of Medicine and Pharmaceutical Sciences Master's Program, the master's course of the Graduate School of Pharma-Medical Science or the master's Course of the Graduate School of Science and Engineering in the month before the month in which you wish to enroll are not required to take the written examination.

Short essay and aptitude test

- The aptitude test requires basic knowledge of your desired field.

(2) Oral examination

- Questions such as master's thesis and related research papers or work experience are asked.

(3) Examination Date and Venue

Enrollment in April 2025(The first recruitment) and Enrollment in October 2024

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, August 22, 2024	From 11:00 to 12:00	Short essay and aptitude test*1	Gofuku Campus University of Toyama 3190 Gofuku, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

Enrollment in April 2025(The second recruitment)

Examination date	Time	Examination subjects, etc.	Examination venue
Thursday, February 27, 2025	From 11:00 to 12:00	Short essay and aptitude test*1	Gofuku Campus University of Toyama 3190 Gofuku, Toyama-city, Toyama Prefecture
	From 13:30	Oral examination*2	

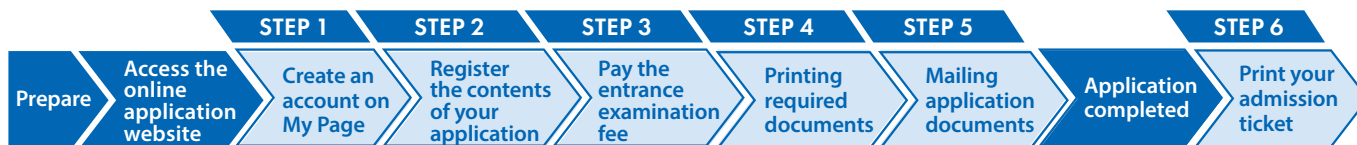
*2 The starting time of the oral examination may vary depending on the number of applicants. We will inform you of any changes, if any, when we issue you the Examination Voucher.

IV General Procedure of Application and Admission

1. Application Procedures

Applications must be submitted online only. The application procedure is completed by sending the required documents by registered express mail within the application period after the registration and payment of the application fee on the Internet application site. Please read the following "Online Application Procedure" carefully and follow the instructions.

Online Application Procedure



Prepare

see page 28

Prepare a PC with an Internet connection and a printer, etc. It may take time for the required documents* to be issued. Please start preparing them early and ensure that you have them with you before applying.

*Required Documents : An official transcript, data of your photo, etc.



Access the Online Application Website

Access from the Online Application website
or
the University website

<https://e-apply.jp/ds/toyama-gs/>

<https://www.u-toyama.ac.jp/>



After completing registration on the Internet application site (STEP 2), the application is completed by paying the examination fee (STEP 3), printing and mailing the required documents (STEP 4, STEP 5). Please note that your application is not complete just by registering. Online applications are available 24 hours a day. However, application documents must arrive by 17:00 on the last day of the application period. Please make sure to give yourself plenty of time when applying.

STEP

1

Create an Account on My Page

Enter the required information according to the instructions on the screen to create an account on My Page. If you have already registered on My Page, proceed to STEP 4.



① If you are registering for the first time, click

My Page Registration



② Register your e-mail address and click on

Send an e-mail for temporary registration



③ Click on the **To the log-in page** from the user registration screen.



④ A default password and a registration URL will be sent to your registered e-mail address.

*Configure your e-mail settings to receive e-mails from the @e-apply.jp domain.



⑤ From the log-in screen, use your registered e-mail address and the default password you received in step 4 and click

log-in



⑥ Change your default password.



⑦ Enter your personal information and click

Next



⑧ Confirm your personal information and click

Register this information



⑨ Registration is complete. Click **To My Page**



⑩ When the above page appears, My Page registration is complete.

* You can proceed to the application procedures by clicking on the **Apply** button only while applications are being accepted. You cannot proceed from here onward during times outside the period. Click on the **Log-out** button.

STEP

2



Register the Contents of Your Application

Make sure to check the procedures and important notices on the screen, and then enter the required fields according to the instructions on the screen.



① After logging in to My Page, click on the **Apply** button, and the registration page will appear.



② Select an entrance exam and confirm the important notices.



③ Select the desired department, etc.



④ Upload a photo. Click on the **Select Photo** button to select a photo.



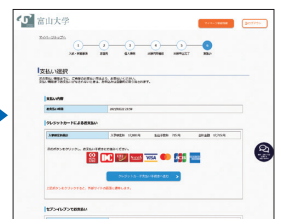
⑤ Enter your information entrance (name, address, etc.).



⑥ Confirm the contents of your application. Click on the **Application Form (sample)** button to check your application form.



⑦ Your application is registered. Click on the **Pay** button to proceed to the page where you can pay your entrance examination fee.



⑧ Payment methods for examination fees.
● Convenience stores
● ATMs with Pay-easy
● Online banking
● Credit cards



⑨ Document required for the application in PDF format (Sample)

*This document can be printed out after the entrance examination fee is paid.

If you have selected "Convenience Stores" or "ATMS with Pay-easy" as your payment method, write down the payment number, which will appear after the selection of a payment method, in the memo space below, and make the payment at a convenience store or an ATM with Pay-easy within the designated payment deadline.

For 7-ELEVEN

Payment slip number Memo (13 digits)

For LAWSON, MINISTOP, FamilyMart, ATMS with Pay-easy

Customer number memo (11 digits)

Confirmation number memo (6 digits)

For Daily YAMAZAKI, Seicomart

Online payment number by Memo (11 digits)

Receiving agency number (5 digits) 5 8 0 2 1

*A receiving agency number is required for payment Pay-easy.

A confirmation e-mail will be sent to you after the application registration is completed. If you have restricted the reception of e-mails, please allow e-mails from the sender (@e-apply.jp) to be received. *Please note that confirmation e-mails may be sorted into your junk e-mail folder, etc.

Please be careful not to enter incorrect information, as the registered information cannot be changed or modified after the application registration is completed. However, if you have not yet paid the entrance examination fee, you can substantially modify the information by re-registering using the correct information.

*Please note that if you have selected a credit card for the "Payment Method for the Entrance Examination Fee," the payment will be completed simultaneously with the registration for application.



STEP

3



Pay the Entrance Examination Fee

1 Credit Card Payment

You can select this method and make a payment when registering your application.

[Accepted Credit Cards]

VISA, Master, JCB, AMERICAN EXPRESS, MUFG Card, DC Card, UFJ Card, NICOS Card



Payment is completed upon registration.

2 Online Banking Payment

After registering your application, you will be redirected to the page of each financial institution from the current page. Please follow the instructions on the screen to make the payment.

*For online payment, your bank account must be signed up for internet banking.

The procedures are completed online.

3 Convenience Store Payment

Payment at a convenience store can be made using the payment number that will appear after you have registered the application information.

● Payment can be made at a cash register.

● Payment can be made using a store terminal.



Loppi



Multi-functional copy machine

あなたも、コンビニ。 FamilyMart



4 Bank ATMs with Pay-easy

Payment can be made using the payment number that will appear after you have registered the application information at bank ATMs with Pay-easy by following the instructions on the ATM screen.

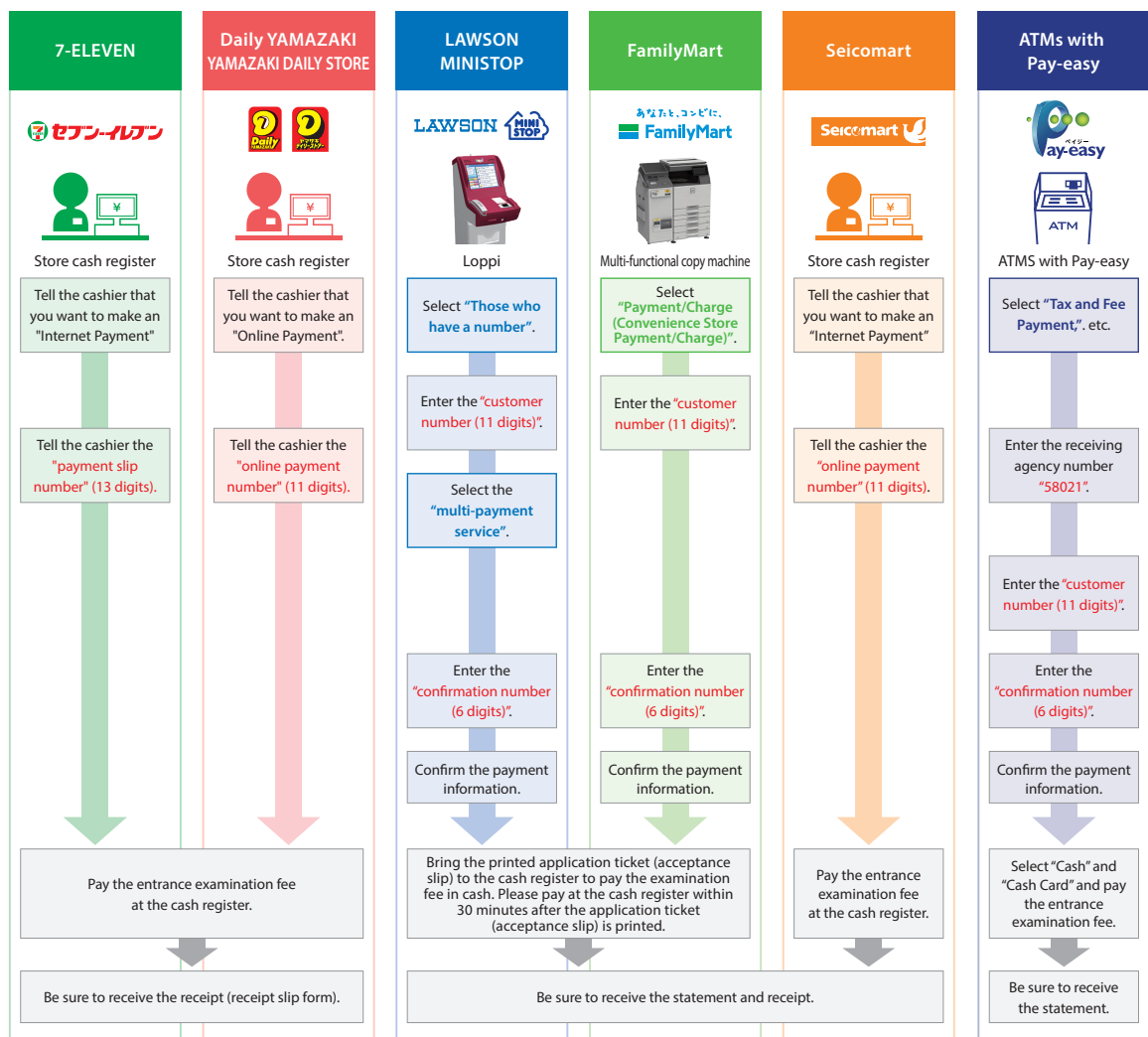


*Please check the "Payment Method Selection" screen to see the banks that offer this payment method.

Enter the required information following the instructions on the screen of each convenience store terminal or ATM and confirm the details before paying the entrance examination fee.

3 Convenience Stores

4 Bank ATMs



STEP

4



Printing required documents

Please log in from the "Confirm Application/Print Application Form" button and print the application form and other required documents in color on A4 paper.

Application form PDF (image)



STEP

5



Mailing application documents

Please note that your application is not complete just by registering.

Please send the documents required for the application by "Registered express mail" from the post office window during the application period.

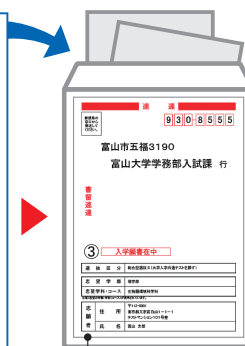
■ Application Documents

One copy is required for each application registration.

Please refer to pages 30 to 31 of the university's application guidelines to prepare the documents required for application.

<Deadline for submission of application documents>

See page 29



Address sheet



Post office window

The mailing address for the application documents is automatically printed on the address sheet.

Paste the address sheet on a commercially available square No. 2 envelope (240mm x 332mm) please.

Once received, the application fee and application documents will not be returned except for reasons specified in the application guidelines.

< Application completed >

We will not respond to any inquiries regarding acceptance by telephone or other means.

STEP

6



Print your admission ticket see page 31

You will be able to print your admission ticket from the online application site after the date of issuance of your admission ticket. Please log in from the "Print Examination Ticket" button and print it. Be sure to print the admission ticket in color on A4 paper and bring it with you on the day of the examination.



(1) Advance Preparation

Documents, etc.	summary
Recommended System Environmentst	<p>Use the following Web browser for Internet filing:</p> <ul style="list-style-type: none">· Microsoft Edge Latest edition· Google Chrome Latest edition· Mozilla Firefox Latest edition· Apple Safari Latest edition <p>* If you would use a tab function of a browser to simultaneously carry out an application operation using more than one tab, there may be the case of malfunction, such as, selected contents are taken over to other tabs. Please refrain from simultaneously carrying out the application operation using more than one tab. If you want to go back to the previous screen, please use the "Return" button displayed on the screen instead of the "Back" button of your browser.</p> <p>* Mobile devices such as smartphones and tablets can be viewed, but since it is not a recommended environment, it may not be displayed properly from some terminal screens. In addition, a printing function is required, so please use a computer.</p>
Software needed for downloading or printing PDF files	<p>Adobe Reader is necessary to view or print the application form that is in a PDF format. Please download the Adobe Reader software from the following website (free download).</p>
E-mail address	<p>A valid email address is required for your application. Please be ready to provide your email address when you start your online registration for application.</p> <p>We recommend that you use an email address that can be used with a computer in order to print out the application form.</p> <p>Also, please check your email settings to ensure that you receive emails from the following domain: @e-apply.jp</p>
Personal photo	<p>Face photo data by the applicant in the application (jpeg, png, bitmap, or gif) is required.</p> <p>In the upper body, no hat, front-facing, Please prepare a clear photograph taken within 3 months prior to submission. File will be up to 10MB.</p> <p>It should be noted that, if it is determined that it is not suitable as application photos, there is a case to be re-submitted..</p>
Printer	<p>In order to output the application form and examination admission ticket (PDF), print on A4 plain paper. You need a color printer that can be used with printing paper (plain paper, PPC paper, OA common paper, copy paper, etc.) Please to mind.</p>
Square 2 envelope	<p>Use a commercially available No. 2 square envelope (240 mm x 332 mm). Please use the "address sheet" that is output when you print the admission application form and paste it on the envelope.</p>

(2) Application Period

Category		Application Period
Enrollment in October 2024	General Admission Examination Special Admission Examination for International Students	Friday, July 12 to Friday, July 19, 2024, at 17:00
Enrollment in April 2025 (The first recruitment)	General Admission Examination Special Admission Examination for International Students	
Enrollment in April 2025 (The second recruitment)	General Admission Examination Special Admission Examination for International Students	Monday, January 20 to Monday, January 27, 2025, at 17:00

If you hand in the documents in person to the University, they are accepted between 9:00 and 17:00 on weekdays.

If you mail them, they must reach the University by 17:00 on Application deadline. However, we will accept application documents even when they reach the University after the expiration of the application period on condition that they are delivered by registered express mail with a postmark before the day before the application deadline.

(3) Examination Fee

30,000 yen.

Payment of the application fee will be made after completion of the registration of application details in STEP 2 on page 25. Please apply through the university's "Internet Application Site (<https://e-apply.jp/ds/toyama-gs/>)" and pay the application fee after completing the applicant registration. Please confirm the method of payment of the examination fee by referring to STEP 3, Payment of the Examination Fee, on page 26. After paying the application fee, you will be able to print out the application form.

A separate handling fee is required for payment of the examination fee. The fee is to be paid by the payer.

However, if you are currently enrolled in a master's course or a master's course at a graduate school of the University of Toyama and wish to continue to a doctoral program of the Graduate School, you are not required to pay the "examination fee".

In addition, there is a system of exemption from the examination fee for those affected by disasters. For more information, please refer to the University's website.

Once the examination fee has been received, it will not be refunded for any reason, except in the following cases.

[1] Cases in which a refund of the examination fee may be requested and the amount of refund.

(i) If you paid the application fee but did not apply to the University of Toyama (did not submit the application documents, etc. or your application was not accepted) [Refund amount] 30,000 yen

(ii) In case of double payment of the examination fee [Refund amount] 30,000 yen

(iii) If you have paid a large amount of the examination fee [Refund amount] The amount you have paid in excess of the examination fee

However, the recipient is responsible for the bank transfer fee when returning the loan.

[2] Method of claiming refund

Please fill out the attached "written claim for refund of examination fee" and mail it to the University.

Send to: Accounting Division I of Finance and Facilities Department

University of Toyama 3190 Gofuku, Toyama City, Toyama 930-8555

Tel: 076-445-6053

(4) Application Documents

Applicants must submit the required documents in an envelope with an "address sheet" attached. If mailed, please use by registered express mail (EMS or other traceable means if mailing from abroad). The required documents will be sent after the payment of the examination fee in STEP 3 on page 26 is completed.

Documents to be printed from the Internet application site

Documents, etc.		Notes
[1]	Application for admission	Please print out the application form in A4 size in color from the Internet application site. Printing is available after payment of the application fee.
[2]	Address sheet	Please print out the application form in A4 size in color from the Internet application site. Attach it to a commercially available kakugata 2 envelope (240mm x 332mm) without peeling off.
[3]	Pledge	Please print out the application in A4 size from the Internet application site. See "8. Security Export Control" on page 34.

Be sure to check the printed information for errors.

Documents to be prepared by applicants

Documents, etc.		Description
[1]	Certificate of Completion	The document shall be prepared by the president (dean of the graduate school) of the university from which the applicant graduated. (Applicants who have graduated from the University of Toyama's Master's and Master's programs do not need to submit it.)
[2]	Academic Transcript	The document shall be prepared and sealed by the president or dean of the graduate school the applicant graduated from. However, no sealing is required when anti-counterfeiting and anti-copying paper is used.
[3]	Academic Transcript	The document shall be prepared and sealed by the president or dean of the university the applicant graduated from. However, no sealing is required when anti-counterfeiting and anti-copying paper is used.
[4]	Master's thesis or its replacement	1 copy (Applicants who have applied for the qualification may alternatively submit a "List of research papers and documents (including conference presentations)" (in the form prescribed by the University)). (Applicants who apply for the qualification may submit "List of Research Documents (including conference presentations)" (in the format prescribed by the University) instead of the above.
[5]	Abstract of the above thesis or dissertation	2 copies One A4 size paper, no more than one page (two pages in total with figures and tables on a separate page), clearly marked with the title of the paper, your name and company name. The main text should be no less than 11-point font size with a minimum of 20 mm margins on the top, bottom, left and right sides of the main body. (Applicants who are applying for the qualification may alternatively submit a "Summary of research and work (A4 size, approximately 2,000 words)").
[6]	Research Achievements (Applicants for short-term completion for working adults)	<ul style="list-style-type: none"> Academic papers that meet the requirements for application (photocopies are acceptable) An abstract of the academic paper that meets the requirements for application (in the format prescribed by the University)
[7]	Letter of approval for taking the examination	Students who are currently enrolled in other graduate schools, etc., or who are currently employed in government agencies, corporations, etc., are requested to attach an examination approval form from the dean or head of the relevant graduate school. (Any form acceptable)

[8]	Copy of Certificate of Residence, etc. (Persons with foreign nationality only)	An applicant who has a foreign nationality and currently lives in Japan is requested to submit a copy of their residence certificate or residence card (with both sides copied) issued by the mayor of the city, town or village or the head of the special ward.
[9]	TOEFL / TOEIC / IELTS Score Sheet (copy) (Only for relevant applicants)	Submit the copy score sheet for one of the following tests. If you are unable to submit your score sheet at the time of application, please submit a document indicating that you have taken or are planning to take the following examination (e.g. a copy of the examination admission card) and submit the score sheet (copy) before the day of the admission examination. [1] Score Report for the applicant of TOEFL-iBT [2] Score Report of TOEFL-ITP [3] Official Score Certificate of TOEIC Listening & Reading [4] Score Report of TOEIC L&R-IP [5] Test Report Form-TRF of IELTS Only the score sheets of the tests taken on and after September 1, 2021 are valid and acceptable.

(Note) For documents written in languages other than Japanese or English, attach Japanese or English translations to them.

Where to Submit Application Documents

Program name	Address
Graduate Program of Pharmaceutical Science and Technology	Educational Affairs Division, Sugitani Area Administration Department, University of Toyama, 2630 Sugitani, Toyama City, Toyama Prefecture, 930-0194, Japan
Graduate Program of Applied Natural Medicine	
Graduate Program of Cognitive and Emotional Neuroscience	
Graduate Program of Medical Design	Admission Office (Educational Affairs Division) of the School of Engineering, University of Toyama, 3190 Gofuku, Toyama City, Toyama Prefecture, 930-8555, Japan

2. Print out the Examination Voucher and Examination Instructions

- (1) The examination voucher will be available for printing on the Internet application site after the date of issuance of the voucher after the University receives the application documents sent by the applicant. When the examination voucher is ready to be printed, we will notify the applicant's e-mail address registered at the time of Internet application.

Date of Issue of Examination Voucher, etc.

Category	Deadline
Enrollment in October 2024	15:00 on Wednesday, August 7, 2024 (tentative)
Enrollment in April 2025 (The first recruitment)	
Enrollment in April 2025 (The second recruitment)	15:00 on Friday, February 14, 2025 (tentative)

(Note) The date of issuance of examination vouchers is tentative and may be subject to change.

- (2) Log in to My Page from "Login" on the Internet application site. In order to log in, you will need [your email address and the password you set yourself].
- (3) After log in, please download the examination voucher. Please print out the examination voucher in color on A4 paper and bring it with you on the day of the examination. Please note that a separate notification of examination instructions will be sent to you by e-mail, so please make sure you read them carefully before taking the examination.

Precautions

- (1) After printing the examination voucher, be sure to check the information on it. If the information is different from what you registered for the application, please contact the Examination Section of the Admissions Office for Educational Affairs Division of Sugitani Area Administration Department as soon as possible.

Also, be sure to check that the examination number on the computer screen and the number on the printed examination voucher match.

- (2) Even if you do not receive an e-mail, please log in to the Internet application site and print out the examination voucher and instructions for the examination.
- (3) The number you receive when you register your application online is not your examination number. Please be sure to bring your examination voucher with you on the day of the examination, as you will not be allowed to take the examination using your reception number.
- (4) On the day of the examination, it is not acceptable to present the examination voucher by displaying it on the screen of a smartphone or other such device. Be sure to bring the printed examination voucher and keep it in a safe place after the examination.

3. Examination of Eligibility for Application

Each of applicants who intend to file their applications for the General Admission Examination (5) ,(6)through (11) and the Special Admission Examination for International Students (2) will be individually examined in advance. In such cases, make an inquiry to the following section in advance and submit the requested documents by the due date.

[Inquiry and Submission]

Examination Section of Admissions Office, Educational Affairs Division, Sugitani Area
Administration Department, University of Toyama
2630 Sugitani, Toyama City, Toyama Prefecture, 930-0194, Japan
Phone: (076) 434-7658

- (1) Documents necessary for Examination of Eligibility for Application
 - [1] Application for Examination of Eligibility for Application (form designated by the University)
 - [2] Transcripts and graduation certificates from the last school attended
 - [3] Summary of research and work
 - [4] List of research papers (including conference presentations) (In the format prescribed by the University)

* The originals of each certificate must be submitted. Copies will not be accepted.
Documents written in foreign languages must be submitted with Japanese translation.

(2) Deadline for the submission of documents

Category	Deadline
Enrollment in October 2024	16:00 on Thursday, July 4, 2024
Enrollment in April 2025 (The first recruitment)	
Enrollment in April 2025 (The second recruitment)	16:00 on Friday, January 10, 2024

As a rule, application documents shall be submitted by mail and must reach the University by the above-mentioned deadline.

If an applicant hands in the documents himself/herself to the university for some inevitable reason, we will accept them between 9:00 and 16:00 on weekdays. They will not be accepted after the deadline.

(3) Notification of the examination results

We will send the result of the preliminary examination to each applicant by the following date.

Category	Notification
Enrollment in October 2024	By Thursday, July 11, 2024
Enrollment in April 2025 (The first recruitment)	
Enrollment in April 2025 (The second recruitment)	By Friday, January 17, 2025

4. Announcement of successful applicants

At the following date, the examinee's numbers of successful applicants will be posted on the website of the University of Toyama, and a Notification of Acceptance will be sent to the applicants by mail.

We will not respond to any inquiries by telephone and e-mail or other means.

Category	Announcement
Enrollment in October 2024	15:00 on Tuesday, September 3, 2024
Enrollment in April 2025 (The first recruitment)	
Enrollment in April 2025 (The second recruitment)	15:00 on Friday, March 7, 2025

5. Admission Procedure

The admission procedure is as follows. More details will be separately notified to the successful applicants.

(1) Admission procedure period

Admission period	Deadline date
Enrollment in October 2024	Friday, September 13, 2024
Enrollment in April 2025 (The first recruitment)	Wednesday, January 22, 2025
Enrollment in April 2025 (The second recruitment)	Friday, March 14, 2025 (provisional)

(2) Expenses required for the admission procedure

a. Enrollment fee: 282,000 yen (provisional)

However, if you have completed a master's course at one of the graduate schools of the University of Toyama and wish to continue to a doctoral course at the Graduate School, you do not need to pay the admission fee.

(Note) [1] The enrollment fee shown above is still provisional. If it is revised at the time of enrollment, the new enrollment fee will apply.

[2] The paid enrollment fee will not be refunded.

b. Others

[1] Persons who find it difficult to pay the enrollment fee may be exempted or deferred from collection after deliberation.

[2] Tuition fees must be paid after enrollment. The exact amount of the tuition fee and detailed method of the payment will be announced at the time of the admission procedure.

<Reference> The tuition fee of academic year 2024: 535,800 yen.

[3] There is a scholarship system of Japan Student Services Organization.

[4] Other expenses include the fee for the Personal Accident Insurance for Students Pursuing Education and Research.

(3) Remarks

Persons who have not completed the admission procedure within the Admission procedure period will be considered to have declined the admission.

6. Policy on Personal Information Protection

Personal information possessed by University of Toyama will be handled based on the Act on the Protection of Personal Information, and University of Toyama Personal Information Protection Policy.

(1) Personal information (including name, address, etc.) of applicants that comes to the knowledge of the University through the application shall be used for [1] applicant selection procedure (application processing and selection), [2] announcement of successful applicants, [3] admission procedure, [4] survey/study of the selection method, and [5] operations associated with those purposes.

(2) Personal information of those who completed the admission procedure that comes to the knowledge of the University through the application shall be used for post-admission operations related to [1] academic affairs (registration, study guidance, etc.), [2] student support (health care, application for tuition exemption or scholarship, career support, etc.), [3] tuition collection work, and [4] statistical survey and data analysis.

(3) We may use only the successful applicants' numbers, names, and addresses for the purpose of contact from the University's relevant bodies, such as Alumni Association, Supporting Group and Cooperative Society.

(Note) Applicants who do not wish to be contacted by the above bodies are requested to inform the Educational Affairs Division of Sugitani Area Administration Department to that effect.

(4) University of Toyama may have contractors do some kind of university operations. When

conducting the operations, all or part of the personal information obtained shall be provided to the contractor to the extent necessary to perform the operations; however, University of Toyama supervises the use of information to ensure compliance with confidentiality.

7. Notes on Application

- (1) If any submitted application document is incomplete, the application may not be accepted.
- (2) If the examination fee is not fully paid, the application will not be accepted.
- (3) Accepted application documents will not be returned for any reason.
- (4) Even after admission has been granted, if any discrepancy is found with the information in the submitted documents, the admission may be cancelled.
- (5) For inquiries related to the application and other matters, contact the following section:
Examination Section of Admissions Office, Educational Affairs Division of Sugitani Area Administration Department, University of Toyama,
2630 Sugitani, Toyama City, Toyama Prefecture, 930-0194, Japan
Phone: 076-434-7658

8. Security Export Control

The University of Toyama has established the "University of Toyama Security Export Control Regulations" based on the "Foreign Exchange and Foreign Trade Act", and conducts strict screening for security export control in the perspective of providing technology and export of research equipment and materials. If applicants who fall under any of the regulated items, you may not be able to get the permission to enroll, and receive the desired education at the university. There may be restrictions on your desired research activities.

[Reference] "University of Toyama Regulations Concerning Security Export Control"
URL <http://www3.u-toyama.ac.jp/soumu/kisoku/pdf/0110401.pdf>

9. Preliminary Consultation for Applicants with Disabilities

Applicants with disabilities (visual impairment, hearing impairment, physical disability, sickness, injury, developmental disability, etc.) who may require special arrangements in their admission examinations or in class should contact the Educational Affairs Division of Sugitani Area Administration Department prior to application.

If necessary, the University may hold interviews with the applicant or his/her previous school's staff members, who may represent him/her.

* Even if you apply for prior consultation, you are not obliged to apply to the University of Toyama.

(1) Consultation deadline

Category	Deadline
Enrollment in October 2024	16:00 on Thursday, June 27, 2024
Enrollment in April 2025 (The first recruitment)	
Enrollment in April 2025 (The second recruitment)	16:00 on Friday, December 27, 2024

(2) Consultation method

Please download a Preliminary Consultation application form from the University's website or create an application form containing the following information and submit it together with a doctor's medical certificate (its copy is also acceptable) to the Examination Section of Admissions Office, Educational Affairs Division of Sugitani Area Administration Department.

- [1] Name, gender, date of birth, address, telephone number and e-mail address
- [2] Program of choice and category of admission examination
- [3] Type and degree of disability
- [4] What special considerations the applicant desires during the admission examination
- [5] What special considerations the applicant desires during course of study
- [6] Measures taken at the previous university, etc. (Comments of the applicant's academic advisor)
- [7] Situation of daily life
- [8] Other matters for reference (Please also submit any reference materials to be used for consultation, e.g. a copy of Physical Disability Certificate, etc.)

(Reference) Preliminary Consultation Application Form page

(University's Home Page) → "Admission exam information" → "Preliminary consultation for applicants with disabilities"

(3) Contact for consultation

Educational Affairs Division of Sugitani Area Administration Department, University of Toyama, 2630 Sugitani, Toyama City, Toyama Prefecture, 930-0194, Japan
Phone: 076-434-7658
FAX: 076-434-4545

(Note) If you wish to use hearing aids, crutches, wheelchairs, etc., used in your daily life, during the examination, arrangements may be required in the examination venue settings, etc., so please contact us beforehand.

Preliminary consultation is intended to inform applicants with disabilities about the current situation of the University in advance and to find a better or ideal way when they take an admission examination and/or lessons; it is not intended to restrict their admission and study.

(Reference) Please refer to the Guidelines for staff to eliminate discrimination on the basis of disability at University of Toyama
(University's Home page) → "About the University of Toyama" → "Information".

V. Overview of the Graduate School of Pharma-Medical Sciences

The Graduate School of Pharma-Medical Sciences offers the curriculums organized by the Graduate School of Medicine and Pharmaceutical Sciences and the Graduate School of Science and Engineering in collaboration.

The Graduate School of Pharma-Medical Sciences aims to contribute to the development of human and environmental health culture through collaboration and fusion among such different fields as medicine, pharmacy, science, and engineering. It teaches academic theories, research techniques, and applications in those fields to enable students to cultivate deep knowledge and superior skills for pursuing careers that require a high level of expertise.

Based on this objective, a degree will be granted to persons who have made academic achievements confirmed by this graduate school through acquisition of not only universal knowledge and skills in medicine, pharmacy, science, and engineering based on the fundamental abilities in a wide range of fields of education and research, but also the ability to think and act on their own to create something new based on the advanced specialized knowledge and ethics.

Please note that all graduate schools that will be reorganized in the 2022 academic year will adopt a four-term (quarter) system, and each course will be offered in principle on a single-term basis. Each term lasts for 8 weeks.

Comparison of two-term (semester) and four-term (quarter) systems

	Name of each term			
Two-term (semester) system	First semester		Second semester	
Four-term (quarter) system	First term	Second term	Third term	Fourth term

Overview of each program

1. Graduate Program of Pharmaceutical Science and Technology

(1) Purpose and Degree

The purpose of the Graduate Program of Pharmaceutical Science and Technology is to nurture people who can contribute to pharmaceutical development through specialized education focusing on medicine development process from discovery, synthesis, pharmacokinetics, safety tests, formulation to clinical trials. Also, the Program trains researchers and engineers who aim to play an active role in the field of pharmaceutical science based on the acquired knowledge and technology.

A Doctoral degree (pharmaceutical sciences) will be awarded to persons who have completed this program.

(2) Special Measures for Educational Methods

In order to allow persons currently in employment to study without leaving their jobs, special measures can be taken in accordance with the “Special Provision on Educational Method Stipulated in Article 14 of the Standards for Establishment of Graduate Schools.”

Persons eligible for the special educational measures can attend classes and research guidance not only in the daytime, but also at night if they submit a course plan in consultation with their academic advisors. As a rule, the night classes are scheduled between 18:10 and 21:20 from Monday through Friday. Apart from this schedule, eligible students can take the classes on Saturdays or during summer holidays depending on the class subject.

Class hours are scheduled as follows.

1st Period 8:45 to 10:15	2nd Period 10:30 to 12:00	3rd Period 13:00 to 14:30
4th Period 14:45 to 16:15	5th Period 16:30 to 18:00	
6th Period 18:10 to 19:40	7th Period 19:50 to 21:20	

(3) Requirements for Completion of Courses

As a rule, students must be enrolled for at least 3 years, take the designated classes (including special research) to obtain 16 or more credits, receive the necessary research supervision, and pass the dissertation and final examination.

In addition, if a student, due to circumstances such as having an occupation, etc., puts forward a plan to take and complete a course in a planned manner for a certain period beyond the standard length of study (3 years), the plan may be approved.

(4) List of Research projects Conducted by Academic Advisors

See the attached Table I-1.

2. Graduate Program of Applied Natural Medicine

(1) Purpose and Degree

Natural medicine has already played an important role in modern medical practice, and it is expected to be further utilized by clarifying new efficacy and scientific evidence. New medicine discovery research based on the natural medicines is a highly promising research area that can lead to therapeutic innovation in various diseases. In addition, research on natural medicine is directly linked to the advancement of preemptive preventive medicine and the elucidation of complex systems and pre-illness states of living organisms, and will greatly contribute to the realization of healthy life expectancy. In light of this potential for development, it is essential to form a virtuous cycle of expanding the base, developing and cultivating excellent people, and further increasing the social presence of this academic field.

This program is designed to provide students with a wide range of highly specialized knowledge and skills concerning natural pharmacology through an integrated education of medicine and science. The purpose is to foster people, such as researchers, educators, engineers, or reviewers (administrative officer) who can contribute to the development of medicines and human health, as well as to the advancement of academic research in the field of pharmaceutical science by developing innovative medicines from traditional ones such as natural pharmacology based on pre-illness research.

A Doctoral degree (pharmaceutical sciences) will be awarded to persons who have completed this program.

(2) Special Measures for Educational Methods

In order to allow persons currently in employment to study without leaving their jobs, special measures can be taken in accordance with the “Special Provision on Educational Method Stipulated in Article 14 of the Standards for Establishment of Graduate Schools.”

Persons eligible for the special educational measures can attend classes and research guidance not only in the daytime, but also at night if they submit a course plan in consultation with their academic advisors. As a rule, the night classes are scheduled between 18:10 and 21:20 from Monday through Friday. Apart from this schedule, eligible students can take the classes on Saturdays or during summer holidays depending on the class subject.

Class hours are scheduled as follows.

1st Period 8:45 to 10:15	2nd Period 10:30 to 12:00	3rd Period 13:00 to 14:30
4th Period 14:45 to 16:15	5th Period 16:30 to 18:00	
6th Period 18:10 to 19:40	7th Period 19:50 to 21:20	

(3) Requirements for Completion of Courses

As a rule, students must be enrolled for at least 3 years, take the designated classes (including special research) to obtain 16 or more credits, receive the necessary research supervision, and pass the dissertation and final examination.

In addition, if a student, due to circumstances such as having an occupation, etc., puts forward a plan to take and complete a course in a planned manner for a certain period beyond the standard length of study (3 years), the plan may be approved.

(4) List of Research projects Conducted by Academic Advisors

See the attached Table I-2.

3. Graduate Program of Cognitive and Emotional Neuroscience

(1) Purpose and Degree

The purpose of this graduate program is to nurture people, in the field of brain science research, who have fundamental ability to support research and can collect information, think logically, spread information, understand theses in English, discuss research topics with others, and can also do so at academic communities in specialized research fields. Also, it provides the students with bioethics and researcher ethics to cultivate an ethical views that enable them to take appropriate actions in accordance with social norms.

A Doctoral degree (neuroscience) will be awarded to persons who have completed this program.

(2) Special Measures for Educational Methods

In order to allow persons currently in employment to study without leaving their jobs, special measures can be taken in accordance with the “Special Provision on Educational Method Stipulated in Article 14 of the Standards for Establishment of Graduate Schools.”

Persons eligible for the special educational measures can attend classes and research guidance not only in the daytime, but also at night if they submit a course plan in consultation with their academic advisors. As a rule, the night classes are scheduled between 18:10 and 21:20 from Monday through Friday. Apart from this schedule, eligible students can take the classes on Saturdays or during summer holidays depending on the class subject.

Class hours are scheduled as follows.

1st Period 8:45 to 10:15	2nd Period 10:30 to 12:00	3rd Period 13:00 to 14:30
4th Period 14:45 to 16:15	5th Period 16:30 to 18:00	
6th Period 18:10 to 19:40	7th Period 19:50 to 21:20	

(3) Requirements for Completion of Courses

As a rule, students must be enrolled for at least 3 years, take the designated classes (including special research) to obtain 16 or more credits, receive the necessary research supervision, and pass the dissertation and final examination.

In addition, if a student, due to circumstances such as having an occupation, etc., puts forward a plan to take and complete a course in a planned manner for a certain period beyond the standard length of study (3 years), the plan may be approved.

(4) List of Research projects Conducted by Academic Advisors

See the attached Table I-3.

4. Graduate Program of Medical Design

(1) Purpose and Degree

In Japan, the population aging is picking up the pace, and the need for healthcare is increasing. Especially in non-metropolitan cities such as those in Toyama Prefecture, elderly people make up a large proportion of the population, and it has become an important issue to provide them with appropriate healthcare and extend their healthy life expectancy. On the other hand, Toyama Prefecture is home to a large number of companies in the fields of precision machinery, metal and resin processing, and these companies are aiming to enter the medical and welfare equipment or related service fields that enable them to produce higher-value-added products. If the development of medical and welfare equipment and services that accurately meet domestic needs is promoted by the local businesses in Toyama Prefecture, it will contribute to not only the enhancement of the good health and welfare of the people, but also the revitalization of the economy of Japan including Toyama Prefecture. From this perspective, the Graduate Program of Medical Design is working to develop such people who can connect the medical and welfare workplaces with businesses.

- Persons who can discover the needs of the medical treatment and welfare workplaces by exchanging opinions with patients and medical welfare workers and observing the behaviors of those people.
 - Persons who can create the concept of development solutions to meet the needs.
 - Persons who can put concepts into prototypes of a company's product, etc.
 - Persons who can commercialize the prototype and introduce the product to society based on the approval by regulatory authorities such as the Pharmaceuticals and Medical Devices Agency, etc.
- A Doctoral degree (medical engineering) will be awarded to persons who have completed this program.

(2) Special Measures for Educational Methods

In order to allow persons currently in employment to study without leaving their jobs, special measures can be taken in accordance with the "Special Provision on Educational Method Stipulated in Article 14 of the Standards for Establishment of Graduate Schools."

Persons eligible for the special educational measures can attend classes and research guidance not only in the daytime, but also at night if they submit a course plan in consultation with their academic advisors. As a rule, the night classes are scheduled between 18:10 and 21:20 from Monday through Friday. Apart from this schedule, eligible students can take the classes on Saturdays or during summer holidays depending on the class subject.

Class hours are scheduled as follows.

1st Period 8:45 to 10:15	2nd Period 10:30 to 12:00	3rd Period 13:00 to 14:30
4th Period 14:45 to 16:15	5th Period 16:30 to 18:00	
6th Period 18:10 to 19:40	7th Period 19:50 to 21:20	

(3) Requirements for Completion of Courses

As a rule, students must be enrolled for at least 3 years, take the designated classes (including special research) to obtain 16 or more credits, receive the necessary research supervision, and pass the dissertation and final examination.

In addition, if a student, due to circumstances such as having an occupation, etc., puts forward a plan to take and complete a course in a planned manner for a certain period beyond the standard length of study (3 years), the plan may be approved.

(4) List of Research projects Conducted by Academic Advisors

See the attached Table I-4.

Table I-1 List of Research projects Conducted by Academic Advisors (Pharmaceutical Science and Technology)

Educational area Responsible teacher Contact address	Research contents
Biopharmaceutics Professor HOSOYA Ken-ichi (will be retired in March 2026) (Sugitani Campus) hosoyak@pha Associate Professor	<ul style="list-style-type: none"> • Blood-retinal barrier transport function analysis and drug delivery to the retina • Blood-retinal barrier cell reconstruction and analysis of interaction between cells • Elucidation of biological function and transport function in in vivo barrier tissue
Biorecognition Chemistry Professor TOMOHIRO Takenori ttomo@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Chemical biology for efficient drug discovery: target identification, visualization, utilization, and manipulation • Drug activity-based functional proteomics • Synthetic multicomponent integration strategy toward chemical biology and drug discovery
Cancer Cell Biology Professor SAKURAI Hiroaki hsakurai@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Elucidation of the molecular mechanisms of tumor progression via inflammatory signaling pathways • Study on the activation mechanisms of molecular targets in cancer therapy • Study on the intracellular signals in malignant progression of melanoma
Chemical Biology Associate Professor CHIBA Junya chiba@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Chemical biology based on synthetic chemistry, particularly three projects in artificial DNA, protein control, and saccharide recognition
Synthetic and Medicinal Chemistry Professor MATSUYA Yuji matsuya@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Development of new organic reactions for drug discovery • Search for novel seeds of new drugs and structure-activity relationship research • Synthesis and structural optimization of bioactive compounds
Molecular Cell Biology Professor SO Takanori tso@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Elucidation of the molecular mechanism of cytokine signaling regulated by TRAF5 • Development of immunotherapeutic recombinant TNF family proteins • Elucidation of the molecular pathology of X-linked adrenoleukodystrophy
Synthetic and Biomolecular Organic Chemistry Professor YAKURA Takayuki yakura@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Development of environmentally benign organic reactions • Synthesis of biologically active natural products • Pharmaceutical chemical research in bioactive substances

Educational area Responsible teacher Contact address	Research contents
Biointerface Chemistry Professor NAKANO Minoru mnakano@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Study of membrane lipid dynamics and elucidation of lipid transfer machinery • Elucidation of lipid flip-flop mechanisms • Biophysical research for interaction of amyloid beta with membranes • Structural and functional investigation and pharmaceutical application of lipid nanoparticles
Structural Biology Professor MIZUGUCHI Mineyuki mineyuki@pha (Sugitani Campus)	We determine protein conformation by NMR and X-ray crystallography to analyze functions and conduct researches on the relation between changes in protein structures and diseases by examination of abnormal structures such as amyloid fibril.
Pharmaceutical Physiology Professor SAKAI Hideki sakaih@pha (Sugitani Campus)	Physiological, biochemical and pharmacological studies on normal and cancer cells to clarify 1) interactions between drugs and ion transporting proteins interactions between drugs and ion transporting proteins such as pumps, transporters and channels 2) functional relations among ion transporting proteins 3) pathophysiological functions of ion transporting proteins
Pharmaceutical Technology Appointed Associate Professor OKADA Kotaro kokada@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Development of methods for evaluating the physical properties of pharmaceutical products using nuclear magnetic resonance relaxation
Computational Drug Design and Mathematical Medicine Professor TAKAOKA Yutaka ytakaoka@med (Sugitani Campus)	<p>Our aims to construct theoretical medicine, which has an analogous concept of theoretical physics in contrast with experimental physics. It is not easy to describe the human body, that is, a complex system, with a hard science which uses mathematical models in such field as physics or chemistry. Therefore, we utilize molecular simulation analyses to describe human body partially, and use this approach to predict the future disease treatments. It is a challenge to evolve the medical system as a science with accumulated logic for prediction from the one which emphasizes experiences and results. Our final goal is to enable a paradigm shift from "validation" to "prediction" in the system of medical science. It is important to note that we pay attention whether the mathematical model is applicable to the real world and do not aim for mathematical sophistication.</p> <p>In addition, we also study the themes for Kampo and Acupuncture, machine learning and natural language processing, and social medicine such as community medical policies, improvement of hospital function, and medical management as follows:</p> <ul style="list-style-type: none"> • Prediction of adverse drug reactions base on molecular simulation and mathematical models • Prediction of drug efficacy of molecularly target drugs for cancer based on molecular simulation and mathematical models • Design of nucleic acid drugs and evaluation of drug efficacy • Application of drug repurposing to computational drug design • Molecular simulation analysis of pathological conditions caused by genetic mutations resulting in amino acid substitutions • Molecular mechanisms of therapeutic effects of acupuncture and moxibustion • Application of AI technologies such as machine learning and natural language processing to improvement of hospital functions • Population dynamics and the future prediction of community medicine

Educational area Responsible teacher Contact address	Research contents
Biofunctional Chemistry Professor IKAWA Yoshiya yikawa@sci (Gofuku Campus)	Research interest in our group is to elucidate the molecular basis of naturally occurring RNAs with catalytic and receptor functions. Another research interest of our group lies in the artificial generation of novel RNAs and RNA-based molecular systems with through rational and evolutionary approaches.
Bioorganic Medicinal Chemistry Assistant Professor OKADA Takuya tokada@eng (Gofuku Campus)	Based on synthetic organic chemistry, we conduct research and education on the synthesis of natural organic compounds having unique structures, and on the design, synthesis, and structural optimization of small molecules with the aim of developing novel pharmaceuticals.
Engineering based on Genetic Information Professor KUROSAWA Nobuyuki kurosawa@eng (Gofuku Campus)	The research focused on the development of monoclonal antibodies for diagnosis, therapy and to analyze the functionality of biomolecules. The research focused on the production of substances through biological reaction engineering using microorganisms and the elucidation of microbial cellular mechanisms. The research focused on the production of substances by biological reaction engineering using microorganisms and the elucidation of microbial cellular mechanisms. The research is focused on the techniques of synthetic biology for the artificial reconstruction of the molecules and systems that make up life.
Biomaterial Designing and Engineering Associate Professor NAKAJI Tadashi nakaji@eng (Gofuku Campus)	The research object in our laboratory is the construction of the novel concept to developing functional biomedical devices and the creation of biomaterials using synthetic polymer, biopolymer, protein and cells. I conduct the research education to train researchers who can construct material development concepts and have the ability to advance the novel research.
Computers and Applied Chemistry Associate Professor ISHIYAMA Tatsuya ishiyama@eng (Gofuku Campus)	We construct a model of biomolecular interactions based on quantum chemical principles and analyze the molecular structure and dynamics through computer simulations. From the molecular trajectories obtained by simulations, we calculate static and dynamic physical quantities based on statistical mechanics theory to elucidate biological phenomena at the molecular level.
Biomolecular Chemistry Associate Professor SAKONO Masafumi msakono@eng (Gofuku Campus)	The purpose of this research is to elucidate the chemical and molecular aspects of biological compounds. We conduct research on improving conventional bioengineering methods and developing new biosensing methods.
Synthetic and Medicinal Chemistry Professor ABE Hitoshi abeh@eng (Gofuku Campus)	In this field, education and research is conducted on the development of efficient synthetic methods for biologically active compounds such as pharmaceuticals and various functional organic molecules.

Educational area Responsible teacher Contact address	Research contents
Pharmacology Associate Professor TAKASAKI Ichiro takasaki@eng (Gofuku Campus)	Education and research will be conducted on intractable chronic pain diseases such as postherpetic neuralgia, migraine, and cancer pain, and intractable chronic pruritic diseases such as atopic dermatitis, in order to elucidate their pathological mechanisms and to discover novel therapeutic agents.

※In addition to the above table, the following laboratories are also available.
protein metabolism

Table I-2 List of Research projects Conducted by Academic Advisors (Applied Natural Medicine)

Educational area Responsible teacher Contact address	Research contents
Neuromedical Science Professor TOHDA Chihiro chihiro@inm (Sugitani Campus)	<ul style="list-style-type: none"> • Elucidation of the molecular mechanism of restoring the neuronal network for activation of neural function. • Traditional medicine research for developing fundamental therapeutic drugs for Alzheimer's disease, spinal cord injury, degenerative cervical myelopathy, glaucoma, and disuse syndrome. • Molecular basis of crosstalk between the central nervous system and peripheral organs, which controls neural function. • Clinical study aiming to develop new botanical drugs and new usage of Kampo formulas. • Clinical study to analyze factors affecting physical and mental health and to identify biomarkers of well-being.
Host Defences Professor HAYAKAWA Yoshihiro haya@inm (Sugitani Campus)	<ul style="list-style-type: none"> • Study of NK cell biology and its roles in immunity • Role of innate immune responses in cancer progression • Immunological study of inflammatory & allergic diseases • Modulation of immune responses and immunological diseases by Kampo medicines • Study to regulate cancer progression & metastasis • Elucidation of novel actions of kampo medicines and food factors on the basis of modulation of intraluminal bile acid metabolism in gastrointestinal tract
Medicinal Resource Science Professor SHOJI Tsubasa tsubasa@inm (Sugitani Campus)	<ol style="list-style-type: none"> 1. Molecular regulation of alkaloid and terpenoid pathways in medicinal plants of the Solanaceae family. 2. Novel regulatory mechanisms of alkaloid pathways in tobacco plants. 3. Biosynthesis and accumulation of natural sweeteners. 4. Collaborate with industry partners to apply our research to the stable supply and production of herbal medicines.
Natural Products & Drug Discovery Professor MORITA Hiroyuki hmorita@inm (Sugitani Campus)	<ul style="list-style-type: none"> • Studies on biosynthesis of naturally occurring bioactive compounds • Structural basis for secondary metabolite enzymes • Enzyme engineering for novel drug development • Isolation of bioactive compounds from plants, microorganisms, and marine organisms • Investigation of Asia's natural resources not fully utilized • Discovery of natural anticancer agents from medicinal plant resources by employing a novel antiausterity screening strategy • Chemical investigation of medicinal plants and search for novel bioactive secondary metabolites • Investigation of the structure-activity relationship of the active natural compounds and their mechanism of action against cancer cell survival pathways • Discovery of metabolomic biomarkers associated with cancer cells by utilizing FT-NMR and MS strategy
Complex Biosystem Research Professor NAKAGAWA Yoshimi ynaka@inm (Sugitani Campus)	<ul style="list-style-type: none"> • Functional analysis of transcription factors that regulate glucose and lipid metabolism • Study for nutrient metabolism regulation by cell-cell and tissue-tissue interaction • Study for the molecular mechanism of improvement of lifestyle-related diseases by Wakan-yaku
Presymptomatic Disease Professor KOIZUMI Keiichi kkoizumi@inm (Sugitani Campus)	<ul style="list-style-type: none"> • Understanding of the fluctuation of biometric information and its medical applications. • Development of the glutaminase inhibitor and its medical applications. • Elucidation of the function of immunostimulatory nanoparticles and nucleotide degradant discovered by traditional Japanese medicine (Kampo formula) and their medical applications.

Educational area Responsible teacher Contact address	Research contents
Clinical Pharmaceutics Professor KATO Atsushi kato@med (Sugitani Campus)	<ul style="list-style-type: none"> • Drug design and validation of chaperone compounds for rare lysosomal diseases utilising Protein-Ligand Docking • Research on the development of functional cosmetics based on scientific evidence • Research on the isolation and purification of the iminosugars from plants and their application as pharmaceuticals. • Reverse translational research on Japanese and Chinese medicines, taking into account clinical experience.
Bioorganic Medicinal Chemistry Assistant Professor OKADA Takuya tokada@eng (Gofuku Campus)	Based on synthetic organic chemistry, we conduct research and education on the synthesis of natural organic compounds having unique structures, and on the design, synthesis, and structural optimization of small molecules with the aim of developing novel pharmaceuticals.
Biofunctional Chemistry Professor IKAWA Yoshiya yikawa@sci (Gofuku Campus)	Research interest in our group is to elucidate the molecular basis of naturally occurring RNAs with catalytic and receptor functions. Another research interest of our group lies in the artificial generation of novel RNAs and RNA-based molecular systems with through rational and evolutionary approaches.
Cell Biology Professor KARAHARA Ichirou karahara@sci (Gofuku Campus)	Research and education to understand the environmental responses of plant organs and tissues, analyzing from macroscopic to ultrastructural structures, including 3D levels
Engineering based on Genetic Information Professor KUROSAWA Nobuyuki kurosawa@eng (Gofuku Campus)	<p>The research focused on the development of monoclonal antibodies for diagnosis, therapy and to analyze the functionality of biomolecules.</p> <p>The research focused on the production of substances through biological reaction engineering using microorganisms and the elucidation of microbial cellular mechanisms.</p> <p>The research focused on the production of substances by biological reaction engineering using microorganisms and the elucidation of microbial cellular mechanisms.</p> <p>The research is focused on the techniques of synthetic biology for the artificial reconstruction of the molecules and systems that make up life.</p>
Synthetic and Medicinal Chemistry Professor ABE Hitoshi abeh@eng (Gofuku Campus)	In this field, education and research is conducted on the development of efficient synthetic methods for biologically active compounds such as pharmaceuticals and various functional organic molecules.
Pharmacology Associate Professor TAKASAKI Ichiro takasaki@eng (Gofuku Campus)	Education and research will be conducted on intractable chronic pain diseases such as postherpetic neuralgia, migraine, and cancer pain, and intractable chronic pruritic diseases such as atopic dermatitis, in order to elucidate their pathological mechanisms and to discover novel therapeutic agents.

Educational area Responsible teacher Contact address	Research contents
<p>Computational Drug Design and Mathematical Medicine</p> <p>Professor TAKAOKA Yutaka ytakaoka@med (Sugitani Campus)</p>	<p>Our aims to construct theoretical medicine, which has an analogous concept of theoretical physics in contrast with experimental physics. It is not easy to describe the human body, that is, a complex system, with a hard science which uses mathematical models in such field as physics or chemistry. Therefore, we utilize molecular simulation analyses to describe human body partially, and use this approach to predict the future disease treatments. It is a challenge to evolve the medical system as a science with accumulated logic for prediction from the one which emphasizes experiences and results. Our final goal is to enable a paradigm shift from "validation" to "prediction" in the system of medical science. It is important to note that we pay attention whether the mathematical model is applicable to the real world and do not aim for mathematical sophistication.</p> <p>In addition, we also study the themes for Kampo and Acupuncture, machine learning and natural language processing, and social medicine such as community medical policies, improvement of hospital function, and medical management as follows:</p> <ul style="list-style-type: none"> • Prediction of adverse drug reactions base on molecular simulation and mathematical models • Prediction of drug efficacy of molecularly target drugs for cancer based on molecular simulation and mathematical models • Design of nucleic acid drugs and evaluation of drug efficacy • Application of drug repurposing to computational drug design • Molecular simulation analysis of pathological conditions caused by genetic mutations resulting in amino acid substitutions • Molecular mechanisms of therapeutic effects of acupuncture and moxibustion • Application of AI technologies such as machine learning and natural language processing to improvement of hospital functions • Population dynamics and the future prediction of community medicine

Table I-3 List of Research projects Conducted by Academic Advisors (Cognitive and Emotional Neuroscience)

Educational area Responsible teacher Contact address	Research contents
Anatomy and Neuroscience Professor ICHIJO Hiroyuki ichijo@med (Sugitani Campus)	We study structure, function, and evolution of neural circuits involved in animal behavior with taking advantage of in vivo and in silico methods. <ul style="list-style-type: none"> • We investigate the structure and function of the habenula, which codes for aversive environments such as stress, in mice using anterior-posterior topography and maturation as clues. • We investigate individual differences in neural circuits that respond to stress and their functional significance in mice. • We investigate evolutionary mechanisms of innate attack and defense behaviors with using in silico individual-based models.
Molecular Brain Science Professor INOKUCHI Kaoru inokuchi@med (Sugitani Campus)	We aim to resolve mechanisms underlying memory formation and also roles played by idling brain in subconscious in mammals by making full use of molecular biology, biochemistry, cell biology, histochemistry, electrophysiology, behavioral pharmacology, optogenetics, and live-imaging. <ul style="list-style-type: none"> • Research on the physical substance of engram • Research on the dynamics of engram • Research on idling brain functions
Systems Function and Morphology Professor ITO Tetsufumi itot@med (Sugitani Campus)	We employ multidisciplinary approach to investigate functional and morphological basis of the brain which allows the coding of sensory information, especially sounds, and the sensory perception. Followings are the examples of the approach. (1) By combining neurophysiological and neuroanatomical techniques, the organization of neuronal circuitry which enable a specific function will be clarified. (2) We will identify functional, morphological, and molecular details of neuronal cell types which constitute a neuronal circuitry to establish functional standpoint of each cell type. (3) By comparing non-model animals which have unique specializations for sensory behaviors with model animals, details of the functional organization of sensory neuronal circuitry and its evolution will be clarified. (4) By manipulating specific elements of a given neuronal circuitry, relationship between changes of activation patterns of the neuronal circuit and behavioral changes will be clarified.
Molecular Neuroscience Associate Professor YOSHIDA Tomoyuki toyoshid@med (Sugitani Campus)	<ul style="list-style-type: none"> • Research on molecular basis of higher brain functions such as cognition, emotion, and sociality with generation of novel genetically modified mouse models. • Research on the development of novel molecular imaging methods in the brain. • Research on molecular basis of neuro-immune interactions. • Research on molecular mechanisms of central synapse formation • Research on pathogenic mechanisms of neurodevelopmental disorders
Neuropsychiatry Professor TAKAHASHI Tsutomu tsutomu@med (Sugitani Campus)	<ul style="list-style-type: none"> • Brain imaging studies on pathophysiology of schizophrenia and their application to objective diagnosis of psychotic disorders • Neurophysiological studies in schizophrenia and related disorders • Pharmacotherapy to improve cognitive dysfunction in schizophrenia • Mechanisms of symptom development and preventive strategies for schizophrenia • Mechanisms of brain maturation, personality development, and sociality in adolescence • Early diagnosis and intervention for dementia
Clinical and Cognitive Neuroscience Professor HAKAMATA Yuko hakamata@med (Sugitani Campus)	We aim at understanding the neurobiological mechanisms underlying emotional dysregulation associated with distorted cognitions, and using this understanding to develop novel, effective psychological interventions for anxiety and depressive disorders. We address these questions from the integrative view including psychology, cognitive behavioral science, endocrinology, immunology, genetics, and neuroscience. Lab members are expected to be engaged in research related to at least one of the following projects: 1) to examine the neurobiological mechanisms of biased cognitions towards emotional information; 2) to evaluate the efficacy of cognitive interventions including cognitive bias modification, cognitive training, and cognitive behavioral therapy for clinical and non-clinical population at high risk; and 3) to develop program tools to get the interventions easily accessible and doable. Participation in more than one project is encouraged.

Educational area Responsible teacher Contact address	Research contents
Behavioral Physiology Professor TAKAO Keizo takao@cts (Sugitani Campus)	<ul style="list-style-type: none"> • Investigation of the physiological basis of learning, memory, emotion, and cognition • Exploration and evaluation of mouse models of neuropsychiatric disorders using behavioral analyses • Elucidation of the pathophysiology and development of therapies for neuropsychiatric disorders using mouse models • Development of new genetically engineered mice • Development of new reproductive technologies
System Emotional Science Professor NISHIMARU Hiroshi nishimar@med (Sugitani Campus)	<ul style="list-style-type: none"> • Neural mechanisms of emotion, learning/memory, and behavioral expression in the limbic system • Neural mechanisms of social cognition and non-verbal communication • Non-invasive functional brain mapping of human higher brain functions • Central control of autonomic nervous functions • Neural mechanism of sensory perception and cognition • Neuronal mechanism of sensorimotor integration underlying emotional behavior • Neuronal mechanism of value-based decision-making • Development and application of machine-learning based behavior analysis methods for animal models of neuropsychiatric disorders.
Pathology and pathologyAssociate Professor YAMAMOTO Seiji seiyama@med (Sugitani Campus)	<ul style="list-style-type: none"> • We promote a research to elucidate the function of platelet-derived growth factor receptor (PDGFR) in mice, especially neural tissue, neural stem cells, and blood vessels. • We also conduct in vitro studies using cells isolated from such mice to elucidate that the PDGFR signal is involved in the regeneration and functional recovery of several organs and tissues. • We create novel genetically engineered animals, such as knockout mice, to study intractable human diseases, to explore and identify factors involved in disease progression, and promote research to develop novel treatment methods for patients.
Computational Drug Design and Mathematical Medicine Professor TAKAOKA Yutaka ytakaoka@med (Sugitani Campus)	<p>Our aims to construct theoretical medicine, which has an analogous concept of theoretical physics in contrast with experimental physics. It is not easy to describe the human body, that is, a complex system, with a hard science which uses mathematical models in such field as physics or chemistry. Therefore, we utilize molecular simulation analyses to describe human body partially, and use this approach to predict the future disease treatments. It is a challenge to evolve the medical system as a science with accumulated logic for prediction from the one which emphasizes experiences and results. Our final goal is to enable a paradigm shift from "validation" to "prediction" in the system of medical science. It is important to note that we pay attention whether the mathematical model is applicable to the real world and do not aim for mathematical sophistication.</p> <p>In addition, we also study the themes for Kampo and Acupuncture, machine learning and natural language processing, and social medicine such as community medical policies, improvement of hospital function, and medical management as follows:</p> <ul style="list-style-type: none"> • Prediction of adverse drug reactions base on molecular simulation and mathematical models • Prediction of drug efficacy of molecularly target drugs for cancer based on molecular simulation and mathematical models • Design of nucleic acid drugs and evaluation of drug efficacy • Application of drug repurposing to computational drug design • Molecular simulation analysis of pathological conditions caused by genetic mutations resulting in amino acid substitutions • Molecular mechanisms of therapeutic effects of acupuncture and moxibustion • Application of AI technologies such as machine learning and natural language processing to improvement of hospital functions • Population dynamics and the future prediction of community medicine

Educational area Responsible teacher Contact address	Research contents
Applied Pharmacology Professor KUME Toshiaki tkume@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Elucidation of pathogenesis mechanisms of neurodegenerative diseases, pruritus, pain and dysesthesia and search and development of preventive and therapeutic drugs for these disorders. • Establishment of novel animal models that exhibit the brain diseases and the sensory symptoms, such as itch, pain and dysesthesia • Search for cytoprotective substances derived from foods and plants
Molecular Neurobiology Associate Professor TABUCHI Akiko atabuchi@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Elucidation of the molecular mechanisms underlying regulation of neuronal function and plasticity by gene expression and cellular communication between synapses and a nucleus • Studies on neurological disorders caused by dysfunction of transcription factors and synaptic molecules • Basic studies on transcription factors and synaptic molecules toward drug development targeted for neurological disorders
Pharmaceutical Therapy and Neuropharmacology Professor NITTA Atsumi nitta@pha (Sugitani Campus)	<ul style="list-style-type: none"> • Behavioral pharmacological, molecular biological and cell biological studies to clarify the function of the novel molecules for the psychiatric diseases • Study for the clarification of the mechanisms of establishment of addiction of nicotine, THC and methamphetamine • Establishment of addictive model mice • Pharmaceutical studies and pharmaceutical educational methods
Regulatory Biology Professor MATSUDA Kouhei kmatsuda@sci (Gofuku Campus)	Rapid progress has been made in the functional analysis of various substances responsible for signaling pathway, such as physiologically active substances and their receptors, in the nervous, endocrine, and immune systems. I will conduct education and research on the modes and molecular basis of intercellular and intracellular transduction mechanisms in the central and peripheral regions.
Artif icial Intelligence Professor Shangce Gao gaosc@eng (Gofuku Campus)	We engage in education and research focused on the development, analysis, and evaluation of various machine learning techniques. This includes artificial neural networks inspired by human brain mechanisms, deep learning where artificial intelligence learns autonomously, swarm intelligence approaches like ant colony optimization, error backpropagation methods, genetic algorithms, and evolutionary strategies.

※In addition to the above table, the following laboratories are also available.

Integrative Neuroscience

Table I-4 List of Research projects Conducted by Academic Advisors (Medical Design)

<p>Educational area Responsible teacher Contact address</p>	<p>Research contents</p>
<p>Biological Information Processing</p> <p>Professor TABATA Toshihide ttabata@eng (Gofuku Campus)</p>	<p>We focus on both basic and applied neuroscience of learning and memory. We investigate cellular and molecular mechanisms underlying learning and memory using advanced methods of electrophysiology, electrochemistry, fluorescence microscopy, and behavior measurement. Based on the results of these studies, we devise brain-tech gadgets such as a mobile device for episodic memory performance training.</p>
<p>Computational Biophotonics</p> <p>Professor KATAGIRI Takashi katagiri@eng (Gofuku Campus)</p>	<p>We conduct research and education aimed at creating basic principles of next-generation medical measurement and diagnostic technology and building an academic system by combining photon science, laser spectroscopy, optical communication technology and information science.</p>
<p>Mechanical Information and Instrumentation</p> <p>Professor SASAKI Tohru tsasaki@eng (Gofuku Campus)</p>	<p>We conduct research to make complex systems highly functional and multifunctional, to develop elements and systems that constitute efficient measurement and control systems, and to establish theories.</p>
<p>Human-Computer Interaction</p> <p>Professor NOZAWA Takayuki nozawa@eng (Gofuku Campus)</p>	<p>We conduct education and research on the analysis and evaluation of human cognition and social interaction, and on the design of information technologies that support people's intellectual activities in real life. For this purpose, we use a combination of multimodal measurement of brain, psychological, physiological, and behavioral activities with data science and artificial intelligence techniques.</p>
<p>Dynamical Systems and Robotics</p> <p>Associate Professor TODA Hideki toda@eng (Gofuku Campus)</p>	<p>We will establish various theories and technologies for the creation and application processes of excellent new materials and functional materials, and collaborate with molecular functional materials. Furthermore, we will conduct educational research on the industrial application of molding technology for metals and new materials.</p>
<p>Biomedical Photonics</p> <p>Associate Professor OSHIMA Yusuke oshima@eng (Gofuku Campus)</p>	<p>We conduct research on advanced optical devices such as novel lasers or microscopy techniques, diagnosis, photodynamic therapy, image information processing, and AI technology for practical use in the life science and medical fields focusing on the interaction of light and living bodies and its mechanisms and working with engineering researchers, technicians, biologists, and clinicians in a cross-disciplinary approach.</p>
<p>Medical Image Analysis, Bioinformatics</p> <p>Associate Professor TERABAYASHI Kenji tera@eng (Gofuku Campus)</p>	<ul style="list-style-type: none"> • Image understanding of cells in blood for cancer patients • Analysis of CT data for fracture fixation • Understanding central nervous system disease based on proteomics

<p>Educational area Responsible teacher Contact address</p>	<p>Research contents</p>
<p>Medical Information Sensing</p> <p>Professor HASEGAWA Hideyuki hasegawa@eng (Gofuku Campus)</p> <p>Associate Professor NAGAOKA Ryo nryo@eng (Gofuku Campus)</p>	<p>We conduct education and research on the theory and applications of noninvasive ultrasonic imaging and sensing of morphological and functional information of biological bodies. In particular, we develop advanced signal- and image-processing techniques, such as ultrasonic beamforming, target motion estimation, and tissue viscoelasticity estimation, for ultrasonic measurements.</p>
<p>Brain and Neural Systems Engineering</p> <p>Professor KAWAHARA Shigenori kawahara@eng (Gofuku Campus)</p>	<p>By using relatively simple invertebrate neural networks, we conduct education and research on phase-dependent processing of sensory information in synchronous neural activities and dynamic interaction among the nonlinear oscillators in the brain as well as between the brain and rhythmic sensory inputs.</p>
<p>Materials Plasticity Engineering</p> <p>Professor AIDA Tetsuo aida@sus (Gofuku Campus)</p>	<p>We will establish various theories and technologies for the creation and application processes of excellent new materials and functional materials, and collaborate with molecular functional materials. Furthermore, we will conduct educational research on the industrial application of molding technology for metals and new materials.</p>
<p>Cardiology and Nephrology</p> <p>Professor KINUGAWA Koichiro kinugawa@med (Sugitani Campus)</p>	<ul style="list-style-type: none"> • Establishment of optimization protocol for the treatment of heart failure using various biomarkers • Development of non-invasive home tele-monitoring system in order to minimization of re-hospitalization by heart failure • Mechanisms of sympathetic nerve inhibition by non-pharmacological therapy for heart failure • Introduction of novel staging of heart failure by cardiopulmonary function • Development of novel strategy for heart failure to alter cardiac-specific gene expression • Investigation of relationship between beta-adrenergic receptors and reversibility of myocardial remodeling • Exploitation of factors to determine the viability of renal collecting tubules • Effect of renal denervation on autonomic disorders in heart failure model • Mechanisms of onset of atrial fibrillation
<p>Urology</p> <p>Professor KITAMURA Hiroshi hkitamur@med (Sugitani Campus)</p>	<ul style="list-style-type: none"> • Biomarker research on urological cancers • Development of immunotherapy for urological cancers • Cancer stem cell research on urologic cancers • Growth factor research on prostate cancer • Basic research on impaired spermatogenesis • Research on vascular epithelial cells in erectile dysfunction • Research on Heat Shock Protein in acute/chronic rejection after renal transplantation

Educational area Responsible teacher Contact address	Research contents
Cardiothoracic Surgery Professor TSUCHIYA Tomoshi ytakaoka@med (Sugitani Campus)	Through our transplantation and tissue engineering research, we have established a network with domestic and international research institutions to promote human exchange, joint research, and study abroad programs. (Collaborating institutions: Department of Biomedical Engineering at Yale University, Cincinnati University, RIKEN, Institute of Quantum Beam Science, Nagasaki University, Nagoya University, Department of Surgery for Organ Replacement and Xenotransplantation at Kagoshima University) The following is a list of major research projects. (Ref ; https://www.organengineering.com/) <ul style="list-style-type: none"> • Research on organ engineering using decellularized tissue skeletons • Development of disease models using regenerated organs • Development of disease models using lung organoids • Induction of immune tolerance by cell therapy in lung transplantation models ~Cell therapy using regulatory T cells (Treg cells) ~Cell therapy using mesenchymal stem cells • Research on development and disease control of lung mucinous adenocarcinoma • Prediction of pleural invasion by intraoperative imaging using artificial intelligence
Hematology Professor SATO Tsutomu tsutomus@med (Sugitani Campus)	<ul style="list-style-type: none"> • Development of new drugs for multiple myeloma • Exploratory research into molecularly-targeted therapy for T-cell lymphoma • Prevention of bone mineral density reduction during lymphoma therapy • Effects of osteoporosis on hematopoietic stem cells
Comprehensive Oral Sciences Professor YAMADA Shin-ichi shinshin@med	<ul style="list-style-type: none"> • Research on pathological diagnosis and image diagnosis of oral diseases using artificial intelligence. • Basic research on anticancer drug sensitivity using human oral squamous cell carcinoma cell lines. • Basic research on cancer proliferation and invasion mechanisms using human oral squamous cell carcinoma cells. • Immunological analysis using mouse oral squamous cell carcinoma model. • Research on prevention of oral mucositis using human fibroblasts. • Research on the development of minimally invasive oral cancer treatment. • Research on the effects of oral bacteria on systemic diseases.

Educational area Responsible teacher Contact address	Research contents
<p>Computational Drug Design and Mathematical Medicine</p> <p>Professor TAKAOKA Yutaka ytakaoka@med (Sugitani Campus)</p>	<p>Our aims to construct theoretical medicine, which has an analogous concept of theoretical physics in contrast with experimental physics. It is not easy to describe the human body, that is, a complex system, with a hard science which uses mathematical models in such field as physics or chemistry. Therefore, we utilize molecular simulation analyses to describe human body partially, and use this approach to predict the future disease treatments. It is a challenge to evolve the medical system as a science with accumulated logic for prediction from the one which emphasizes experiences and results. Our final goal is to enable a paradigm shift from "validation" to "prediction" in the system of medical science. It is important to note that we pay attention whether the mathematical model is applicable to the real world and do not aim for mathematical sophistication.</p> <p>In addition, we also study the themes for Kampo and Acupuncture, machine learning and natural language processing, and social medicine such as community medical policies, improvement of hospital function, and medical management as follows:</p> <ul style="list-style-type: none"> • Prediction of adverse drug reactions base on molecular simulation and mathematical models • Prediction of drug efficacy of molecularly target drugs for cancer based on molecular simulation and mathematical models • Design of nucleic acid drugs and evaluation of drug efficacy • Application of drug repurposing to computational drug design • Molecular simulation analysis of pathological conditions caused by genetic mutations resulting in amino acid substitutions • Molecular mechanisms of therapeutic effects of acupuncture and moxibustion • Application of AI technologies such as machine learning and natural language processing to improvement of hospital functions • Population dynamics and the future prediction of community medicine

※In addition to the above table, the following laboratories are also available. Biomechanics

- The (Gofuku Campus), (Sugitani Campus) and (Takaoka Campus) in the contact information indicate the campus where the teacher's laboratory is located.
- A portion of email address is listed in the contact address. Please use it for preliminary consultations with the relevant academic advisor in the field of your choice. Please add ".u-toyama.ac.jp" after the address.
Example) abc@def → abc@def.u-toyama.ac.jp