In the Graduate School of Biomedical Science and Engineering, we have established two courses to meet student interests and the needs of their future careers: The Quantum Biomedical Science and Engineering Course to acquire the in-depth comprehensive knowledge required to apply the basic radiation physics developed through quantum mechanics to medical science, and the Molecular Biomedical Science and Engineering Course to acquire the in-depth knowledge required to apply science and engineering to specific molecules in medical science. These courses are offered with unique curricula exclusive to our school.

Support System for International Students
- At the Graduate School of Biomedical Science and Engineering, courses are provided in English in principle if international students attend the courses. Students can complete their programs only in English.
- Special selection for international students is conducted using Skype for those who have difficulty in visiting Japan for an entrance exam. (See p.9)

Global Perspectives
- World leading intensive lectures for education in medical physics and radiation biology in cooperation with internationally renowned universities and other relevant organizations

Developing Specialized Personnel with High Ethical Standards
- The subjects we offer will develop high ethical standards and provide the ethical knowledge required, including the basics of medical ethics, guidelines for clinical research and conflicts of interest, knowledge which is required for “research related to human beings” when conducting research and development of medical technology and medical equipment.

Methods of Education and Research for Career Development
- Customized opportunities for all students to be provided with individualized research support through the collaboration of the staff of the sciences, engineering, and medical faculties
- Hokkaido University Hospital in-house training in subjects for medical professionals and medical engineers who will play active roles in medical settings as medical physicists
- Subject curricula designed to train technical experts able to conduct research and development of medical equipment, including the quality control aspects, through actual innovative development of medical equipment in collaboration with industry

From Physics to Medicine
When I was an undergraduate, my instructor in charge of career options told me about a student who had majored in physics and who had entered the medical field. This made me interested in medicine, and I started to collect information about that. As a result, I decided to enroll in the master’s program of the Department of Cosmoscience of Hokkaido University Graduate School of Science. It was hard for me to keep up with others because the lectures of medical physical courses were mostly interdisciplinary, medicine, engineering and science. However, the topics were new and interesting. I came to realize that the human body is also an object to look at scientifically and I enjoyed learning about its basic mechanisms although the lectures of the medical field were difficult to follow due to my lack of basic knowledge. My research topic in the master’s program was the measurement of cross-sections of radionuclides for medical use. It is very important to know basic data of medical radionuclides accurately because the values are used in highly precise simulations in the search for methods to generate nuclides. Now I wish to be involved in a project to realize better radiation therapies as a medical physicist.

Message from a Student
Moemi Hanada

The program is divided into three years: the first year is focused on the development of students' research skills and abilities, the second year is centered on the development of students' abilities to conduct research, and the third year is dedicated to the completion of the dissertation.