

Curriculum Policy

Doctor Course of Pharmacy

This educational program aims at training specialists who can contribute to research in basic pharmaceutical science and clinical pharmacy. This program comprises two research-intensive courses, the “Basic Pharmaceutical Science Course” and the “Clinical Pharmacy Course.” In these two courses, advanced technical knowledge and research skills for a variety of academic fields in basic and clinical pharmaceutical science are covered through interdisciplinary pharmaceutical seminars, Seminars on Current Topics and the Pharmaceutical Research Seminar. The curriculum is designed to train globally active pharmacists and highly motivated researchers in basic or clinical pharmaceutical science. Additionally, our program provide educational courses for Pharmaceutical Researchers Specializing in Cancer Treatment and Pharmacists Specializing in Personalized Cancer Pharmacotherapy in collaboration with medical universities. The educational course for Pharmaceutical Researchers Specializing in Cancer Treatment is to train researchers who are able to contribute to cutting-edge cancer research with deep knowledge and clinical research experience in pharmaceutical cancer treatment. The course for Pharmacists Specializing in Personalized Cancer Pharmacotherapy is to train pharmacists with cutting-edge knowledges in academic fields in variety for cancer pharmacotherapy and abilities to perform the basic and the clinical researches, which enable to pursue personalized medical care according to life stage of a patient.

1. The aim of the courses is to educate established and independent researchers in the fields of basic pharmaceutical science and clinical pharmacy by conducting their own research and completing a doctoral dissertation. Accordingly, the program is organized for students to improve themselves and attain an appropriate level of proficiency in scientific presentations and discussions, in practical English, and in research ethics by carrying out pharmaceutical research in their fields of interest through the interdisciplinary pharmaceutical seminars, Seminars on Current Topics and the Pharmaceutical Research Seminar.
2. Advanced lectures are to be held in an omnibus fashion in cooperation with undergraduate courses as transdisciplinary classes that cover multiple academic fields. This system has been organized for the doctoral course, which is set above the six-year undergraduate education in the faculty of pharmacy to effectively cultivate advanced scientific achievements and scholarship in a variety of pharmaceutical fields. Furthermore, in case a student requires knowledge from outside the area of his or her expertise, classes have been prepared in the Basic Pharmacy Course to teach fundamentals and applications. These classes can be taken during any year of graduate school from the first to the fourth.

3. The “Basic Pharmaceutical Science Course” trains globally active researchers in scientific knowledge and the ability to perform research in the fields of pharmaceutical science. The students are expected to conduct research in the laboratory and to cultivate high research abilities in discovering and solving problems.
4. The “Clinical Pharmacy Course” regards training clinical pharmacists and clinical pharmaceutical researchers as its most important objective and provides practical education in actual medical settings through cooperation with the pharmaceutical division of a hospital. Students in the doctoral course are expected to acquire specialized and obligatory knowledge in advanced lectures. Simultaneously, they are expected to serve as hospital pharmacists to contribute to medical teams in a hospital. Laboratory activities to perform translational collaborative research in clinical pharmacy targeted at a specific disease, which bridges basic and clinical research, are also required.
5. Regarding a research topic, an advisory system has been established by laboratories in medicinal science, pharmaceutical analytical science, pharmaceutical life science, pharmaceutical pathophysiological science, pharmaceutical clinical science, and pharmaceutical education. Students can choose one of the research groups from the departments above. Laboratories engaged in education for the doctoral course in Pharmaceutical Science collaborate for the smooth and effective progress of research.
6. In the “Training Course for Pharmaceutical Researchers Specializing in Pharmaceutical Cancer Treatment”, students are required to take certain designated advanced subjects (six credits) in which they acquire in-depth knowledge of cancer and pharmaceutical cancer treatments. As a general rule, students are to participate in the cooperative educational program between graduate schools and hospitals for one to two years. During this period, the ability to conduct clinical pharmaceutical research is cultivated through translational research collaboration between the involved laboratories, which can also be the bridge between basic research specializing in pharmacy and clinical medical research.
7. In the “Pharmacists Specializing in Personalized Cancer Pharmacotherapy”, students are required to take certain designated advanced subjects (six credits) in which they acquire in-depth knowledge of cancer and pharmaceutical cancer treatments. For this purpose, students are to participate in an educational program, either for home medical care or of the graduate school – hospital cooperation, in a period set by the president. Students must acquire an ability to perform a leading-edge research on home medical care with taking leadership on cancer pharmacotherapy in the community-based integrated care systems.

8. In the laboratory, progress reports and participation in research discussions are required. In addition, all students are asked to participate in the journal club and textbook reading in turn. These activities strengthen research capability, cultivate the “research mind,” and inculcate skills in presentation, discussion, and English. These seminars and progress reports are required (four credits) for the Pharmaceutical Research Seminar..

9. The Seminar on Current Topics (required; two credits) is usually held in the summer of the third year and is supported by all of the laboratories in the graduate school. One must conduct a “Review” of one’s topic and present it to the attendees with time provided for “questions and answers.” The purpose of this event is to raise abilities in presentation, discussion, and writing research papers.

Pre-Doctoral Course in Pharmaceutical Sciences

This course, the master's course in Pharmaceutical Sciences, builds on the four-year undergraduate course. Basic and cutting-edge knowledge and techniques necessary to perform original research in pharmaceutical science are expected to be acquired. This course is intended for practice and to set the foundation for continuously conducting research in the doctoral course. The education in this course comprises advanced lectures, the Seminar on Special Topics, the Seminar in Pharmaceutical Sciences, and Research Work in Pharmaceutical Sciences.

1. Basic transdisciplinary programs that cover a number of specialized fields are established as advanced course subjects to cultivate scientific scholarship in a variety of specializations.
2. From the second semester of the first year, the student is expected to put in great effort and concentrate on research activities to become an independent researcher, ending in completing a thesis for the master's degree.
3. The research is performed in a laboratory to which the student is assigned in one of the program's divisions, such as the Division of Medicinal Chemical Sciences, Division of Analytical and Physical Sciences, Division of Biological Sciences, Division of Pathological Sciences, Division of Clinical Pharmaceutical Sciences, and Division of Pharmacy Education.
4. In the laboratory, progress reports and participation in research discussions are required. In addition, all students are asked to participate in the journal club and textbook reading in turn. These activities strengthen research capabilities and, skills in presentation, discussion, and English, and also cultivate the "research mind." These seminars and progress reports are required (four credits) for the Seminar in Pharmaceutical Science.
5. The Seminar on Special Topics (required; two credits) is usually held in the summer of the second year and is supported by all of the laboratories in the graduate school. One must construct a "Review" of one's topic and present it to the attendees with time provided for "questions and answers." The purpose of this event is to raise abilities in presentation, discussion, and writing research papers.

Doctoral Course in Pharmaceutical Sciences

This course is established to train highly motivated and internationally active researchers in the field of pharmaceutical sciences. The student is expected to cultivate the ability to conduct original research and scholarship in a basic pharmaceutical field, such as drug development or life science, through Research Work in Pharmaceutical Science, the Seminar on Current Topics, and the Pharmaceutical Research Seminar.

1. Upon joining the graduate school, the student is expected to focus on conducting laboratory research. The course aims at training independent researchers who will complete a doctoral thesis and who are expected to raise their abilities in scientific presentation and discussion through laboratory research, the Seminar on Current Topics, and the Pharmaceutical Research Seminar. Students also must take an advanced lecture as a compulsory subject to raise perspectives on research ethics.
2. Research Work in Pharmaceutical Science is performed in a laboratory to which the student is assigned in one of the following departments: The Department of Pharmaceutical Chemistry, Department of Medicinal Chemistry, Department of Pharmacognosy, Department of Biophysical Chemistry, and Department of Public Health. Furthermore, a system has been organized for collaborative research and education with laboratories belonging to the Doctoral Course in Pharmacy.
3. In the laboratory, progress reports and participation in research discussions are required. In addition, all students are asked to participate in the journal club and textbook reading in turn. These activities strengthen research capabilities and skills in presentation, discussion, and English, and also cultivate the “research mind.” These seminars and progress reports are required (four credits) in the Pharmaceutical Research Seminar.
4. The Seminar on Current Topics (required; two credits) is usually held in the summer of the second year and is supported by all of the laboratories in the graduate school. One must conduct a “Review” of one’s topic and present it to the attendees with time provided for “questions and answers.” The purpose of this event is to raise abilities in presentation, discussion, and writing research papers.