

School of Pharmaceutical Sciences

Educational Objectives

In line with the Educational Objectives of the University of Osaka, the School of Pharmaceutical Sciences aims to develop individuals who can contribute to the health of humanity and prosperity of society by discovering drugs, establishing appropriate methods of drug use, and ensuring the safety of the living environment.

To help students develop their individual career paths, the School of Pharmaceutical Sciences offers three courses – Advanced Research course, Pharm. D (the University of Osaka) course, and Pharmaceutical Research course – to train pharmaceutical professionals who can meet the needs of society with the following skills and abilities.

Advanced Research course

This course develops pharmacist-scientists with the ability to play a leading role internationally in pharmaceutical and medical research, pharmaceutical administration and healthcare.

Pharm. D (the University of Osaka) course

This course develops research-oriented leading pharmacists who can play a central role at universities, government agencies and medical institutions with clinical and research skills in drug discovery.

Pharmaceutical Research course

This course develops pharmacist/drug-discovery-researchers who can play a leading role at universities, public research institutions and pharmaceutical companies with the ability to conduct basic research based on one's clinical and medical experience and applied research using one's expertise for drug discovery, etc.

Advanced specialized knowledge and outstanding academic expertise

Acquire diverse knowledge and skills in life sciences, drug discovery sciences, social and environmental pharmacy, and medical and clinical pharmacy, and develop the competency and ability to contribute to problem-solving by integrating such knowledge and skills.

Broad-based knowledge and critical thinking

Acquire knowledge in a wide range of fields in addition to pharmaceutical sciences and develop the competency and ability to think from multifaceted perspectives.

Develop a rich sense of humanity, a firm commitment to contributing to the health of humanity, and a strong sense of ethics required for medical professionals.

International mindset

Develop the competency and ability to understand different cultures and societies from global and comprehensive perspectives.

Develop the competency and ability to play an active role internationally in drug discovery, advanced healthcare, public hygiene and other related fields.

Design prowess

Develop the competency and ability to delve into regional and global pharmaceutical problems affecting human health, healthcare and welfare.

Develop the competency and ability to play a leading role in finding solutions to pharmaceutical problems in cooperation with various stakeholders.

Degree Awarding Policy (Diploma Policy)

Under the Diploma Policy of the University of Osaka, the School of Pharmaceutical Sciences offers three courses at the six-year Department of Pharmacy to develop individuals who can contribute to the health of humanity and prosperity of society by discovering drugs, establishing appropriate methods of drug use, and ensuring the safety of the living environment to meet the respective educational objectives. To achieve this aim, the School of Pharmaceutical Sciences confers a Bachelor's Degree in Pharmacy on individuals who have been enrolled in the School of Pharmaceutical Sciences for the period specified in the Undergraduate School Regulations; acquired "advanced specialized knowledge and outstanding academic expertise," "broad-based knowledge and critical thinking," "an international mindset" and "design prowess" as stated in the following learning goals; and earned the stipulated number of credits.

Advanced specialized knowledge and outstanding academic expertise

1. Acquire diverse knowledge and skills in life sciences, drug discovery sciences, social and environmental pharmacy, and medical and clinical pharmacy, and develop the ability to contribute to problem-solving by integrating such knowledge and skills.

Broad-based knowledge and critical thinking

2. Acquire knowledge in a wide range of fields in addition to pharmaceutical sciences and develop the ability to think from multifaceted perspectives.
3. Develop a rich sense of humanity, a firm commitment to contributing to the health of humanity, and a strong sense of ethics required for medical professionals.

International mindset

4. Develop the ability to understand different cultures and societies from global and comprehensive perspectives.
5. Develop the ability to play an active role internationally in drug discovery, advanced healthcare, public hygiene and other related fields.

Design prowess

6. Develop the ability to delve into regional and global pharmaceutical problems affecting human health, healthcare and welfare.
7. Develop the ability to play a leading role in finding solutions to pharmaceutical problems in cooperation with various stakeholders.

Teaching and Learning Policy (Curriculum Policy)

In line with the Curriculum Policy of the University of Osaka, the School of Pharmaceutical Sciences designs a curriculum that systematically provides subjects in general and Academic Major education to acquire: advanced specialized knowledge and outstanding academic expertise; broad-based knowledge and critical thinking; an international mindset; and design prowess, as stated in the Diploma Policy, combining lectures, seminars, basic and practical training sessions and long-term research on assigned topics as appropriate.

Principles of Curriculum Design

The curriculum of the School of Pharmaceutical Sciences systematically provides subjects that are designed to guide students to achieve learning goals in terms of advanced specialized knowledge and outstanding academic expertise, broad-based knowledge and critical thinking, an international mindset, and design prowess as stated in the Diploma Policy.

To be specific, students study professional basic education subjects and basic pharmaceutical subject sets (physics/information, chemistry, hygiene/analysis, biology/biosciences) which are systematically provided as part of general and Academic Major education, and medical and clinical subjects that are taught in the form of lectures, seminars and laboratory work, as well as long-term research on assigned topics and practical training in order to acquire diverse knowledge and skills in pharmaceutical sciences as part of advanced specialized knowledge and outstanding academic expertise.

Students acquire diverse knowledge and the ability to think from multifaceted perspectives as part of broad-based knowledge and critical thinking through lectures and seminars that are systematically provided in general and Academic Major education as stated above. Students develop a rich sense of humanity, a firm commitment to contributing to the health of humanity and an advanced sense of ethics by studying lecture- and seminar-based humanism education subjects offered as medical and clinical subjects in specialized pharmaceutical education and through studies prior to and during practical training.

Students acquire an international mindset backed by the competency and ability to understand different cultures and societies from a comprehensive perspective and play an active role internationally by studying lecture- and seminar-based subjects designated by the School of Pharmaceutical Sciences as advanced Liberal Arts and Global Literacy education subjects, and also by participating in overseas training.

Students develop design prowess backed by the competency and ability to delve into regional and global pharmaceutical problems affecting human health, healthcare and welfare, and play a leading role in finding solutions to such problems in cooperation with various stakeholders by studying lecture- and seminar-based subjects in Academic Major education and through studies prior to and during practical training and long-term research on assigned topics.

The School of Pharmaceutical Sciences offers the Advanced Research course, Pharm. D (the University of Osaka) course, and Pharmaceutical Research course. Students study in one of these courses from the third year. In each of these courses, students study required subjects offered in the curriculum stated above to acquire advanced specialized knowledge and outstanding academic expertise, broad-based knowledge and critical thinking, an international mindset and design prowess, which are critical for pharmaceutical studies. In addition, a diverse range of elective subjects are offered in the six-year Academic Major education. Students in each course are guided to study these subjects at appropriate stages of their studies to achieve the capacity-building goals specific to the course.

Contents and Methods of Education

At the School of Pharmaceutical Sciences, the problem-based learning (PBL), active learning and self-directed learning methods are used in lectures, seminars, practical training sessions, laboratory works, workshops and long-term research on assigned topics to guide students to achieve the learning goals to acquire: advanced specialized knowledge and outstanding academic expertise; broad-based knowledge and critical thinking; an international mindset; and design prowess. Some subjects are taught by combining these methods as appropriate.

Academic Performance Evaluation Method

<Evaluation of Achievement of Learning Goals>

The School of Pharmaceutical Sciences has established methods and criteria to strictly and fairly assess the level of achievement of learning goals for all the subjects. These methods and criteria are shown in the syllabuses of the subjects and made known to students. Some seminar-based and practical-training-based subjects are designed to develop undergraduate-level competencies and skills, in addition to acquiring advanced knowledge, including thinking, judgment and expression skills, and cooperative learning attitude. Academic performance in these subjects, as well as humanism education subjects and long-term research on assigned topics, is fairly evaluated by assessing the level of achievement of learning goals and the competencies and skills specified in the educational goals of the subjects.

<How to evaluate the learning outcomes of the study>

For the evaluation of the qualities and abilities (1-7) that students should acquire by the time of graduation as stated in the Diploma Policy (The evaluation of learning outcomes),

- (1) As the educational curriculum developed based on the above curriculum policy progresses, appropriate subjects will be set at appropriate times for each of the qualities and abilities, and an evaluation (performance evaluation) will be conducted to measure the level of achievement of the relevant qualities and abilities, in addition to the evaluation of the achievement level of the learning goals of the subject concerned.

In principle, reports, rubrics, etc. will be used for evaluation, and evaluation criteria will be set for each quality and ability. For rubric evaluation, self-evaluation by students is also conducted. The results of these evaluations will be fed back to individual students as formative evaluations, and the effectiveness of learning will be verified, and the results will be used to improve and enhance the educational program.

- (2) Upon completion of Basic Laboratory Experiments II, Clinical Pharmacy 2, Fundamentals of Pharmacy Practice and Long-term Project Study, an evaluation (performance evaluation) is conducted to measure the level of achievement of the relevant qualities and abilities, in addition to the evaluation of the achievement level of the learning goals of the subject concerned.

In principle, reports, presentations, rubrics, etc. will be used for evaluation, and evaluation criteria will be set for each quality and ability. For rubric evaluation, self-evaluation by students is also conducted. The results of the evaluation of these qualities and abilities will be used as a summative evaluation, and will be used for graduation authorization separately from the fulfillment of graduation credit requirements.