Course Description

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◯ Undergraduate

As an axis of basic science, chemistry provides fundamental principles that can be applied to various basic sciences such as physics, material science, and life science. These principles are also applied to high-tech industries related to environment, energy and electronics. Therefore, the Undergraduate Program of Department of Chemistry focuses on the understanding of basic chemical principles and operates a variety of courses to balance practical application studies in parallel. The advanced specialization courses can be taken by those who want to explore specific fields of chemistry in depth. The other courses are a minor, a double major, and a free fusion major courses for those who want to pursue multidisciplinary studies. The curriculum also encourages students to choose appropriate careers by providing diverse information for career choice. Through such flexible curriculum management, we will cultivate talented students with diversified knowledge in response to rapidly changing social needs.

The curriculum is composed of core theories and experiments on physical, organic, analytical, and inorganic chemistry for the 2nd and 3rd grade students. Then, we provide more specialized courses related to biochemistry, nanochemistry, spectroscopy, polymers, computational chemistry, and so on. In addition, 500 units of graduate courses are designated as a course mutually recognized by undergraduate and graduate programs, giving students more opportunity to choose ahead of graduate school or to advanced students. We also provide complementary information about future career through the colloquium composed of invited lecturers with various chemistry-related occupations and the LRP (lab rotation program) course aiming to introduce lap researches. Finally, we offer various opportunities to students in order to experience the latest research trend through individual research, URP, and graduate research.

◯ Graduate

The Graduate Program of Department of Chemistry focuses on the integrated master's/doctoral course, and also operates the master's course in conjunction with the industry-academy program and the doctoral course for the fund-supported scholarship students. Master's and doctoral courses are elective courses so that students can freely choose their field of expertise. Students will also be able to broaden the scope of their study with the courses mutually recognized by undergraduate and graduate programs. In addition, students are required to complete the necessary credits in two or more distinct fields to enhance their ability to solve interdisciplinary and convergent problems.

The graduate program is designed to provide students with an advanced understanding of the basic principles of chemistry (500 units), a comprehensive understanding of specific fields of chemistry (600 units), and the latest knowledge in various fields of chemistry (700 units). The fields of chemistry include physical chemistry, organic chemistry, inorganic chemistry, biological chemistry, polymer chemistry, and electrochemistry. Through the Thesis Research, it provides high-level research opportunities for each laboratory. Through weekly seminars, experts from various industries, academia, and research institutes are invited to give a broader perspective on chemistry. The course also helps students to have balanced experience of education and research by teaching undergraduates as assistants through chemistry education training.