

Department of Chemistry

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What is Chemistry?

Chemistry is often defined as “the systematic study of everything, ” which means that it is the study of everything that occupies space and possesses mass. This includes their composition, the properties they exhibit, and the changes they undergo when they react with other substances. We live in a world in which chemistry plays a central role. Chemistry is a critical part of our society. Modern medicines are a result of chemistry. So are computer chips. Refining metals used in so many products are a result of chemistry. We make plastics via chemical processes. We increase yields of all kind of foods via chemistry. We are still learning about the world, still feeling its way, constantly discovering more about the influence of chemicals on all aspects of our lives.

Chemistry at Kyung Hee

This chemistry department features a prominent group of scientists - faculty and students who engage in a broad range of chemical, educational, and research activities. The faculty is dedicated to chemical education and prides itself on its graduate and undergraduate programs, which are designed to prepare students for active careers in industry and academia. Knowledge of chemistry is developed through intensive course work, laboratory experiments, the literature, and individual research efforts. The specific programs are tailored largely to the interest of each student, giving freedom to schedule one's course work accordingly with the primary goal of developing a creative and productive scientist. Faculty members bring to the department diverse backgrounds, as they have received graduate degrees from various foreign universities. They have scholarly interests in all primary areas of chemistry in the fields of analytical, inorganic, organic, physical chemistry and biochemistry. Since modern chemical research is increasingly interdisciplinary, much of our current research activity cuts across boundaries. The training of both graduate and undergraduate students is taken seriously by the faculty.

The modern chemist must have knowledge of and access to state-of-the-art instrumentation in order to perform rapidly and accurately the functions that society demands of him. Consistent with its goal of providing outstanding training, the department continues to meet this challenge by an active instrumentation acquisition program, which is well-supported by the University. Equipment available in the department covers a broad range.

Our department is notable for a high degree of interaction between the faculty and students. In short, our department provides an open and friendly yet highly stimulating environment.

Degree Requirements

To receive the Bachelor of Science in Chemistry, a student must:

- complete a minimum of 130 credit units.
- complete 27 credit units of General Studies Courses.
- complete 63 credits offered by the Chemistry department listed below including 21 credits of Required Courses for the major.
- acquire a minimum English proficiency test score of TOEIC 600 or TOEFL 200 or TEPS 550.

Courses

BS for Chemistry

Year 1

Mathematics1, Mathematics2, Physics1, Physics2, Chemistry1, Chemistry2, Biology1, Biology2, Philosophy

Year 2

Analytical Chemistry I.II, Analytical Chemistry Laboratory, Organic Chemistry I.II, Organic Chemistry Laboratory I, Physical Chemistry I.II, Physical Chemistry Experiment, Introduction to Organic Chemistry, Physical Chemistry Exercise I.II, Organic Chemistry Exercise I.II, Inorganic Chemistry I

Year 3

Physical Chemistry III, Biochemistry I.II, Inorganic Chemistry II.III, Inorganic Chemistry I.II, Inorganic Chemistry Laboratory, Physical Chemistry Exercise III, Organic Chemistry III, Organic Chemistry Laboratory II, Instrumental Analysis I.II,

Instrumental Analysis Laboratory, Chemical Kinetics, Special Topics in Physical Chemistry I, Theoretical Organic Chemistry, Spectroscopic Analysis of Display Devices, Spectroscopy Experiment for Display, Industrial Chemistry, Functional Polymer Chemistry I

Year 4

Organic Synthesis, Special Topics in Physical Chemistry II, Biochemistry III, Organic Identification, Introduction to Material Chemistry, Functional Polymer Chemistry II

Careers and Graduate Destinations

All major chemical companies send requests for our students throughout the year. Many smaller companies and academic institutions also contact individual faculty members when positions become available. Such openings are made known to all the students, and every effort is made to find suitable jobs for our graduates. Strong ties exist between the Department and the chemical industry. Our graduates hold industrial or academic positions or they are employed by government research institutes.

Faculty

Won Lee, Ph.D. Yonsei University, 1976, Emeritus Professor, Analytical Chemistry, wonlee@khu.ac.kr
Dong-Joon Choo, Ph.D. University of Kansas, 1982, Professor, Organic Chemistry, djchoo@khu.ac.kr
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Seung-Min Park, Ph.D. Brown University, 1989, Professor, Physical Chemistry, smpark@khu.ac.kr
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Jae-Kyu Song, Ph.D. Seoul National University, 2002, Assistant Professor, Physical Chemistry, jaeksong@khu.ac.kr
Sang-Soo Hah, Ph.D. Seoul National University, 2001, Assistant Professor, Biochemistry and Bioorganic Chemistry, sshah@khu.ac.kr
Joo-Hoon Kim, Ph.D. University of Texas at Austin, 2007, Instructor, Analytical Chemistry, jkim94@khu.ac.kr