College of Science

Department of Chemistry

Tel : +82 2 961 0237 Fax : +82 2 961 0443 E-mail : chem1@khu.ac.kr URL : http://chem.khu.ac.kr/

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 the composition of substances, 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 and is a critical part of our society. From modern medicines, to computer chips, to metal alloys used in many products to plastics and fertilizers all are a result of chemistry. Chemistry is not limited to beakers and laboratories. It is all around us, and the better we know chemistry, the better we know our world.

Chemistry at Kyung Hee

The 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. A knowledge of chemistry is developed through intensive course work, laboratory experiments, 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've all been awarded graduate degrees from prestigious universities around the globe and have research experience working in world-renowned institutions. The faculty have interests and curriculums which span the fields of analytical, inorganic, organic, physical chemistry, biochemistry, polymer and materials chemistry. Modern chemical research is increasingly interdisciplinary and much of the department's current research activity cuts across boundaries and involves collaboration with biologists, physicists, engineers and industrial sponsors. The training of both graduate and undergraduate students is the highest priority of the department.

Modern chemistry requires access to state-of-the-art equipment in order to meet the demands of society. Consistent with its goal of providing outstanding training, the department continues to meet this challenge with an active instrumentation acquisition program, which is endowed by the University. Research facilities available in the department cover all of the major disciplines of modern chemistry.

Our department is notable for a high degree of interaction between the faculty and students. In short, our department provides an open, friendly and stimulating environment that nurtures the development of our students' careers and abilities.

Degree Requirements

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

- complete a minimum of 130 credit units
- complete 21 credit units of general studies courses
- complete 66 credits offered by the Chemistry department listed below including 10 credits of required courses for the major
- acquire a minimum English proficiency test score of TOEIC 650 or TOEFL (CBT 190) or TEPS 600

Courses

B.S. degree for Chemistry

Year 1

Calculus and Recitation 1, Calculus and Recitation 2, Physics and Laboratory 1, Physics and Laboratory 2, Chemistry and Laboratory 1, Chemistry and Laboratory 2, Biology and Laboratory 1, Biology and Laboratory 2

Year 2

Analytical Chemistry 1.2, Analytical Chemistry Laboratory, Organic Chemistry 1.2, Organic Chemistry Laboratory 1, Physical Chemistry 1.2, Physical Chemistry Experiment1, Introduction to Organic Chemistry, Physical Chemistry Exercise 1.2, Inorganic Chemistry 1

Year 3

Physical Chemistry 3, Inorganic Chemistry 2, Inorganic Chemistry Laboratory, Biochemistry 1.2, Physical Chemistry Exercise 3, Organic Chemistry 3, Organic and Polymer Synthesis Laboratory, Instrumental Analysis 1.2, Chemical Kinetics, Theoretical Organic Chemistry, Functional Polymer Chemistry 1, Biochemistry Laboratory, Industrial Chemistry, Organometallic Chemistry, Physical Chemistry Experiment 2, Environmental Chemistry

Year 4

Organic Synthesis, Special Topics in Chemistry 1.2, Qualitative Organic Analysis, Electroanalytical Chemistry, Functional Polymer Chemistry 2, Capstone design(Chemistry), Independent Learning & Research 1,2, Understanding Computational Chemistry

Careers and Graduate Destinations

Strong ties exist between the Department and the chemical industry and all major chemical companies in South Korea actively recruit 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. Graduates of the department are often able to pursue advanced degrees in foreign universities. Our department takes pride in the high rate at which graduates are employed in industrial positions, or as well as the graduates who are appointed to academic positions or positions at government research institutes.

Faculty

Minserk Cheong, Ph.D. Ohio State University, 1987, Professor, Inorganic Chemistry, mcheong@khu.ac.kr, http://web.kyunghee.ac.kr/~greenchem

Seung-Min Park, Ph.D. Brown University, 1989, Professor, Physical Chemistry, smpark@khu.ac.kr, http://web.kyunghee.ac.kr/~chemi/laser/home.htm

Ho-Jung Kang, Ph.D. Ohio State University, 1991, Professor, Organic Chemistry, hjkang@khu.ac.kr, http://web.kyunghee.ac.kr/~chemi/org/home.htm

Hai-Dong Kim, Ph.D.

Hoon-Sik Kim, Ph.D. Yale University, 1986, Professor, Green Chemistry, khs2004@khu.ac.kr

Jae-Yeol Lee, Ph.D. Korea University, 1997, Professor, Organic Chemistry, liy@khu.ac.kr, http://medchem.khu.ac.kr

Hyun-Joo Koo, Ph.D. Sungkyunkwan University, 1997, Professor, Physical Chemistry, hjkoo@khu.ac.kr,

Jae-Kyu Song, Ph.D. Seoul University, 2002, Professor, Physical Chemistry, jaeksong@khu.ac.kr

Sang-Soo Hah, Ph.D. Seoul University, 2001, Professor, Biochemistry and Bioorganic Chemistry, sshah@khu.ac.kr, http://biochemistry.khu.ac.kr

Joohoon Kim, Ph.D. University of Texas at Austin, 2007, Professor, Analytical Chemistry, jkim94@khu.ac.kr
Youngmi Kim, Ph.D. Massachusetts Institute of Technology, 2005, Professor, Organic Chemistry, youngmi.kim@khu.ac.kr, https://sites.google.com/site/ymklabfml
Je-Seung Lee, Ph.D. Korea University, 2004, Professor, Inorganic Chemistry, leejs70@khu.ac.kr
Jeewoo Lim, Associate Professor, Ph.D. Massachusetts Institute of Technology, 2011, Assistant Professor, ,Organic/Polymer Chemistry, jeewoo@khu.ac.kr
Bright Walker, Associate Professor, Ph.D. University of California at Santa Barbara, 2012, Assistant Professor, Materials Chemistry, walker@khu.ac.kr
Sung Yul Lim, Assistant Professor, Ph.D. Seoul National University, 2016, Analytical Chemistry, limsy@khu.ac.kr
Jieun Yang, Assistant Professor, Ph.D. Ulsan National Institute of Science and Technology, 2015, Energy Engineering, jey@khu.ac.kr
Joo Jung Min, Professor, Ph.D. Princeton Univerity, 2008, Organic Chemistry, jmjoo@khu.ac.kr