

Department of Biology

Tel: +82 2 961 0244 Fax: +82 2 961 9155 E-mail: biology1@khu.ac.kr URL: <http://biology.khu.ac.kr/>

What is Biology?

Biology, the science of life, is a multidimensional, dynamic, and creative discipline that focuses on understanding the living world. The discipline is represented jointly by the two related fields, biology of organisms and molecular biology, which differ primarily in emphasis. The macroscopic biology with organisms principally explores the morphology, behavior, and evolution of individuals, populations, and ecosystems while the biology of molecules mainly focuses on the structure, function, and evolution of biological molecules, organelles, and cells. These draw on a broad array of methodologies including biochemistry, molecular biology, genetics, systematics, ecology, biotechnology, and bioinformatics. It depends on the integration of approaches and techniques with those of many other scientific disciplines. For this reason, elements of mathematics, chemistry, and physics are important foundations for the study of biology.

Biology at Kyung Hee

The Department of Biology was founded in 1955 and has produced over 1,900 graduates who are actively involved in academia, public services, and industrial society. Currently, there are fifteen faculty members in the department and they have studied the highest level in the area of biology in Germany, the U.S., England, Sweden, Australia, and France. They maintain distinguished expertise in teaching and research and offer top quality education in biological sciences ranging from molecular biology to ecology. In addition, the department has kept the strongest tradition in ornithology since its foundation. The department is well equipped to give you practical experience with state-of-the-art technique in molecular cell biology, genetics, ecology, neurobiology, evolutionary biology, microbiology, virology, plant biology, developmental biology, immunology, toxicology, computational biology and many related fields of research. The department offers various experiment courses and bio big data programming courses. Especially, students are encouraged to identify their own research topics of interest and to delve deeper into biological questions under the guidance of a supervising professor by participating in Internship or Independent Learning & Research courses.

Degree Requirements

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

- complete a minimum of 130 credit units
- satisfy the general requirements of the School for professional degrees
- complete 66 credits of major courses including 13 credits of required courses for a major in Biology
- complete 48 credits of major courses including 13 credits of required courses for double major in Biology
- acquire a minimum English proficiency test score (TOEIC 700, TOEFL (CBT 203, IBT 74), TEPS 650, OPIc IM, or TOEIC Speaking 130)

Courses

Year 1

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

Year 2

Systematics, Basic Studies in Biological Science, Biological Chemistry, Cell Biology, Genetics, Microbiology, Laboratory of Systematics, Biological Statistics, Freshwater Biology, Molecular Biology

Year 3

Ecology, Laboratory of Cell Biology and Toxicology, Laboratory of Microbiology and Immunology, Physiology, Bacteriology, Environmental Toxicology, Laboratory of Ecology, Molecular Cell Biology Immunology, Molecular Neurobiology, Applied Microbiology, Economic Botany, Behavioral Science, Practical Research Study 1,2(Biology), Teaching Unit Analysis, Teaching Logics and Essay (General Science), Capstone Design(Biology), Internship1,2(Biology), System Biology, Independent Learning & Research, Practice of Systems Biology, Epigenetics

Year 4

Laboratory of Neurobiology and Developmental Biology, Microbial Ecology, Virology, Developmental Biology, Bioinformatics, Endocrinology, Biotechnology, Behavioral Neuroscience, Lesson Plan for Teaching Materials, Laboratory of Bioinformatics, Evolutionary Biology, Insect Ecology

Careers and Graduate Destinations

Our students have an array of employment choices after graduation. More than 95% of graduates from the department are employed within a year of graduation. Nearly 20% of them are accepted in graduate schools for a higher academic degree in biology, 30% have jobs related with biological sciences, and 50% pursue a wide range of careers such as business, banking, mass media, and others. There are increasing opportunities to apply their knowledge and skills to contribute to biotech industries.

Faculty

Suk-Pyo Hong, Ph.D., Uppsala University, 1991, Professor, Plant Taxonomy, sphong@khu.ac.kr

Yun-Hee Kim, Ph.D., Tufts University, 1992, Professor, Developmental Biology, kimyh@khu.ac.kr

Jeong-Chil Yoo, Ph.D., University of Oxford, 1993, Professor, Animal Ecology, jcyoo@khu.ac.kr

Yong-Seok Jeong, Ph.D., University of Texas at Austin, 1994, Professor, Virology, ysjeong@khu.ac.kr

Sang-Hoon Kim, Ph.D., University of North Dakota, 1996, Professor, Animal Physiology, shkim@khu.ac.kr

Ki-Soon Shin, Ph.D., Seoul National University, 1996, Professor, Neurobiology, kisoon_shin@khu.ac.kr

Soon-Ji Yoo, Ph.D., Seoul National University, 1998, Professor, Cell Biology, yoosoonji@khu.ac.kr

Young-Seuk Park, Ph.D., Pusan National University, 1993, Professor, Ecological Informatics, parkys@khu.ac.kr

Sung-Jae Lee, Ph.D., Kyung Hee University, 1998, Professor, Microbial Genetics, sungjaelee@khu.ac.kr

Eun-Young Kim, Ph.D., Ehime University, 1996, Professor, Environmental Chemistry and Ecotoxicology, eykim@gmail.com

Jin-Woo Bae, Ph.D., KAIST, 2001, Professor, Microbial Ecology, baejw@khu.ac.kr

Kwangwoo Kim, Ph.D., KAIST, 2011, Professor, Human Genomics, kkim@khu.ac.kr

Kwoneel Kim, Ph.D., KAIST, 2015, Associate Professor, Bioinformatics, kwoneelkim@khu.ac.kr

Chang Seok Han, Ph.D., University of New South Wales, 2013, Assistant Professor, Evolutionary Ecology, cshan@khu.ac.kr

Lee Ho Seok, Ph.D. Yonsei University, Assistant Professor, Plant Genetics, hoseoklee@khu.ac.kr