

Department of Food Science & Technology

Tel : +82 31 201 2623 Fax : +82 31 204 8116 E-mail : foodscience@khu.ac.kr URL : <http://fst.khu.ac.kr/>

What is Food Biotechnology?

Food Biotechnology integrates application to food with several contributory sciences. It involves knowledge of the chemical composition of food materials, their physical, biological and biochemical behaviour, human nutritional requirements and the nutritional factors in food materials, the nature and behaviour of enzymes, the microbiology of foods, the interaction of food components with each other, with atmospheric oxygen, with additives and contaminants, and with packaging materials, pharmacology and toxicology of food materials, additives and contaminants, the effects of various manufacturing operations, processes and storage conditions, and the use of statistics for designing experimental work and evaluating the results.

Food Science and Technology at Kyung Hee University

Department of Food Science and Biotechnology is housed in College of Life Sciences Building of Global Campus. With 9 faculty members, Food Science and Biotechnology major provides an educational, research and informational center for food biotechnology. Currently, 200 students are enrolled in the undergraduate programs. The objectives of our educational program are to integrate the basic scientific principles from different disciplines, apply them to food systems, and to focus on the basic nature of food and problems involved in the development of various food products. We also recognize the diversity in the fields of food science and different career interests of students, and offers seminars in food science and field trips to food industries in regular basis. In addition, our annual event held during the fall festival provides opportunities for undergraduate students to cooperate and to get to know each other by participating in seminars and sharing the experiences of manufacturing food products.

Degree Requirements

To obtain the Bachelor of Science in Food Biotechnology, a student must:

- complete a minimum of 130 credit units
- satisfy the general requirements of the School for professional degrees
- complete 12 units of core courses
- complete 54 units of technical electives for Food Biotechnology
- complete 66 units stated in the common studies program and Humanities/Social Science Electives
- acquire a minimum English proficiency test score of TOEIC 650, TOFEL(IBT) 69, TEPS 551 or G-TELP 57(Level2)

Courses

Year 1

Biology 1, Chemistry 1, Calculus 1, General Physics, Statistics

Year 2

Introduction to Food Science, Food Microbiology I, II and Lab, Food Physical Chemistry, Bio-Organic Chemistry, Bio-Organic Chemistry Laboratory, Analytical Chemistry and Lab, Food Biochemistry I, Food and Health, Food Safety and Hygiene, Food Nanotechnology

Year 3

Food Chemistry I, II, Food Engineering I, II and La, Food Biochemistry II, Food Processing & Laboratory I, II, Food Analysis and Lab, Food Nanomaterials, Bio-functional food materials, Fermentation and Microbial Engineering, Genetically Modified Foods

Year 4

Food Preservation, Food Quality Control and Lab, Functional Foods, Alcoholic Beverage Technology and Laboratory, Food & Biotechnology, Food Nutrition, Food Toxicology, Food Molecular Biology, Food Lipids

Careers and Graduate Destinations

Students graduating from Food Science and Biotechnology at the undergraduate or graduate levels are very much in demand and will find rewarding careers in the following areas of specialization: food microbiology, food chemistry, food processing, food biotechnology, consulting, quality control & inspection, basic and applied research product development, supervision and management, production and packaging, technical sales and service teaching. We also strongly recommend students to enter graduate programs related to food biotechnology.

Faculty

Byung-Yong Kim, Ph.D. North Carolina State University at Raleigh, USA, 1987, Professor, Food Engineering & Rheology, bykim@khu.ac.kr

Seung-Kook Park, Ph.D. University of California at Davis, USA, 1993, Professor, Agricultural & Environmental Chemistry, skpark@khu.ac.kr

Hae-Yeong Kim, Ph.D. Albert Einstein College of Medicine, USA, 1994, Professor, Food Biochemistry, hykim@khu.ac.kr

Cheon-Seok Park, Ph.D. University of California, Davis, USA, 1997, Professor, Food Microbiology & Biotechnology, cspark@khu.ac.kr

Moo-Yeol Baik, Ph.D. University of Massachusetts at Amherst, USA, 2001, Associate Professor, Food Processing, mooyeol@khu.ac.kr

Dae-Ok Kim, Ph.D. Cornell University, USA, 2003, Associate Professor, Functional Foods, dokim05@khu.ac.kr

Young-Rok Kim Ph.D. Cornell University, USA, 2003, Associate Professor, Food Nanobiotechnology, youngkim@khu.ac.kr,

Ju-Hoon Lee Ph.D. University of Minnesota, USA, 2007, Associate Professor, juhlee@khu.ac.kr

Woo-Ki Kim, Ph.D. Texas A&M University, USA, 2008, Assistant Professor, kimw@khu.ac.kr