

Department of Food Science & Biotechnology

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What is Food Science & Biotechnology?

Food Science & Biotechnology integrates application to food with several contributory sciences. It involves knowledge of the chemical composition of food materials, their physical, biological and biochemical behavior, human nutritional requirements and the nutritional factors in food materials, the nature and functions 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 Biotechnology 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 offer 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 get to know each other by participating in seminars and sharing the experiences of manufacturing food products.

| Degree Requirements |

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

- complete a minimum of 130 credit units
- satisfy the general requirements of the School for professional degrees
- complete 15 units of core courses
- complete 46 units of technical electives for Food Biotechnology
- complete 50 units stated in the common studies program and Humanities/Social Science Electives

| 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, Analytical Chemistry and Lab, Food Biochemistry I, Food and Health, Food Safety and Hygiene, Food Chemistry I

Year 3

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

Year 4

Food Preservation, Functional Foods, Food Biotechnology, Food Nutrition, Food Toxicology, Food Molecular Biology, Food Immunology, Food Packaging, Food Safety Policy and Regulations, Food Safety Field Study, Food Science and Biotechnology Capstone I,II, Graduation Thesis(Food&Biotechnology)

| 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 |

- ___ 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, 2000, Professor, Food Processing, mooyeol@khu.ac.kr
- ___ Dae-Ok Kim, Ph.D. Cornell University, USA, 2003, Professor, Functional Foods, dokim05@khu.ac.kr
- ___ Young-Rok Kim Ph.D. Cornell University, USA, 2003, Professor, Food Nanobiotechnology, youngkim@khu.ac.kr,
- ___ Mun-Gi Sohn, Ph.D. Rutgers University, USA, 1996, Professor, Food Engineering, mgsohn@khu.ac.kr
- ___ Mi-Ju Kim, Ph.D. Kyung Hee University, Korea, 2018, Assistant Professor, Food Omics, mijukim@khu.ac.kr
- ___ Hyun-Seok Kim, Ph.D. University of Idaho-Moscow, USA, Professor, Food Engineering, khstone@khu.ac.kr