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OVERVIEW OF THE POSITIONS OF PROFESSOR/ASSOCIATE PROFESSOR/ASSISTANT PROFESSOR IN FOOD SCIENCE

University of Helsinki

The University of Helsinki (<https://www.helsinki.fi/en>), founded in 1640, is an international academic community of 40 000 students and staff members. It operates on four campuses in Helsinki and 15 other locations in Finland. The high-quality research conducted at the University of Helsinki creates new knowledge for educating specialists in various fields, and for use in social decision-making and the business sector.

As the oldest and largest of the Finnish Universities, University of Helsinki has established a solid track record of international recognition. It is ranked among the top 100 universities in the World, and among 20 top universities in Food Sciences (Taiwan University ranking). University of Helsinki collaborates widely with academia, industries and RTO's in Europe, in North America and, increasingly, in Asia. University of Helsinki is a founding member of the leading research-intensive League of European Research Universities. University of Stockholm, Sweden, and University of Beijing, China are strategic partner universities in education and research.

Faculty of Agriculture and Forestry

The Faculty of Agriculture and Forestry (<http://www.helsinki.fi/af-faculty>), located on the Viikki campus which is an internationally recognized concentration of bio- and life sciences, promotes the sustainable use of natural resources and human wellbeing through scientific research and research-based teaching. The faculty's key areas of education and research are agricultural, food, forest and environmental sciences, and economics. The faculty has 3 200 undergraduate and postgraduate students and employs 500 experts. The research and education cover the whole agro-food chain; food production and quality from plant and animal breeding and farming to food design, technology, chemistry and safety, and further to healthy nutrition and consumer behavior. Food sciences are linked to social sciences (food behavior, consumer science), economics (food economics, marketing), and IT (remote sensing, precision farming, big data) creating multidisciplinary research and education platforms.

Viikki campus houses three further faculties (Biological and Environmental Sciences, Pharmacy, and Veterinary Medicine) and a range of research institutes (Institute of Biotechnology, Neuroscience Center, the Finnish Food Safety Authority, and the Natural Resources Institute Finland).

Department of Food and Environmental Sciences

The Department of Food and Environmental Sciences (<http://www.helsinki.fi/food-and-environment>) is the biggest department of the Faculty of Agriculture and Forestry with its 200 employees, 500 undergraduate students and 100 doctoral students. The department has five divisions: Food Chemistry, Food Technology, Microbiology and Biotechnology, Nutrition, and Soil Science. The department provides an active, multidisciplinary research environment with food pilot processing facilities and up-to date research laboratories with latest analytical instrumentation for biological, chemical and physical analyses (<http://www.helsinki.fi/food-and-environment/infra>). Facilities also exist to carry out sensory studies and dietary interventions. Each year the research groups acquire about EUR 4 million in external research funding and publish some 120 papers in leading international journals. The high quality of the department's research has been demonstrated in international research assessments conducted at the University of Helsinki.

The Department of Food and Environmental Sciences has four focal areas of research:

- § food production chains,
- § food quality and healthy nutrition,
- § utilization of microbial resources, and
- § vital soil and clean environment.

The scientific, technological and economic disciplines on Viikki campus provide a framework for research in these focal areas. Complementary expertise enables mutually beneficial collaboration with industry. The department contributes to the development of high quality, safe, and nutritionally balanced food for consumers, concomitantly enhancing the circular economy in food production systems.

Sixty students annually enrol the Bachelor Programme in Food Sciences and fifteen students enrol the Bachelor Programme in Nutrition. Together with the Faculty of Biological and Environmental Sciences, the department offers Bachelor's curricula in Molecular Biosciences and in Environmental Sciences. The major subjects at the Master's level include Biotechnology, Food Chemistry, Food Technology, Environmental Soil Science, Microbiology, and Nutrition. The department also offers the international Master's Degree Programme in Food Sciences and contributes to international Master's Degree Programme in Biotechnology. Presently the Bachelor's and Master's Degree curricula at the University of Helsinki are reorganized and merged to larger degree programmes; in the future, there will be the Bachelor's and Master's Degree Programmes in Food Sciences. The latter is thought in English and will also take international students.

An international perspective as well as a high standard of research and teaching form the foundation of the department's operations. The department continuously pursues high quality of its research and teaching while keeping abreast of the ongoing changes in the national and international operating environment. The department strives to be an attractive and interesting environment for top-level researchers and students.

Overview and duties of Professors to be hired

Professors of Food Science are expected to carry out top-level research and provide high-quality research-based teaching, supervise theses on Bachelor, Master and Doctoral level, and be active in national and international research cooperation and networks. In collaboration with other teaching and research staff, the recruited professors are responsible for the coordination and development of teaching and research of food sciences.

The positions are situated in the Division of Food Technology which covers food processing, cereal, dairy and meat science and technology, food packaging, and sensory science. Research and education in the division are focusing on food processing, especially management of the processing chain of domestic food raw materials including sustainable food production from new protein sources. Designing processing technologies and routes to maintain and optimize chemical, microbiological, nutritional and sensory quality are the focus. Bioprocessing is studied to optimize the content and nature of health beneficial food constituents. Understanding properties, reactions and interactions of food constituents in different food matrices is of key importance.

Currently, the Department of Food and Environmental Sciences employs nine professors in the food and nutrition area. Their areas of expertise are

- § food chemistry
- § food safety
- § cereal technology
- § dairy technology
- § microbiology (food microbiology)
- § nutrition
- § nutritional physiology
- § food science (associate professor)

The Department of Economics at the Faculty of Agriculture and Forestry has professors specialising in food economics, marketing, and consumer economics. The Faculty of Veterinary Sciences has professors in food production hygiene.

The Professors of Food Science are expected to have scientific background and experience in food design and technology fields and complement the existing expertise. They are expected to be motivated to make an impact in the new and innovative solutions concerning the whole food production chain. Excellence in food science is sought, and applications from scientifically active, knowledgeable, and enthusiastic researchers to reinforce the department's food science discipline are warmly welcomed.

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www.helsinki.fi/food-and-environment