Graduate Certificate in Food Safety and Defense

By providing a distance education Food Safety and Security certificate program, we will serve the needs of industry and agencies that must protect the human food supply from accidental or deliberate contamination with pathogenic microbes and/or toxicants. In an era of terrorism and global food systems, effective control of foodborne hazards requires advanced education. There is a need for online education for food industry personnel who, while working full time, would like to pursue more in-depth specialized training in food safety and security that is pertinent to their job.

Kansas State University, Iowa State University, University of Nebraska-Lincoln and the University of Missouri, Columbia have developed pertinent food safety and defense distance education courses and have established a multi-state agricultural consortium to develop and deliver high-priority collaborative distance education programs in the food and agricultural sciences.

Food Safety and Defense Graduate Certificate Learning Outcomes

1. Synthesize a current and multi-faceted picture of key food safety and security issues.
2. Apply in real-world situations the scientific principles of microbial and chemical risk assessment and analysis related to food safety and security issues.
3. Analyze and apply the concepts of HACCP (Hazard Analysis Critical Control Point) programs, as well as other safety and security approaches, in the management of food safety and security in food systems.
4. Evaluate food safety and security issues in the food industry using the perspectives of sound science, critical thinking and ethical reasoning.

Food Safety and Defense Certificate Requirements

The online certificate includes a minimum of 12 credits, 8-9 credits in core courses and at least 3 elective credits, on topics including food microbiology, foodborne toxicants, HACCP, food safety and security overview, food laws, risk assessment, food biotechnology, rapid food microbiological methods, food allergy and food fermentations with each participating university offering at least one course on a regular basis, and each university cross-listing all courses.

Students must meet admissions requirements for the Master of Science degree in Food Science (http://catalog.missouri.edu/undergraduategraduate/collegeofagriculturefoodandnaturalresources/foodscienceandnutrition/ms-food-science) or equivalent degree at their respective universities. A tuition disbursement framework as in operation for the Great Plains Interactive Distance Education Alliance (IDEA) consortium will be used. Certificate enrollments of 20-25 students per year are anticipated, with time to completion of 2-3 years (1-2 courses per semester). See the Great Plains IDEA (http://www.gpidea.org) for further information.

Admission standards and prerequisites for the certificate program.

Successful applicants must be a graduate of an accredited institution and normally must rank in the upper quartile (3.0 grade point average) of their class to gain admission. Undergraduate preparation should include emphasis in chemistry and biology or food science.

Course Requirements

Courses required for the Food Safety and Defense Graduate Certificate belong to Kansas State University, Iowa State University, University of Nebraska and the University of Missouri. For more information refer to the Food Safety and Defense Graduate Certificate website: http://foodscience.missouri.edu/graduate/foodsafetycert.php

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