

Defending the Safety of the Food System Through Research and Education

The National Center for Food Protection and Defense's (NCFPD's) Education and Outreach Programs provide food defense education and training for the next generation of Homeland Security science, technology, engineering, and math (HS-STEM) professionals—including students, governmental and private sector audiences, and others—who will be instrumental in protecting the national economy and the public's health against the potentially devastating impacts of accidental or intentional contamination of the food supply.

Current Education Initiatives

NCFPD Graduate Education Program

NCFPD is furthering its educational reach by initiating the development and implementation of an NCFPD Graduate Education Program in Food Protection and Defense that is accessible across academic institutions and degree programs to maximize both the ease of access for students and the human capital developed. This program will provide a framework to 1) leverage food defense-related graduate courses of various formats already available at numerous institutions nationwide, 2) accommodate a variety of course formats (traditional classroom, online/distance education, etc.), 3) make coursework accessible to students anywhere, 4) flexibly meet the needs of individual students, and 5) plan for and embrace change as the needs of food defense professionals evolve.



This program, which would complement a broad range of degree programs across partner institutions, will be inherently interdisciplinary, spanning food safety, food science, public health, food and agriculture systems, emergency management, animal health, communications, engineering, epidemiology, and many other disciplines.

FoodSHIELD Initiatives

Developed by NCFPD's public health team in partnership with regulatory and laboratory associations, FoodSHIELD addresses a major unmet need for communication, coordination, and just-in-time training across a wide range of state and local food and agriculture laboratories, as a user-focused, one-stop location for sharing information and educational resources.

FoodSHIELD provides a platform for delivering food defense training modules and materials to professionals in public health, food regulatory agencies, and industry, as well as the general public. Several food protection and defense



courses developed for the University of Minnesota Public Health Institute are currently being converted to an online format for access through FoodSHIELD.

Frontier Interdisciplinary eXperiences (FIX) Program

The *Frontier* Interdisciplinary eXperiences (FIX) program is an NCFPD-funded Career Development Grant (CDG) initiative that prepares Homeland Security professionals through curricular and experiential training. The FIX program develops critical thinking across disciplines and HS-STEM research areas related to Food Defense and Border Security. The FIX program, initiated by the NCFPD-affiliated



Frontier program at Kansas State University and New Mexico State University, involves faculty, student-program coordinators, and students who pursue interdisciplinary studies in Border Security, Food and Agriculture Security, Food Safety and Security, International Relations, and related HS-STEM research areas and disciplines. *Frontier* and the FIX program provide a programmatic bridge for leveraging collaboration between two DHS Centers of Excellence: NCFPD and the National Center for Border



Security and Immigration. The FIX program offers NCFPD students a combination of HS-STEM academic programs and coursework, skill-development

activities, experiential research opportunities, and efforts that connect students to internships and employment in Homeland Security.

Hallmarks of the FIX program include genuine interdisciplinary co-mentorship by faculty, dedicated student-guidance personnel in the form of FIX Coordinators, and routinely held student retreats, field trips, training sessions, professional development opportunities, and workshops.

NCFPD Education Accomplishments

By engaging **students** (from high school students to post doctoral fellows) in its research programs, NCFPD has impacted over 200 students from 28 schools in its first four and a half years. To date, 76 students engaged in NCFPD research projects have completed their degrees.



NCFPD actively engages in DHS-sponsored educational programs. Since 2005 NCFPD-affiliated researchers have hosted six DHS-funded **Summer Research Teams** comprised of faculty and students from MSI institutions.

NCFPD efforts have led to the establishment of a Public Health Certificate in Food Protection in the University of Minnesota's School of Public Health, a standalone **academic credential** that also serves a specialty track within the Masters of Public Health degree program.

NCFPD has developed new food protection and defense **courses and curricula**. Examples include the web-based course *Ten Best Practices of Risk Communication* which addresses the impact of risk communication on public reaction to a food defense incident, as well as a series of Homeland Security-specific courses developed for the Public Health Certificate in Food Protection.

Future Education Plans

Continue curriculum development activities, including modifying educational materials for training of professionals in non-degree programs.

Further explore the utility of computer- and web-based programs to expand delivery of existing and new educational products to broader audiences.

Explore opportunities to enhance the development of students, perhaps by establishing a formalized NCFPD internship program.

About NCFPD

Research Area Alignment

NCFPD's research and education initiatives align with several of the sixteen DHS Science & Technology Priority Research and Education Areas, most notably Food and Agriculture Security.

Partners

The NCFPD research and education consortium includes individual investigators from universities, private sector research organizations, and food and agriculture agencies. NCFPD projects involve over 140 experts from education, industry, and government. NCFPD also works in close partnership with federal and state regulatory agencies, state and local health and agriculture departments, first responder communities, professional organizations, intergovernmental groups (FAO/WHO), other DHS Centers of Excellence, the national laboratories, and private stakeholders. Over 30 food industry expert advisors provide technical advice, critical end-user feedback, and strategic oversight.

For more information

For additional information about NCFPD Research and Education programs, contact the center at ncfpd.umn.edu, or visit the NCFPD website at www.ncfpd.umn.edu.

