Food Processing and Development Training Program

The Food Processing and Development Training Program is a unique opportunity for undergraduate students interested in food processing to explore their interests in a hands-on setting.

Eligibility Requirements:

- Food Science undergraduate major (Qualified Animal Science and Dairy Science students may apply)
- Freshman or sophomore standing (transfer students: no more than 2 complete semesters at Cornell University at time of application; Transfer applicants will enter the program at the stage determined to best fit their experience and background as evaluated by the FPDL manager)

Program Structure:

Beginning as early as their freshman year, undergraduates have the opportunity to participate in hands-on activities in the FPDL, with the goal of increasing their skills and abilities over the rest of their time at Cornell University. Students advance in level contingent on satisfactory completion of learning outcomes and benchmarks set forth by FPDL and extension staff.

If accepted into the Program, students will be instructed to enroll in FDSC 4960 under Rob Ralyea, via the CALS Special Studies form, accessible through DUST.

**Level 1:** Projects are determined by FPDL and extension staff. Students are required to enroll in FDSC 4960 (internship) for 1 to 3 credits, as determined by the manager of the FPDL, strictly S/U.

  Learning Outcomes include demonstrating proficiency and practical understanding of:

  - Basic Dairy Science and Sanitation
    - Basic Dairy Microbiology and Milk Composition
    - Food Safety Overview
    - Good Manufacturing Practices and Prerequisite Programs
    - Dairy Sanitation
    - Hazards associated with dairy foods processing

**Level 2:** Projects are determined by FPDL and extension staff. Students are required to enroll in FDSC 4960 (internship) for 1 to 3 credits, as determined by the manager of the FPDL, strictly graded.

  Learning Outcomes include demonstrating proficiency and practical understanding of:

  - Basic Cheese Making
    - Milk quality which impacts cheese making
    - Cheese culture and chemistry and microbiology
    - Cheese-making unit operations and techniques and hands-on cheese making
  - Greek Yogurt Processing
    - Milk quality and impact on cultured dairy products
    - Culture microbiology and hands-on cultured dairy making
    - Unit operations and sanitation in cultured dairy production n Formulation utilizing different ingredients
• HTST/Vat Pasteurization
  o HTST Operation Components
  o Regulatory requirements for HTST Operation
  o Cleaning & Sanitizing HTST Programs
  o Foodborne pathogens resulting from unpasteurized milk
  o Components of vat pasteurization
  o Thermometer requirements
  o Chart recorders and chart requirements

**Level 3:** Projects are determined by student interests and FPDL/extension staff. Students are paid hourly based on time in the FPDL. Continued participation is dependent on satisfactory completion of assigned tasks.
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