

## LOCATIONS

1. Schaub Hall - Raleigh, NC
2. Center for Marine Sciences and Technology - Morehead City, NC
3. Plants for Human Health Institute - Kannapolis, NC
4. Dairy Farm; Randleigh Heritage Museum; Howling Cow Dairy Education Center and Creamery - Raleigh, NC



## CONNECT

For an in-depth view of all our services and to engage with our faculty, staff, and students, please visit our website at [fbns.ncsu.edu](https://fbns.ncsu.edu).

Follow us on social media and learn about our faculty, staff, student, and alumni achievements! Search **fbns ncstate** on Facebook, Instagram, Twitter, and LinkedIn.



## BECOME AN INDUSTRY PARTNER!

### Industry Partners Advisory Council

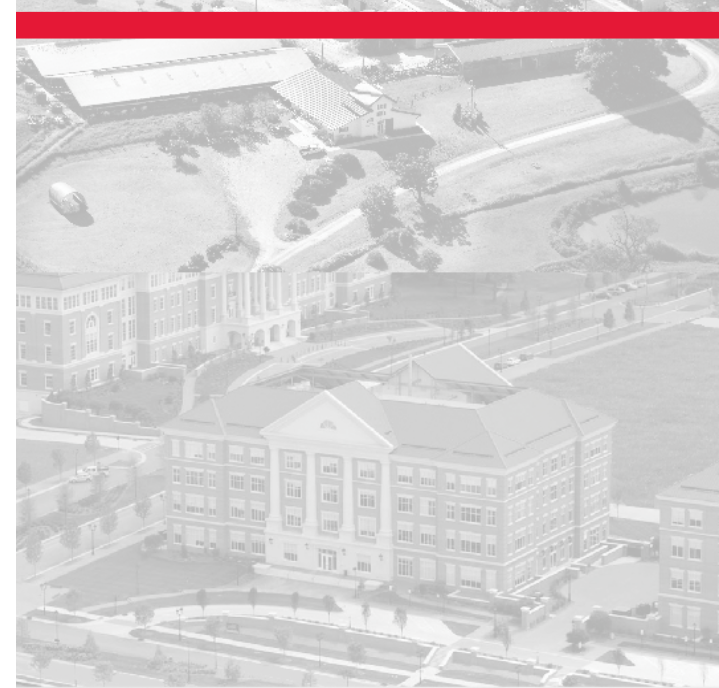
IPAC members are individuals, companies, or organizations who support, promote, and globally advance FBNS.

### Involvement and Benefits:

- Access to students for projects, internships, and full-time jobs
- Early access to cutting-edge research and tools
- Lead creation of facilities (e.g., GMP) that benefit member companies
- Mentor students and deliver guest lectures
- Use of facilities for training and education

Email [fbnsliaison@ncsu.edu](mailto:fbnsliaison@ncsu.edu) to join.

# FOOD, BIOPROCESSING AND NUTRITION SCIENCES



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## TEACHING

### 400+ Undergrads, 70+ Graduate Students

#### Undergraduate Pathways:

- Food Science (Science or Technology emphases)
- Bioprocessing Science
- Nutrition Science

#### Graduate Pathways:

- Food Science: Masters (thesis and non-thesis), PhD
- Nutrition: Masters (thesis; and non-thesis, online), PhD

#### Minor Pathways:

- Food Science (undergraduate, graduate)
- Nutrition (undergraduate, graduate)
- Brewing Science and Technology (undergraduate)
- Food Safety (graduate)

#### Certificate Programs:

- Food Safety Quality Management (undergraduate)
- Acidified Foods Manufacturing School (for acidified foods operators/supervisors)

Various food science and nutrition courses are available online at the undergraduate and graduate levels.



## RESEARCH

### Food Safety and Foodborne Disease Prevention:

Bacterial foodborne pathogens; virology; safety of produce, seafood, vegetables, and acidified foods

### Food Manufacturing and Entrepreneurship:

Thermal and plant food processing; vegetable preservation by fermentation and acidification; processing via cold atmospheric plasma, high pressure, UV; meat processing

### Health and Well-being:

Metabolomics; fruit, vegetable, and peanut bioactives; food structure and ingredient functionality; flavor chemistry; phytochemicals and gut microbiome interaction; probiotics; CRISPR; fermented foods; obesity prevention; study of diet, health, and disease

### Education Innovation and Effectiveness:

Community nutrition; maternal, infant healthcare; federal nutrition programs; virtual reality and interactive learning

### Affiliated Areas:

- **Southeast Dairy Foods Research Center (SDFRC):** Milk and whey ingredient functionality, thermal processing, sensory characteristics, and consumer perception of dairy products, proteins and other foods
- **Center for Advanced Processing and Packaging Studies (CAPPS):** NSF-founded center; includes Ohio State, UC Davis, and food industry members
- **Plants for Human Health Institute:** Phytoactive components in plant foods and their impact on human health and wellness
- **USDA-ARS Food Science and Market Quality and Handling Research Unit:** Enhance flavor, nutrition, and safety of sweet potatoes, fermented vegetables, peanuts
- **Seafood Science:** Multi-college/inter-disciplinary work on quality and safety of aquatic foods
- **Dairy Enterprise System:** Dairy plant, farm
- **Wolfpack Brewery:** Chemistry, microbiology, and engineering aspects of brewing
- **Pilot Plants:** Advance knowledge of thermal processing and dairy products, fruits, vegetables, meats, seafood

## EXTENSION

### A Land-Grant University Serving NC

#### Programs:

- Food product, process development; plant proteins
- Fresh produce safety; FSMA training
- Food safety and quality training programs; intervention studies and evaluation
- Maternal and infant nutrition; breastfeeding support
- Red meats: Quality and safety
- Seafood: Equipment validation, SSOP, HACCP, GMP, shelf-life determination
- Training on milk pasteurization and other thermal processes

#### Services:

- **Entrepreneur Initiative for Food (ei4f) Program:** pH, water activity, nutrition labels, and process authority letters; Acidified Foods Training School (required certification)
- **Sensory Service Center:** Consumer panel, trained panel, and instrument analysis of texture, flavor, and aroma
- **Rheology Lab:** Rheological characterization of foods and pharmaceuticals

#### Community Outreach:

- **Nutrition NUTS Program:** Health and nutrition education for preschoolers and their families
- **Breastfeeding Support:** Partnership with the NC Breastfeeding Coalition

