FOOD SYSTEMS, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

The FDSYS minor will educate and prepare students for existing and emerging food systems careers by designing and delivering an integrative, interdisciplinary Food Systems minor that is learner-centered, experiential and stakeholder-responsive. The minor uses a competency-oriented approach to inform its curriculum, reflective interdisciplinary collaboration, and food systems stakeholder involvement.

Competencies and Guiding Principles of the Food Systems Minor

A comprehensive ecology of knowledge framework emphasizes both what is taught, and how it is taught as mutually supportive components of education. The competencies of the minor are the what: the student learning objectives that graduates of the Food Systems minor are expected to demonstrate proficiency in. The guiding principles of the Food Systems minor are the how: they serve as a roadmap for how the courses and experiences in the minor will support the learning objectives.

Competencies

Students who complete the Food Systems Minor will:

1. Solve complex problems: Analyze, plan, act on and evaluate solutions across multiple domains of the food system, including health, science, economics and business, community, agriculture, the food service industry, and policy.
2. Use evidence from multiple ways of knowing (epistemologies) to analyze, select and assess food systems problems and solutions. Different knowledge include scientific, social, cultural, historical, political, indigenous, and local perspectives.
3. Respect and critically reflect on one's own and others' perspectives and values to understand how these perspectives and values influence food systems decisions.
4. Be civically engaged both locally and globally to enable positive change in food and agricultural systems.

Guiding Principles

1. Experiential learning. Courses and related activities will offer students place-based, learning experiences in food systems beyond the classroom, thereby integrating theoretical and practical knowledge. Activities will include engaged scholarship, internships, service learning, research, and other creative and professional work experiences. For example, the required Supervised Field Engagement Experience will provide opportunity for personalized work on food systems related topics, practice in stakeholder engagement, and network-building for students with potential future employers.
2. Interdisciplinary problems and project-based learning. Problem-based learning, experiential and stakeholder-driven projects, and systems-oriented inquiry have been linked to positive student appraisal of competency development for individual courses (Galt et al. 2013). Courses and related experiences will incorporate pedagogies and curricula that emphasize students' engagement with interdisciplinary food system problem-posing (inquiry) and project-based learning, thereby placing students at the center of their learning.
3. Community partnerships and engagement. Courses and related experiences will advance students' and community partners' knowledge, skills, and dispositions toward forming and maintaining partnerships in service towards food systems security and mutually beneficial community, health, and environmental sustainability goals.
4. Personal transformation through reflection. Courses and related experiences will provide opportunities for students, instructors, and allied partners to reflect (individually and collectively) upon their learning about a wide range of issues associated with environmental sustainability, economic development and community prosperity, justice and well-being with an intention to articulate change in one's own understandings.
5. Collaboration and deliberation. Courses and related experiences will promote among students, instructors and allied partners opportunities to develop knowledge, skills and dispositions inherent to democratic/civic participation.
6. Career stakeholder engagement. Courses and related experiences will engage food systems stakeholders and prospective employers from government, industry and non-profit sectors. By assessing stakeholders' understandings of critical competencies for successful food systems work, Food Systems minor graduates will be better prepared to address current food system challenges and also achieve their personal and professional goals.

Program Requirements

Requirement	Credits
Requirements for the Minor	18-19

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
Prescribed Courses: Require a grade of C or better		
AGBM 170	Investigating the U.S. Food System: How food moves from field to table	3
FDSYS 490	From Agriculture to Culture: Perspectives on your food from seed to plate	1
FDSYS 495	Internship	2-3
Additional Courses		
Additional Courses: Require a grade of C or better		
Select 3 credits each from two of the three topic areas. At least one selected additional course should be at the 400-level:		6
Topic Area: Agricultural and Environmental Sciences:		
AGECO 134N	Sustainable Agriculture Science and Policy	
AGECO/ENT 457	Principles of Integrated Pest Management	
AGRO 28	Principles of Crop Management	
ANSC 100	Introduction to Animal Industries	
Topic Area: Food, Nutrition and Health:		
FDSC 200	Introductory Food Science	
NUTR 100	Nutrition Applications for a Healthy Lifestyle	
NUTR 175		

NUTR 251	Introductory Principles of Nutrition
HM/FDSYS 407	The Sustainable Fork: Food Systems Decisions for Away-From-Home Eating
Topic Area: Human and Social Dimensions:	
CED/FDSYS 442	Changing Food Systems: Comparative Perspectives
CI 304N	Food, Farms & Justice: What's Education Got To Do With Them?
GEOG 3N	Food and the Future Environment
HIST 111	Introduction to U.S. Food History

Supporting Courses and Related Areas

Supporting Courses and Related Areas: Require a grade of C or better

Select 6 credits from approved list in consultation with the minor adviser. At least 3 of the credits must be from the topic area not selected under Additional Courses. The following courses are recommended for meeting the requirements of the minor. Students may substitute courses to meet this requirement in consultation with the minor adviser. 6

Agricultural and Environmental Sciences:	
AGECO 134N	Sustainable Agriculture Science and Policy
AGECO 144	Principles and Practices of Organic Agriculture
AGECO 201	Introductory Agroecology
AGECO/ANSC/SOILS 418	Nutrient Management in Agricultural Systems
AGECO/ENT 457	Principles of Integrated Pest Management
AGRO 28	Principles of Crop Management
AGRO 423	Forage Crop Management
AGRO 425	Field Crop Management
ANSC 100	Introduction to Animal Industries
ANSC 201	Animal Science
ANSC/FDSC 207	Animal Products Technology
ANSC/FDSC 208	Animal Products Technology Laboratory
ENT 222	
ERM 210	Environmental Factors and Their Effect on Your Food Supply
HORT 101	Horticultural Science
HORT 431	Small Fruit Culture
HORT 432	Deciduous Tree Fruits
HORT 433	Vegetable Crops
INTAG 300	Tropical Agriculture and Food Systems
PLANT 220	Gardening for Fun and Profit
PPEM 120	The Fungal Jungle: A Mycological Safari From Truffles to Slime Molds
PPEM 225	Mushroom Cultivation
PPEM 300	Horticultural Crop Diseases
SOILS 101	Introductory Soil Science
SOILS 402	Soil Nutrient Behavior and Management
SOILS 412W	Soil Ecology
SOILS 422	Natural Resources Conservation and Community Sustainability
Food, Nutrition, and Health:	
BBH 130	Strategies for Addressing the Obesity and Diabetes Epidemics
FDSC/STS 105	Food Facts and Fads
FDSC 200	Introductory Food Science
FDSC 406W	Physiology of Nutrition
FDSC 460	International Food Production
HM 304	Institutional Food Service Management
HM 329	
HM 330	Food Production and Operations Management
HM/FDSYS 407	The Sustainable Fork: Food Systems Decisions for Away-From-Home Eating
HM 413	New Product Development for Commercial Foodservice
HM 430	Applied Leadership in Foodservice Operations Management
NUTR 100	Nutrition Applications for a Healthy Lifestyle
NUTR 119	Elementary Foods
NUTR 175Z	Healthy Food for All: Factors that Influence What we Eat in the US
NUTR 361	Community and Public Health Nutrition
NUTR 421	Biocultural Perspectives on Public Health Nutrition
NUTR 425	Global Nutrition Problems: Health, Science, and Ethics
Human and Social Dimensions:	
AG/CED 160	Introduction into Ethics and Issues in Agriculture
AGBM 102	Economics of the Food System
AGBM 302	Food Product Marketing
AGBM 460	Managing the Food System
ANTH 120	First Farmers
ANTH 140	Anthropology of Alcohol
ANTH 152	Hunters and Gatherers
ANTH 375Q	Anthropology of Food Honors
CI 304N	Food, Farms & Justice: What's Education Got To Do With Them?
CED 155	Science, Technology and Public Policy
CED/FDSYS 442	Changing Food Systems: Comparative Perspectives
ENGL 179	Exploring the Literature of Food: Current Trends in American Food Writing and Environmentalism
GEOG 3N	Food and the Future Environment
HIST 111	Introduction to U.S. Food History
HIST 451	The Consumer Revolution
HORT 150N	Plants in the Human Context
INTAG 100	
JST/RLST 405	

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged

in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/32-00-advising-policy/)

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