ASCI 202: APPLIED FOOD SAFETY MGMT

Proposer:

Name:	Email:
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Effective Term:
Fall 2024

Credit Status:
Credit - Degree Applicable

Subject:
ASCI - Animal Science

Course Number:
202

Discipline:

And/Or	(	Discipline	)
		Agricultural Production (Animal science, plant science, beekeeping, aquaculture)	
Or		Agricultural Business and Related Services	

Catalog Title
Applied Food Safety Management

Catalog Description
Overview of the government entities regulating food safety for the US Federal Government. Basic understanding of pathogenic organisms and how to identify/test them from a farm perspective, plant perspective, and packing perspective. Understanding and implementing HACCP and PCQI in an applied agricultural setting from farm to fork.

Method of Instruction:
Distance Education (Emergency Addendum)
Laboratory
Lecture and/or Discussion

Course Units/Hours:

Course Units Minimum:
3

Lecture Hours Minimum (week)
3

Lab Hours Minimum (week)
1

Total Contact Hours Minimum (semester)
70

Total Outside Hours Minimum (semester)
105

Total Student Learning Minimum Hours (semester)
175

Repeatability:
No

Open Entry/Exit:
No

Field Trips:
Not Required

Grade Mode:
Standard Letter

TOP Code:
010200 - * Animal Science

SAM Code:
C - Clearly Occupational

Course Content

Methods of Assessment:
Essay quizzes or exams
Mulitple choice tests
Oral presentations
Problem solving assignments or activities
Project
Short answer quizzes or exams
Skill demonstrations
Written essays or extended papers

Course Topics:

	Course Topics
1	Overview of Hazard Analysis Critical Control Points (HACCP)
2	Introduction to Food Microbiology
3	Microbial Growth, Survival, and Death in Food Products
4	Microbial Spores and their Significance
5	Detection and Enumeration of Microbes in Food
6	Rapid and Automated Microbial Methods
7	Pathogenic Microbiological Organisms of Concern from a Farm, Packer, and Processor Perspective
8	Chemical, Physical, and Economically Motivated Hazards
9	Importance of Preventative Controls Qualified Individual (PCQI)
10	Hazard Analysis and Preventative Controls Determination
11	Process Preventive Controls
12	Food Allergen Preventive Controls
13	Sanitation Preventive Controls
14	Supply Chain Preventive Controls
15	Verification and Validation Procedures
16	Record Keeping Procedures
17	Developing a Recall Plan
18	Developing a Food Safety Plan

Course Objectives:

	Course Objectives
1	Understand the differences between the FDA and USDA as it pertains to regulatory oversight.
2	Initiate and develop understanding of microorganisms playing a significant role in the production, processing, fermentation shelf life and safety of various foods.
3	Understand how to detect and quantify microbiological organisms of concerning using various laboratory testing methodologies.
4	Understanding the importance of PCQI as it pertains to FSMA.
5	Have a solid foundation of all of the steps and processes of PCQI.
6	Successfully developing a food safety plan from either a farm, processor, or packing industry perspective.

Course Outcomes:

	Course Outcomes
1	Ensure students can successfully obtain PCQI Certification if desired.

Assignments:

Assignment Type:	Details
Reading	Students will read Chapter 2 from Food Microbiology An Introduction entitled Microbial Growth, Survival, and Death in Foods
Writing	Students will write up a comprehensive Food Safety Plan from either the farm, processing plant, or packing plant perspective for a food commodity of their choice.
Homework	Students will have to explain differences of pathogenic bacteria in terms of characteristics, environmental sources, and virulence factors and mechanisms of pathogenicity.
Lab	Students will have to properly pour a media place, successfully streak a sample on the media plate, and then properly enumerate the sample on the media plate.

Textbooks or other support materials

Resource Type:	Details
Web/Other	PCQI Certification Modules
Books	Barach, J.T., and Harman, M.M.. HACCP A Systematic Approach to Food Safety., 5th ed. Grocery Manufacturers Association, 2015, ISBN: 9780937774229
Books	Matthews, K.R., Kniel K.E, and Monteville T.J.. Food Microbiology An Introduction, 4th ed. ASM Press, 2017, ISBN: 9781555819385

Equity Review:

Yes

Other Degree Attributes

Degree Applicable
Not Transferable
Not a Basic Skills Course

Banner Title:

Applied Food Safety Mgmt

Curriculum Committee Approval Date:

03/06/2024

Academic Senate Approval Date:

03/13/2024

District Governing Board Approval Date:

04/08/2024

Course Control Number:
CCC000594690