

# HARTNELL COLLEGE

## COURSE OUTLINE

CC Approval: 04/19/2018

Board of Trustees:

Last Revised:

DESIGNATOR & NUMBER: ABT 131COURSE TITLE: Agricultural Practices for Food SafetyCREDIT UNITS: 1.5FACULTY INITIATOR: Aileen Rickert-EhnSEMESTER HOURS:

24.00 - 27.00	Lecture Contact Hours
0.00	Lab Contact Hours
24.00 - 27.00	Total Contact Hours
48.00 - 54.00	Total Out-of-Class Hours
72.00 - 81.00	Total Student Learning Hours

TOTAL CONTACT HOURS (BASED ON 16-18 WEEKS)

24.00 - 27.00	Lecture
0.00	Lab
0.00	By Arrangement Lab Hours (DHR)

GRADING BASIS:

Grade Only

PREREQUISITE:

ABT 130: Introduction to Food Safety with a grade of "C" or better

COREQUISITE:ADVISORY:OTHER:COURSE DESCRIPTION:

Focuses on establishing agricultural practices as they relate to the production of farm products from a food safety standpoint. Covers the specific guidelines for some key agricultural commodities, regulating and monitoring food safety guidelines, writing standard operating procedures, employee

training, and technologies to assist in production of safe food. Field trips may be required.

COURSE OBJECTIVES:

Upon satisfactory completion of the course, students will be able to

1. identify and evaluate production hazards that could lead to food borne illness.
2. discuss the key points to account for in considering food safety guidelines for a specific commodity.
3. compose effective standard operating procedures.
4. evaluate the effectiveness of a standard operating procedure and revise when appropriate.
5. create an employee food safety training schedule.
6. compare and contrast alternative microbial eradication technologies.
7. summarize the role of specific government agencies in food safety with the respect to production agriculture.

COURSE CONTENT:

- I. Good Agricultural Practices
  - A. What is meant by GAPs?
  - B. Field and farm conditions that may lead to food borne illness
  - C. Potential hazards from agricultural inputs
- II. Commodity specific food safety guidelines (emphasis where appropriate, depending on location)
  - A. Meat, poultry and egg products
    1. The Pathogen Reduction/HACCP Regulation
    2. Carcass temperature regulatory requirements
    3. Using continuous time/temperature recorders
    4. Repackaging labeled meat products
    5. Compliance of meat sampling techniques
    6. Design and implementation of sampling and testing programs
    7. Federal inspection programs
  - B. Leafy greens
    1. General requirements
    2. Environmental assessments
    3. Water considerations and hazards
    4. Soil amendments
    5. Non-synthetic crop treatments
    6. Worker hygiene, equipment sanitation
    7. Harvest and field personnel sanitation
    8. Production location considerations
  - C. Canned, dehydrated and frozen products
    1. The risk of microbiological contamination
    2. Does processing destroy food borne pathogens?
    3. Food security issues and implementation of the Bioterrorism Act
  - D. Other fresh fruits and vegetables
    1. Watermelons – overview of food safety guidelines
    2. Tomatoes – overview of food safety guidelines
- III. Regulating and monitoring food safety during production
  - A. Writing standard operating procedures
  - B. Implementing standard operating procedures
  - C. Employee training and compliance

- D. Field auditing
  - E. The role of government agencies
    1. Local health departments
    2. California Department of Food and Agriculture
    3. Food and Drug Administration
    4. USDA Federal Inspection Service
    5. U.S. Environmental Protection Agency
- IV. Technologies to support food safety
- A. Eradication technologies
    1. Ozone treatments
    2. Pasteurization
    3. Irradiation with X-Ray, Electron or Gamma
  - B. Water treatment
  - C. Microbiological testing

INSTRUCTIONAL METHODOLOGY:

Lecture

Individual Assistance

Other (Specify)

Audiovisual (including PowerPoint or other multimedia)

Demonstration

Discussion

Group Activity

Requires a minimum of three (3) hours of work per unit including class time and homework.

Other: Field Trips

METHODS OF EVALUATING OBJECTIVES OR OUTCOMES:

Methods of evaluation to determine if students have met objectives may include, but are not limited to the following:

**CLASSROOM**

**EXPLANATION**

Class Activity

Class discussion, group projects, internet based assignments

Oral Assignments

Class discussions and assignments

Written Assignments

Short written answers on tests, outside assignments, and projects

**EXAMS**

**EXPLANATION**

Comprehensive Final

Comprehensive final

Problem Solving

Analysis and comparison of various eradication technologies

Skill Demonstration

Writing effective standard operating procedures, create an employee safety training program

Objective Test

Midterm and final

Quizzes

Weekly

MINIMUM STUDENT MATERIALS:

Textbook(s) similar to:

Marriott, Norman G. *Principles of Food Sanitation*. 5th Ed, Springer Science Business Media,

2006

Binder containing handouts, including research papers, trade publication articles, protocols, GAP's, and other current information.

- Food Safety Modernization Act: Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption rule
- Produce Safety Alliance standardized curriculum

## COURSE ASSIGNMENTS

### **Examples of Reading Assignments**

Course handouts, internet based materials as assigned, textbook assignments.

### **Examples of Writing Assignments**

Report or case study of a procedure of good agricultural practice.

### **Examples of Outside Assignments**

Complete a project of developing a set of specific standard operating procedures or an employee training program.

5058