

## View Outline

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## Food Safety and Post Harvest Handling

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## 1. Course Alpha. See HELP for information.

AG

## 2. Course Number. See HELP for information.

104

## 3. Course Title/Catalog Title. See HELP for information.

Food Safety and Post Harvest Handling

## 4. Number of Credits. See HELP for information.

1

## 5. Contact Hours/Type. See HELP for information.

- Hour lecture (1)

## 6. Course Description. See HELP for information.

Examines Food Safety Certification requirements for Farms. Explores and evaluates post harvest handling of farm products including vegetables, fruits, meats and flowers. Identifies and evaluates standard wholesale and retail packaging for various farm products. Reviews worker protection standards.

## 7. Pre-Requisites. Please click on HELP icon for style sheet.

none

## 8. Co-requisites

none

## 9. Recommended Preparation.

none

## 10. Is this a cross-listed course? See help for information.

NO

## 11. Reason for Proposal. Why is this course being proposed or modified? See help for information, as this question requires specific information as part of the explanation.

Hour lab

Examines Farm Food Safety Certification requirements, post harvest handling of products, and packaging standards.

The Sustainable Tropical Crop Production AAS is being modified to meet the needs of the New Farmer Institute goals of developing agriculture entrepreneurs. An understanding of food safety best practices is essential for new farmers. Proper post harvest handling and proper packaging is also essential for marketing farm products.

These topics were only briefly touched upon in AG 251. This course will provide a focus on these topics and the principles can be practiced and reinforced in the production courses.

This course or a similar course is not offered in the UH system.

12. Effective Semester and Year. For new or modified courses, the effective year is one year from the semester proposed. For example, if proposed in Spring 2012, the effective semester is Spring 2013. See help for more information.

Fall 2012

13. Grading Method. What grading methods may be used for this course? See help for information.

- Standard (Letter,Cr/NCr,Audit) (0)

14. Is this course repeatable for credit? How often can this course be counted toward a degree or certificate? See help for information.

NO

15. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "COURSE LEARNING OUTCOMES" and enter in that screen. Course Student Learning Outcomes (Course SLOs). These need to be added before the connections are made in question 20. See help for information.

Course SLO/Competency	Describe various pathogens and their potential entry points in a food production system.	Outline pre-harvest food safety requirements for food crops.	Outline harvest food safety requirements for food crops.	Outline post-harvest handling food safety requirements for food crops.	Describe various methods to meet food safety requirements for food crops grown in Hawaii.	Compare the post-harvest handling requirements of different crops and products.	Summarize the requirements of worker protection standards.
Describe proper pre-harvest, harvest and post harvest handling of food and other perishable farm products.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Explain or interpret requirements for food safety certification and worker protection standards.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Course SLO/GESLO	Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems.
Describe proper pre-harvest, harvest and post harvest handling of food and other perishable farm products.	
Explain or interpret requirements for food safety certification and worker protection standards.	<input checked="" type="checkbox"/>

Course SLO/PSLO	Recommend cultural practices, solve problems, plan projects, and cultivate horticultural crops in a sustainable manner based on sound biological and technological principles.
Describe proper pre-harvest, harvest and post harvest handling of food and other perishable farm products.	<input checked="" type="checkbox"/>

Explain or interpret requirements for food safety certification and worker protection standards.	<input checked="" type="checkbox"/>
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16. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "COURSE COMPETENCIES/ISSUES/SKILLS" and enter text in that screen. Competencies/Concepts/Issues/Skills

Competency/Content	Introduction (0-1 wk)	Describe basic biology of food borne pathogens associated with farms and post harvest handling. (1-2wks)	Examine the entry points of food borne pathogens from the farm to consumer. (1-4 wks)	Review food safety requirements in crop production. (1-3 wks)	Review food safety requirements for crop harvest. (1-3 wks)	Review food safety requirements during post-harvest. (1-3 wks)	Examine different methods and materials to meet food safety certification for various farm products. (2-6 weeks)	Examine different standard wholesale packaging methods and materials for different crops. (2-5 weeks)	Examine different post harvest handling requirements and methods for different crops. (2-5 weeks)	Review worker protection standards. (1-2 wks)
Describe various pathogens and their potential entry points in a food production system.										
Outline pre-harvest food safety requirements for food crops.										
Outline harvest food safety requirements for food crops.										
Outline post-harvest handling food safety requirements for food crops.										
Describe various methods to meet food safety requirements for food crops grown in Hawaii.										
Compare the post-harvest handling requirements of different crops and products.										
Summarize the requirements of worker protection standards.										

17. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "RECOMMENDED COURSE CONTENT..." and enter text in that screen. Recommended Course Content and Timeline. See HELP for information.

Content
Introduction (0-1 wk)
Describe basic biology of food borne pathogens associated with farms and post harvest handling. (1-2wks)
Examine the entry points of food borne pathogens from the farm to consumer. (1-4 wks)
Review food safety requirements in crop production. (1-3 wks)
Review food safety requirements for crop harvest. (1-3 wks)
Review food safety requirements during post-harvest. (1-3 wks)
Examine different methods and materials to meet food safety certification for various farm products. (2-6 weeks)
Examine different standard wholesale packaging methods and materials for different crops. (2-5 weeks)
Examine different post harvest handling requirements and methods for different crops. (2-5 weeks)
Review worker protection standards. (1-2 wks)

18. Recommended Evaluation and Assessment Methods. See help for information.

- Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics. (0)
- Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics. (0)
- Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics. (0)
- Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics. (0)
- Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics. (0)

Method of Evaluation	Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics.	Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics.	Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics.	Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics.	Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics.
<b>Course SLOs</b>					
Describe proper pre-harvest, harvest and post harvest handling of food and other perishable farm products.					
Explain or interpret requirements for food safety certification and worker protection standards.					
<b>Course Competencies</b>					
Describe various pathogens and their potential entry points in a food production system.					
Outline pre-harvest food safety requirements for food crops.					
Outline harvest food safety requirements for food crops.					
Outline post-harvest handling food safety requirements for food crops.					
Describe various methods to meet food safety requirements for food crops grown in Hawaii.					
Compare the post-harvest handling requirements of different crops and products.					
Summarize the requirements of worker protection standards.					

<b>Method of Evaluation</b>
Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics.
Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics.
Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written,

oral, computerized, in-class, take-home, at testing sites; appropriate rubrics.
Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics.
Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics.

19. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "PLOs" and enter text in that screen. Program Student Learning Outcomes (PLOs) supported by this course. If you are not a "program" use the Liberal Arts PLOs, view them by clicking on the HELP icon.

Program SLO
Recommend cultural practices, solve problems, plan projects, and cultivate horticultural crops in a sustainable manner based on sound biological and technological principles.

20. General Education Student Learner Outcomes (CASLOs). FIRST, fill out the CASLO grid located in the UHMC tab above. Click on the HELP icon for tips on determining support for the CASLOs and indicate your choices below by clicking on the box in front of each supported CASLO. NOTE: Our campus does not use the Preparatory Level, Level 1 and Level 2 designations in the chart below.

<input type="checkbox"/>	<b>Creativity</b> - Able to express originality through a variety of forms.
<input checked="" type="checkbox"/>	<b>Critical Thinking</b> - Apply critical thinking skills to effectively address the challenges and solve problems. <input checked="" type="checkbox"/> Preparatory Level
<input type="checkbox"/>	<b>Information Retrieval and Technology</b> - Access, evaluate, and utilize information effectively, ethically, and responsibly.
<input type="checkbox"/>	<b>Oral Communication</b> - Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.
<input type="checkbox"/>	<b>Quantitative Reasoning</b> - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantitative reasoning accurately and appropriately.
<input type="checkbox"/>	<b>Written Communication</b> - Write effectively to convey ideas that meet the needs of specific audiences and purposes.

	Creativity	Critical Thinking	Information Retrieval and Technology	Oral Communication	Quantitative Reasoning	Written Communication
Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics.						
Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics.						
Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics.						
Includes, but is not limited to: group discussions, group						

projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics.						
Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics.						

GenED SLO
Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems.

21. Linking Items in Course Outline. CLICK ON CHAIN LINK ICON IN UPPER RIGHT HAND CORNER TO BEGIN LINKING. See HELP for more information on Linking.

22. Method(s) of delivery appropriate for this course. See Help for information.

- Cable TV (0)
- Classroom/Lab (0)
- HITS/Interactive TV (0)
- Hybrid (0)
- Online (0)

23. Text and Materials, Reference Materials, and Auxiliary Materials. See Help for information.

No formal text.

Handouts and readings from United States Department of Agriculture (USDA), UH College of Tropical Agriculture and Human Resources, and other relevant sources.

24. Maximum enrollment. See Help for information.

24. This is the capacity of the agriculture room.

25. Particular room type requirement. Is this course restricted to particular room type? See Help for information.

NO

Prefer Ho'oulu 104.

26. Special scheduling considerations. Are there special scheduling considerations for this course? See Help for information.

NO

27. Are special or additional resources needed for this course? See Help for information.

None

28. Does this course require special fees to be paid for by students? See Help for information.

NO

29. Does this course change the number of required credit hours in a degree or certificate? See help for information.

This course would be included in the Sustainable Tropical Crop Production CC – however AG 290(1) would no longer be required so this course alone does not change the number of credits. AG 103 will move the requirement from 15 to 17 credits

This course would be included in the Sustainable Tropical Crop Management CA and AAS. However, a 3 credit course requirement is being dropped allowing this course and AG 252(2) to substitute. The A.AS will go from 60 credits to 62 credits with the addition of AG 103.

30. Course designation(s) for the Liberal Arts A.A. degree and/or for the college's other associate degrees. See Help for information.

Degree	Program	Category
AA Liberal Arts:		
AS:		
AAS:	AG and NR - Sustainable Tropical Crop Mgt.	PR - Program Requirement
BAS:		
Developmental/ Remedial:		

31. Course designation(s) for other colleges in the UH system.

C.C. in Sustainable Tropical Crop Production and C.A. and A.A.S. in Sustainable Tropical Crop Management.

32. Indicate the year and page # of UHMC catalog referred to. For new or modified courses, please indicate the catalog pages that need to be modified to reflect the new or modified course and provide sheet outlining catalog changes.

2011-2012

33. General Education Student Learner Outcomes (CASLOs). Please click on the HELP icon for more information.

<b>Standard 1 - Written Communication</b> Write effectively to convey ideas that meet the needs of specific audiences and purposes.		
Outcome 1.1 - Use writing to discover and articulate ideas.		1
Outcome 1.2 - Identify and analyze the audience and purpose for any intended communication.		0
Outcome 1.3 - Choose language, style, and organization appropriate to particular purposes and audiences.		0
Outcome 1.4 - Gather information and document sources appropriately.		1
Outcome 1.5 - Express a main idea as a thesis, hypothesis, or other appropriate statement.		0
Outcome 1.6 - Develop a main idea clearly and concisely with appropriate content.		0
Outcome 1.7 - Demonstrate a mastery of the conventions of writing, including grammar, spelling, and mechanics.		0
Outcome 1.8 - Demonstrate proficiency in revision and editing.		0
Outcome 1.9 - Develop a personal voice in written communication.		0
<b>Standard 2 - Quantitative Reasoning</b> Synthesize and articulate information using appropriate mathematical methods to solve problems of quantitative reasoning accurately and appropriately.		
Outcome 2.1 - Apply numeric, graphic, and symbolic skills and other forms of quantitative reasoning accurately and appropriately.		0
Outcome 2.2 - Demonstrate mastery of mathematical concepts, skills, and applications, using technology when appropriate.		0
Outcome 2.3 - Communicate clearly and concisely the methods and results of quantitative problem solving.		0
Outcome 2.4 - Formulate and test hypotheses using numerical experimentation.		0
Outcome 2.5 - Define quantitative issues and problems, gather relevant information, analyze that information, and present results.		0

Outcome 2.6 - Assess the validity of statistical conclusions.	0
<b>Standard 3 - Information Retrieval and Technology.</b> Access, evaluate, and utilize information effectively, ethically, and responsibly.	
Outcome 3.1 - Use print and electronic information technology ethically and responsibly.	1
Outcome 3.2 - Demonstrate knowledge of basic vocabulary, concepts, and operations of information retrieval and technology.	0
Outcome 3.3 - Recognize, identify, and define an information need.	0
Outcome 3.4 - Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information.	0
Outcome 3.5 - Create, manage, organize, and communicate information through electronic media.	0
Outcome 3.6 - Recognize changing technologies and make informed choices about their appropriateness and use.	0
<b>Standard 4 - Oral Communication</b> Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.	
Outcome 4.1 - Identify and analyze the audience and purpose of any intended communication.	0
Outcome 4.2 - Gather, evaluate, select, and organize information for the communication.	0
Outcome 4.3 - Use language, techniques, and strategies appropriate to the audience and occasion.	0
Outcome 4.4 - Speak clearly and confidently, using the voice, volume, tone, and articulation appropriate to the audience and occasion.	0
Outcome 4.5 - Summarize, analyze, and evaluate oral communications and ask coherent questions as needed.	0
Outcome 4.6 - Use competent oral expression to initiate and sustain discussions.	0
<b>Standard 5 - Critical Thinking</b> Apply critical thinking skills to effectively address the challenges and solve problems.	
Outcome 5.1 - Identify and state problems, issues, arguments, and questions contained in a body of information.	1
Outcome 5.2 - Identify and analyze assumptions and underlying points of view relating to an issue or problem.	0
Outcome 5.3 - Formulate research questions that require descriptive and explanatory analyses.	0
Outcome 5.4 - Recognize and understand multiple modes of inquiry, including investigative methods based on observation and analysis.	0
Outcome 5.5 - Evaluate a problem, distinguishing between relevant and irrelevant facts, opinions, assumptions, issues, values, and biases through the use of appropriate evidence.	0
Outcome 5.6 - Apply problem-solving techniques and skills, including the rules of logic and logical sequence.	0
Outcome 5.7 - Synthesize information from various sources, drawing appropriate conclusions.	2
Outcome 5.8 - Communicate clearly and concisely the methods and results of logical reasoning.	0
Outcome 5.9 - Reflect upon and evaluate their thought processes, value system, and world views in comparison to those of others.	0
<b>Standard 6 - Creativity</b> Able to express originality through a variety of forms.	
Outcome 6.1: Generate responses to problems and challenges through intuition and non-linear thinking.	0
Outcome 6.2: Explore diverse approaches to solving a problem or addressing a challenge.	0
Outcome 6.3: Sustain engagement in activities without a preconceived purpose.	0



Outcome 6.4: Apply creative principles to discover and express new ideas.		0
Outcome 6.5: Demonstrate the ability to trust and follow one's instincts in the absence of external direction		0
Outcome 6.6: Build upon or adapt the ideas of others to create novel expressions or new solutions.		0

## 34. Additional Information

## Outline Information

**Proposer:** ANN EMMSLEY  
**Progress:** APPROVAL  
**Modify Date:** 02/07/2012 9:30 PM  
**Approved Date:**

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