

[View Outline](#)View: [Compressed](#) | [Expanded](#)

Introduction to Beekeeping

[Print friendly](#)**1. Course Alpha. See HELP for information.**

AG

2. Course Number. See HELP for information.

162

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

Introduction to Beekeeping

4. Number of Credits. See HELP for information.

2

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

- Hour lecture/lab (2)

6. Course Description. See HELP for information.

Introduces the biology and behavior of honeybees and best management practices for hive management. Develops hands-on skills for hive inspection, maintenance, and management techniques to control honeybee diseases and pests. Investigates alternative pollinators.

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

none

8. Co-requisites

none

9. Recommended Preparation.

AG 174

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

Has been offered twice as an experimental 190V course (As of Spring 12). Bee pests recently introduced to Hawaii has made commercial & hobby beekeeping important to the agriculture industry in Hawaii. Beekeeping important to sustainable production.

Similar to ENTO 262 UH Hilo except this class will be only 2 credits instead of 3 credits.

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 the basic biology of bees.	Explain the role of pollination in agriculture systems and natural systems.	List and identify alternative pollinators.	List the parts of a commercial beehive and beekeeping equipment and explain their function.	Wear and use the proper equipment to safely handle bees.	Build a bee hive.	Carry out basic hive maintenance activities.	Extract honey from a hive.	Identify common pests and diseases of honeybees and recommend control measures.
Explain the biology of honeybees, means of pollination, and the role that pollinators play in the environment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	
Retrieve and evaluate information regarding the best management practices of apiculture, including hive management, honey production, and honeybee husbandry.		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Identify honeybee diseases and recommend the most environmentally and economically appropriate control measures.									<input checked="" type="checkbox"/>

Course SLO/GESLO	Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems.
Explain the biology of honeybees, means of pollination, and the role that pollinators play in the environment.	
Retrieve and evaluate information regarding the best management practices of apiculture, including hive management, honey production, and honeybee husbandry.	<input checked="" type="checkbox"/>
Identify honeybee diseases and recommend the most environmentally and economically appropriate control measures.	<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.	Explain the relationships between agroecosystems, economics, human culture, and natural environments.
Explain the biology of honeybees, means of pollination, and the role that pollinators play in the environment.		<input checked="" type="checkbox"/>
Retrieve and evaluate information regarding the best management practices of apiculture, including hive management, honey production, and honeybee husbandry.	<input checked="" type="checkbox"/>	
Identify honeybee diseases and recommend the most environmentally and economically appropriate	<input checked="" type="checkbox"/>	

control measures.

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 to beekeeping and pollination. (1-2 wks)	Life history of workers, queens and drones. (1-2wks)	Races of Honeybees (1-2 wks)	Behavior of honeybees. (2-4 wks)	Diseases and enemies of the hive. (2-4 wks)	Reproduction and development (1-3 wks)	Honey and Its characteristics (1-3 wks)	Alternative pollinators. (1-3 wks)	Hive box construction. (1-4 wks)	Cultural practices such as hive inspection, swarm collection, requeening, and honey extraction. (4-8wks)
Describe the basic biology of bees.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				
Explain the role of pollination in agriculture systems and natural systems.	<input checked="" type="checkbox"/>									
List and identify alternative pollinators.								<input checked="" type="checkbox"/>		
List the parts of a commercial beehive and beekeeping equipment and explain their function.										<input checked="" type="checkbox"/>
Wear and use the proper equipment to safely handle bees.										<input checked="" type="checkbox"/>
Build a bee hive.									<input checked="" type="checkbox"/>	
Carry out basic hive maintenance activities.										<input checked="" type="checkbox"/>
Extract honey from a hive.							<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Identify common pests and diseases of honeybees and recommend control measures.					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>

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 to beekeeping and pollination. (1-2 wks)
Life history of workers, queens and drones. (1-2wks)
Races of Honeybees. (1-2 wks)
Behavior of honeybees. (2-4 wks)
Diseases and enemies of the hive. (2-4 wks)
Reproduction and development (1-3 wks)
Honey and Its characteristics (1-3 wks)
Alternative pollinators. (1-3 wks)
Hive box construction. (1-4 wks)
Cultural practices such as hive inspection, swarm collection, requeening, and honey extraction. (4-8wks)

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: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; 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, 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: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; appropriate rubrics.	Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics.
Course SLOs						
Explain the biology of honeybees, means of pollination, and the role that pollinators play in the environment.						
Retrieve and evaluate information regarding the best management practices of apiculture, including hive management, honey production, and honeybee husbandry.						
Identify honeybee diseases and recommend the most environmentally and economically appropriate control measures.						
Course Competencies						
Describe the basic biology of bees.						
Explain the role of pollination in agriculture systems and natural systems.						
List and identify alternative pollinators.						
List the parts of a commercial beehive and beekeeping equipment and explain their function.						
Wear and use the proper equipment to safely handle bees.						
Build a bee hive.						
Carry out basic hive maintenance activities.						
Extract honey from a hive.						
Identify common pests and diseases of honeybees and recommend control						

measures.						
-----------	--	--	--	--	--	--

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: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; 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.
Explain the relationships between agroecosystems, economics, human culture, and natural environments.

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"/>	Creativity - Able to express originality through a variety of forms.
<input checked="" type="checkbox"/>	Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems. <input checked="" type="checkbox"/> Preparatory Level
<input type="checkbox"/>	Information Retrieval and Technology - Access, evaluate, and utilize information effectively, ethically, and responsibly.
<input type="checkbox"/>	Oral Communication - Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.
<input type="checkbox"/>	Quantitative Reasoning - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantitative reasoning accurately and appropriately.
<input type="checkbox"/>	Written Communication - 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: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; 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.

- Classroom/Lab (0)

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

Text: No formal text. Use publications and websites from United States Department Agriculture, UH College of Tropical Agriculture and Human Resources, and other land grant institutions.

Materials: Beekeeping suit, hat, mask and gloves

24. Maximum enrollment. See Help for information.

Maximum enrollment is 10. Limited enrollment is necessary for safety reasons. Ten students is the most an instructor could supervise safely when working with the bee hives.

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

NO

Needs a room close to bee yard so can transition to lab activities.

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

YES

Schedule when other students are not working near bee yard.

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

Beekeeping equipment - boxes and a bee yard area.

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

NO
Students may be asked to purchase a beekeeping suit. These can be ordered online.

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

No - it is an elective.

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:	AA	LE - Elective
AS:		
AAS:	AG and NR -- All	PE - Program Elective
BAS:		
Developmental/ Remedial:		

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

AAS in Sustainable Tropical Crop Management at UHMC.

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.

Standard 1 - Written Communication Write effectively to convey ideas that meet the needs of specific audiences and purposes.		
Outcome 1.1 - Use writing to discover and articulate ideas.		0
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
Standard 2 - Quantitative Reasoning 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
Standard 3 - Information Retrieval and Technology. 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.	1
Outcome 3.4 - Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information.	2
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
Standard 4 - Oral Communication 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
Standard 5 - Critical Thinking 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.	0
Outcome 5.2 - Identify and analyze assumptions and underlying points of view relating to an issue or problem.	1
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.	1
Outcome 5.5 - Evaluate a problem, distinguishing between relevant and irrelevant facts, opinions, assumptions, issues, values, and biases through the use of appropriate evidence.	1
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
Standard 6 - Creativity 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 9:56 PM
Approved Date:

approval history (9) | Print friendly