

PLOS and Rubrics for the CAFNRM

Curriculum Matrix for PLOs for Animal Health and Management I=introduce D=develop M=exhibit mastery					
COURSES	PLO 1: Students will achieve a working knowledge of biology, chemistry, and mathematics as a foundation for further studies.	PLO 2: Students will achieve a basic understanding in the different animal science disciplines and be able to apply this knowledge to effectively manage and care for livestock.	PLO 3: Students will have experiential learning opportunities with farm animals through routine hands-on laboratories held at the UH Hilo Agricultural Farm Laboratory. When available, field trips to local farms and ranches will also provide learning opportunities with farm animals. Students will gain hands-on experience with livestock to help enhance their competitiveness in future studies and careers	PLO 4: Students will use and refine their communication skills in various classes GE RUBRICS FOR INFORMATION LITERACY AND WRITTEN COMMUNICATION	PLO 5: Students will develop and apply their computer skills to agricultural examples.
All 100-level courses	I	I	I	I	i
All 200-level courses	I	I	D	I	i
300-level core requirements	D	D	M	D	D
300-level electives	D	D	M	D	D
400-level electives	M	M	M	M	M
496 (Capstone)	M	M	M	M	M

Animal Health and Management PLO 2 & 3 Rubrics

ANSC 353 Horse Production		
Scale	Exhibit proper protocol (Discipline Specific Skill--PLO)	Communication (GE Learning Outcome 3)
Mastery	Demonstrates ideal, textbook protocol for inspection of animal.	Communicates clear and thorough procedures during inspection using advanced terminology and can demonstrate why the step is important in terms of safety.
Minimum Competence	Can demonstrate all the proper steps in inspection but may not be thorough or done with some flaws.	Can articulate procedure but may not fully demonstrate importance of steps; uses lay terms too often; explanation may be minimal.
Needs Improvement	Cannot demonstrate proper inspection protocol—possible unsafe conditions may occur as a result of this inspection if left uncorrected.	Cannot articulate procedures and cannot articulate the reasons for them.

ENTO 350 Advanced Beekeeping				
Scale	Inspection Protocol (Discipline Specific Skill--PLO)	Identify existing and potential problems (Discipline Specific Skill--PLO)	Research (GE Learning Outcome 2)	Devise and implement treatment /maintenance plan (GE Learning Outcome 1)
Mastery	Undertakes an exhaustive yet time efficient inspection protocol	Can identify a wide-range of problems, including those that are uncommon.	Undertakes an exhaustive search of information utilizing multiple academic, peer-reviewed literature.	Hive exhibits increased reproductive output (colony is healthy and expanding)
Minimum Competence	Can undertake an inspection but may not do so in an efficient or thorough manner	Can identify the most obvious and common problems.	Utilizes readily accessible materials; some sources may not be academic.	Hive is operational but shows no growth.
Needs Improvement	Doesn't follow inspection protocol at all.	Is unable to identify any problems in the hive.	Research is superficial using unreliable sites and is inadequate to formulate a solution to the problems in the hive.	Hive fails; hive does not thrive.

Club Activity: Feral Cat Program (Pre-Vet Service Component)			
Scale	Cat Colony Protocol (Discipline Specific Skill--PLO)	Identify existing and potential problems (Discipline Specific Skill--PLO)	Critical Thinking--Problem Solving (GE Learning Outcome 1)
Mastery	Excels in keeping sites clean; shows initiative by checking for pests and damage to structures; proactive in maintaining sanitation and health care.	Able to observe and identify a wide spectrum of possible problems and takes proactive measures (i.e. contacts supervisor; arranges for trap and neuter)	Excels in providing care and support of colony—cats are healthy and show no signs of distress.
Minimum Competence	Does the minimum in maintaining the colony such as providing food	Observes obvious problems; does not always follow up or keep track of problems.	Can provide minimal level of maintenance but colony may come under stress from

	and water; attends to some maintenance of structures.		lack of medical care, inattention to regular neutering/spaying of new additions, poor hygiene.
Needs Improvement	Cannot follow instructions; may undertake activity that poses harm to the colony and/or cleanliness of the site (i.e. leaving open cans of food without throwing away the cane)	Is unobservant of the colony or the conditions of the site.	Provides no care or engages in no problem solving.

Curriculum Matrix for PLOs for Tropical Agroecology

I=introduce D=develop M=exhibit mastery

COURSES	Acquire and integrate the principles, concepts, and applications of biology, chemistry, soil science, and mathematics as they apply to natural and agrarian "crop-based" plant ecosystems	Synthesize knowledge and use insights to describe, analyze, solve, and report on scientific problems involving tropical agroecology and related fields (RUBRIC)	Exhibit proficiency in the use of technology, critical thinking, and quantitative tools used in agroecology applications (RUBRIC)	Appreciate and communicate effectively with peers, mentors, and the larger community through internships, work-related activities using oral, written and visual presentation skills and contemporary networking/social technologies GE RUBRICS FOR INFORMATION LITERACY AND WRITTEN COMMUNICATION	Demonstrate professionalism, proficiency and practical skills in various areas of crop production, and demonstrate awareness of the impact of agriculture on our environment, economy	Successfully pursue diverse careers or enter graduate programs in plant science, agroecology, bioeconomy and other related field
All 100-level courses	I					
All 200-level courses	D	I	I	I	I	
300-level core requirements	D	D	D	D	D	
300-level electives	M	M	M	M	M	I
400-level electives	M	M	M	M	M	D
496 (Capstone)	M	M	M	M	M	M

Tropical Agroecology PLO 2 & 3 Rubric

AG 230 Horticulture & Sustainable Agriculture			
Scale	Site Assessment (Discipline Specific Skill—PLO 2)	Collaborative Skills (GE Learning Outcome 6)	Critical Thinking—Formulating a Plan of Action (Discipline Specific Skill—PLO 3)
Mastery	Exhibits thorough assessment of current conditions, can fully identify needs of the site, as well as identify a range of potential development.	Participates in a highly engaged manner that contributes to the success of the project.	Plan comprehensively addresses all aspects of planning, including design, prior assessment of site, larger context of site, theme, etc.
Minimum Competence	Able to identify basic, obvious problems with the site and can recognize some potential.	Contributes the bare minimum and exhibits some engagement with the group.	Plan exhibits a basic theme and a few problems identified in the prior assessment of site; plan seems to have some logic or reasoning in design and choice of materials/plants/arrangement.
Needs Improvement	Exhibits little or no comprehension of the site; cannot identify the most basic of problems.	Cannot work in a group or contributes very little; may even hamper group collusion.	Plan lacks theme, shows little forethought, does not take into account prior site assessment—no rationale is evidenced in the plan.

Curriculum Matrix for PLOs for Aquaculture
I=introduce D=develop M=exhibit mastery

COURSES	Students will have a thorough understanding of and be able to describe the worldwide extent and importance of aquaculture in the production of food, chemicals, recreation and environmental mitigation.	Students will become familiar with and be able to compare and contrast the major types and components of aquaculture systems, species and factors affecting system sustainability.	Students will be able to identify global cultural, social, economic and historical factors that affect aquaculture development with an emphasis on the Hawai'i and Pan-Pacific region and be able to describe specifically how these factors affect aquaculture.	Students will be able to explain the relationship between aquaculture, society and the natural environments for the major aquaculture areas around the world, including potential impacts (positive and negative), and how environmental and social challenges can be solved. Emphasis will be placed on Hawai'i and the Pan-Pacific region, although regions such as Latin America and SE Asia will also be covered.	Students will have experiential learning opportunities (e.g., hands-on experiences at laboratories, farms, demonstration centers) to acquire skills and abilities including hatchery, growout, harvesting and marketing of aquaculture species to enhance their competitiveness in their future careers.	
	All 100-level courses	I	I	I		
	All 200-level courses	D	D	D	I	I
	300-level core requirements	D	D	D	D	D
	300-level electives	M	M	D	D	D
	400-level electives	M	M	M	M	M
	496 (Capstone)	M	M	M	M	M

AQUA 262			
Introduction to Aquaculture			
Scale	PLO 1	PLO 2	PLO 3
Mastery	Describe in intricate detail the worldwide relevance of aquaculture production of food and other products, and its impact on the environment.	Demonstrate thorough knowledge on the differences between aquaculture systems and their sustainability.	Explain in detail each of the factors affecting aquaculture development in the Pacific and other geographical regions.
Minimum Competence	Limited understanding of the basics of aquaculture food production worldwide, and its impact on the environment.	Able to describe simple differences between aquaculture systems; limited understanding on the concepts of sustainability	Can identify most of the challenges of aquaculture development in the Pacific region.
Needs Improvement	Cannot describe the importance of worldwide aquaculture in the production of food and other products.	Unable to explain the differences among aquaculture systems.	Lack understanding of any of the factors limiting aquaculture development.