Maui Community College
Course Outline

1.	Alpha and Number	Oceanography 64 OCN 64
	Course Title	Hawaiian Marine Life Identification
	Credits	3
	Date of Outline	January 2005
2.	Course Description	Teaches field identification of fishes, invertebrates, and marine algae. Studies ecology of coral reef species. Requires memorization of scientific names. Practices identification in the classroom and in the ocean for field research purposes. *Note: Successful completion fulfills marine life identification requirement for acceptance into Quantitative Underwater Ecological Surveying Techniques (QUEST).* *Does not fulfill Natural Science core requirements.*
3.	Contact Hours/Type	3/ Lecture/lab
4.	Prerequisites	
	Corequisites	
	Recommended Preparation	Recommended: Enrollment in the Marine Option Program

Approved by _____ Date_____

5. General Course Objectives
   Oceanography 64 teaches students to identify and name approximately 200 species of fishes, invertebrates and marine algae by their scientific, Hawaiian and English names. Students will explore coral reef ecology and develop an awareness of relationships between marine organisms that live in nearshore waters.

   This course is designed to prepare students for coral reef research in Hawaii as well as acceptance into Quantitative Underwater Ecological Surveying Techniques (QUEST) MARE 264 at UH Hilo. It is also useful for marine naturalists in the visitor industry.

   This course does not fulfill Natural Science core requirements. It does fulfill requirements for the Marine Option Program and Marine Naturalist Certificates.

6. Student Learning Outcomes
   For assessment purposes, these are linked to #7. Recommended Course Content.
   On successful completion of this course, students will be able to

   a. identify selected fishes, invertebrates, and marine algae on Hawaiian reefs
   b. write the scientific names of approximately 200 species of Hawaiian marine life
   c. describe the ecology of coral reef species in Hawaii
   d. explain basic taxonomy of Hawaiian marine life

7. Recommended Course Content and Approximate Time Spent on Each Topic
   Linked to #6. Student Learning Outcomes.

1 session	Overview of Hawaiian reefs (c, d)
5 weeks	Learn to identify reef fish in the classroom with slides, and field trips to the Maui Ocean center and one snorkel trip. (a, b, c)
5 weeks	Learn to identify Hawaiian marine invertebrates in the classroom and at least 1 field trip to the reef, tidepools or aquarium. (a, b, c, d)
4 weeks	Identify Hawaiian marine algae in the classroom with slides and fresh or dried specimens. (a, b, c, d) At least 1 field trip to the beach to collect seaweed (a) Make pressings of seaweed (a, b, d)

8. Text and Materials, Reference Materials, Auxiliary Materials and Content

Appropriate texts and materials will be chosen at the time the course is offered from those currently available in the field. Examples include field guides such as:
Hoover, J 1999. Hawai'i's Sea Creatures, *A guide to Hawai'i's Invertebrates.* Mutual Publishing, Honolulu
Hoover, J 1993, *Hawai'i's Fishes A Guide for Snorkelers, Divers and Aquarists.* Mutual Publishing, Honolulu
Randall, J. 1996. *Shoreline Fishes of Hawai'i.* Natural World Press, Vida, OR

9. Recommended Course Requirements and Evaluation

Course should include the current QUEST species list at the time the course is offered. Additional materials are at the discretion of the instructor at the time the course is being offered.

50 - 80%	Written exams covering species lists and/or lecture materials
20-50%	Assignments
10-20%	Field trip observations and reports
0-10%	Seaweed pressing and identification
0-10%	Punctuality, attendance and participation

10. Methods of Instruction

Instructional methods will vary with instructors. Specific methods will be at the discretion of the instructor teaching the course and may include, but are not limited to

a. watching slides and videos
b. identifying specimens
c. field trips to observe and note species in the ocean or at the aquarium
d. flash cards
e. homework reading and identification practice
f. quizzes and tests

Assessment of Intended Student Learning Outcomes Standards

	OCN 64	OCN 101	OCN 140	OCN 191v	OCN 293							
Standard 1 - Written Communication												
Outcome 1.1 - Use writing to discover and articulate ideas.	1	2	0	2	2							
Outcome 1.2 - Identify and analyze the audience and purpose for any intended communication.	0	2	0	2	2							
Outcome 1.3 - Choose language, style, and organization appropriate to particular purposes and audiences.	0	2	0	2	2							
Outcome 1.4 - Gather information and document sources appropriately.	0	3	0	3	3							
Outcome 1.5 - Express a main idea as a thesis, hypothesis, or other appropriate statement.	0	3	0	3	3							
Outcome 1.6 - Develop a main idea clearly and concisely with appropriate content.	0	2	0	2	2							
Outcome 1.7 - Demonstrate a mastery of the conventions of writing, including grammar, spelling, and mechanics.	0	2	0	2	2							
Outcome 1.8 - Demonstrate proficiency in revision and editing.	0	3	0	2	2							
Outcome 1.9 - Develop a personal voice in written communication.												

Standard 2 - Quantitative Reasoning	OCN 64	OCN 101	OCN 140	OCN 191v	OCN 293							
Outcome 2.1 - Apply numeric, graphic, and symbolic skills and other forms of quantitative reasoning accurately and appropriately.	0	1	2	2	2							
Outcome 2.2 - Demonstrate mastery of mathematical concepts, skills, and applications, using technology when appropriate.	0	0	0	0	0							
Outcome 2.3 - Communicate clearly and concisely the methods and results of quantitative problem solving.	0	0	0	0	0							
Outcome 2.4 - Formulate and test hypotheses using numerical experimentation.	0	0	0	1	1							
Outcome 2.5 - Define quantitative issues and problems, gather relevant information, analyze that information, and present results.	0	0	0	2	2							
Outcome 2.6 - Assess the validity of statistical conclusions.	0	0	0	2	2							

Standard 3 - Information Retrieval and Technology	OCN 64	OCN 101	OCN 140	OCN 191v	OCN 293							
Outcome 3.1 - Use print and electronic information technology ethically and responsibly.	0	2	0	2	2							
Outcome 3.2 - Demonstrate knowledge of basic vocabulary, concepts, and operations of information retrieval and technology.	0	1	1	1	1							
Outcome 3.3 - Recognize, identify, and define an information need.	0	2	0	2	2							
Outcome 3.4 - Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information.	1	2	1	2	2							
Outcome 3.5 - Create, manage, organize, and communicate information through electronic media.	0	0	0	0	0							
Outcome 3.6 - Recognize changing technologies and make informed choices about their appropriateness and use.	1	2	0	2	2							

Standard 4 - Oral Communication

	OCN 64	OCN 101	OCN 140	OCN 191v	OCN 293							
Outcome 4.1 - Identify and analyze the audience and purpose of any intended communication.	0	2	0	1	1							
Outcome 4.2 - Gather, evaluate, select, and organize information for the communication.	0	2	0	2	2							
Outcome 4.3 - Use language, techniques, and strategies appropriate to the audience and occasion.	0	2	0	1	1							
Outcome 4.4 - Speak clearly and confidently, using the voice, volume, tone, and articulation appropriate to the audience and occasion.	0	2	0	1	1							
Outcome 4.5 - Summarize, analyze, and evaluate oral communications and ask coherent questions as needed.	0	0	0	0	0							
Outcome 4.6 - Use competent oral expression to initiate and sustain discussions.	0	1	0	1	1							

Standard 5 - Critical Thinking

	OCN 64	OCN 101	OCN 140	OCN 191v	OCN 293							
Outcome 5.1 - Identify and state problems, issues, arguments, and questions contained in a body of information.	0	3	3	2	2							
Outcome 5.2 - Identify and analyze assumptions and underlying points of view relating to an issue or problem.	0	1	1	1	1							
Outcome 5.3 - Formulate research questions that require descriptive and explanatory analyses.	0	3	0	3	3							
Outcome 5.4 - Recognize and understand multiple modes of inquiry, including investigative methods based on observation and analysis.	0	3	0	3	3							
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	2	0	3	3							
Outcome 5.6 - Apply problem-solving techniques and skills, including the rules of logic and logical sequence.	0	2	2	2	2							
Outcome 5.7 - Synthesize inform from various sources, drawing appropriate conclusions.	0	2	1	2	2							
Outcome 5.8 - Communicate clearly and concisely the methods and results of logical reasonong.	0	2	0	2	2							
Outcome 5.9 - Reflect upon and evaluate their thought processes, value system, and world views in comparison to those of others.	0	0	0	0	0							