APPLICANT: Dr. K. Gopalakrishnan

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COURSE ALPHA and NUMBER: BOT 130

COURSE TITLE: Plants in the Hawaiian Environment

ESTIMATED NUMBER OF SECTIONS:
   Fall: 0
   Spring: 1

APPLICATION IS FOR:
   □ New Course   □ Modified Course   □ Existing Course   □ Re-designation
   □ Certification   □ Re-Certification. Date of last certification:

DIVERSIFICATION AREA DESIGNATION SOUGHT:
   □ DA (Arts)   □ DP (Physical Sciences)
   X DB (Biological Sciences)   □ DS (Social Sciences)
   □ DH (Humanities)   □ DY (Laboratory)
   □ DL (Literature and Language)

What percentage of the CONTENT of this course focuses on this diversification area? 95

What percentage of CLASS MEETINGS focuses on this diversification area? 95
1. **Hallmarks and SLOs.** Please explain how course-specific SLOs align with the diversification area’s hallmarks.

**DB 1. Uses the terminology of the biological or physical sciences:**

- SLO 4. Discuss botanical terminology for use in identifying native Hawaiian plants
- SLO 5. Demonstrate the ability to successfully propagate native and non-native plants
- SLO 6. Identify external and internal structures of leaves, stems, roots, and flowers, and become familiar with their function.
- SLO 7. Name sub-cellular organelles in plant cells and explain their functions.

As in any biological science, students are required to understand and learn basic terminology and vocabularies used in the study of plants. These aspects are included in SLO 4, SLO 6 and SLO 7. Similarly, there are specific terminology that students are expected to learn when they study propagation and reproductive biology of plants (SLO 5).

**DB 2. Involves knowledge and theories relating to processes in the biological sciences:**

- SLO 1. Discuss geological history of the Hawaiian Islands and natural history of plants in Hawaii.
- SLO 2. Discuss the arrival, establishment, major evolutionary trends and adaptive radiation of some of the surviving native species.

Understanding the natural history of plants in Hawaii, one should apply the knowledge and theories involved in evolution and natural selection (SLO 1 and SLO 2).

**DB 3. Demonstrates inquiry that is guided by observation/ experiment and reasoning and Mathematics:**

- SLO 3. Discuss the natural and human-mediated changes in the ecosystem, and interaction between native and introduced species of plants
- SLO 8. Analyze the biotic and abiotic forces that have shaped the Hawaiian Islands and their impact on evolution, distribution and endangerment of Hawaiian flora.

Human-mediated changes have greatly influenced ecosystem and community developments of plants in Hawaii. Students will observe such changes to evaluate its impacts on this isolated Hawaiian environment (SLO 3 and SLO 8).

2. **Assessment strategies.** Explain assessment strategies you have used (or plan to use) to measure the degree to which students exit the course with the course-specific SLOs. If there are multiple sections of the course taught by different instructors, please discuss how assessment is (or will be) carried out across instructors.
Due to the nature of the course, attendance is mandatory for complete understanding of the material. Attendance will be taken at each class meeting. Students will be encouraged to participate in group discussions to keep them focused on topics covered in the class. Weekly quizzes, homework assignments, research report submission and power point presentations in the class will be used as measures to test the effectiveness of students exiting the course with exposure to all course-specific SLOs. Instructor evaluations will be a gauge to improve the shortfalls pointed by students. Only one instructor will be teaching this course once a year.

3. **Assessment of assessment.** How have you used (or plan to use) the assessment findings to modify or improve this course? If there are multiple sections of the course taught by different instructors, please discuss how review of assessment results is (or will be) carried out across instructors.

Assessment strategies for this course include: review and modification of the course content to incorporate new discoveries in the field of botanical sciences, compare the course competency and equivalency at other campuses of the UH system. When ever applicable, student progress and field of study will be monitored to re-assess the effectiveness of the course in leading them to their success. Effectiveness of style of exams and other student performance will be assessed to see if any changes are necessary to make the process even more effective.
DIVERSIFICATION BOARD DECISION:

☑ Approved
Re-Certification Due: **Fall 2017**

☐ Not approved
If not approved, reasons for disapproval:

Diversification Board Chair Signature: [Signature]
Date: **Fall 2012**
Course Syllabus

Course Title: Plants in the Hawaiian Environment

Course Numbers: EOT 130

Credits: 3

Time: Monday & Wednesday 10:00 am-11:15 am (Lecture)

Co-requisite: BOT 130-L

Course Description:
This course is a study of some of the plants which grow in Hawaii. Plants will be identified and discussed in regard to their form and structure. Evolution and ecology of the plants will also be considered.

This course will satisfy the diversification requirement in Biological Sciences (DB) (Group 1 of Natural Science)

Student learning outcomes:

1. Discuss geological history of the Hawaiian Islands and natural history of plants in Hawaii.

2. Discuss the arrival, establishment, major evolutionary trends and adaptive radiation of some of the surviving native species.

3. Discuss the natural and human-mediated changes in the ecosystem, and Interaction between native and introduced species of plants

4. Discuss botanical terminology for use in identifying native Hawaiian plants.

5. Demonstrate the ability to successfully propagate native and non-native plants

6. Identify external and internal structures of leaves, stems, roots, and flowers, and become familiar with their function.

7. Name sub-cellular organelles in plant cells and explain their functions.

8. Analyze the biotic and abiotic forces that have shaped the Hawaiian Islands and their impact on evolution, distribution and endangerment of Hawaiian flora.
Grading Policy:

Your Grade for the course will be determined from the following procedures:

10% of grade: **Attendance and Participation:** Due to the nature of the course, attendance is mandatory for complete understanding of the material. Consideration is given to the student for the attendance, participation in the class discussions, student group activities and attitude throughout the course when calculating the final grade.

10% of grade: **Weekly Quizzes:** These will be questions from reading assignments and topics discussed in class the previous week. The weekly quiz will typically be given at the beginning of class on Wednesday. There is no make-up quiz if you are late for class.

20% of grade: **Assignments:** Various smaller assignments to help reinforce concepts. Some in class, some homework.

30% of grade: **Two Cumulative Exams:** Midterm (15%), and Final (15%)

30% of grade: **Research Report and Presentation:** Written Report (15%) and Presentation (15%): Each student is expected to write a research report on a native Hawaiian plant of their choosing. The paper will be 3-4 type-written pages in length (double spaced, 12 pt. font, including references) Each student will also give a 10 minute presentation on the topic using PowerPoint.

Final Grade Calculation:

90% or more   A
80% or more   B
70% or more   C
60% or more   D
Less than 60%   F

Attendance Policy:
Due to the nature of the course, attendance is mandatory for complete understanding of the material. Attendance will be taken at each class meeting.

**REQUIRED TEXTBOOKS**


Honolulu.**DISABILITIES ACCOMMODATION STATEMENT**
If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the