

Island Science For Teachers

PIP 894

CALS 104

Tuesday/Thursday - 3-5:30 pm (class begins Feb 11th)

Instructor

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**Office Hours by Appointment*

**Please use email (not telephone) to most efficiently communicate with course instructors.*

*If you must use phone as primary means of communication, call 735.2696 to schedule an appt during office hours.

Course Description and Objectives

This class is designed to provide teachers employed by a local school the opportunity to improve on their content knowledge in the fields on coral reef ecosystems, watersheds, and the ecology of Guam. Students will be introduced to coral reef and watershed **content**, while learning how to best implement this content in the classroom in the form of interactive, hands-on activities. The knowledge obtained from this course will be used to create grade-level appropriate lesson plans that meet the standards and objectives of the Guam Department of Education (GDOE) school district. Students will gain an understanding of various teaching methods, development and application of teaching modules, and how to evaluate students' progress. This will result from in class lectures, reading assignments, microteaching exercises, classroom teaching hours, and in school observations. This class will focus primarily on content with significantly less involvement in teaching theory. The practice oriented opportunities created by this course allow students to develop their own personal leadership and communication skills, and engage in critical thinking. Weekly lectures and classroom practice will provide the students with a detailed understanding of ecological processes on Guam and Micronesia while also aiding students' in the development of effective teaching strategies for science. A main objective is for students to create at least one educational module that could be implemented in a GDOE classroom. The final product of the class will be a lesson plan handbook developed in part from in-class assignments (student and teacher generated materials will be compiled for the handbook). Guest speakers will present content specific instruction. The final project will demonstrate how well the students have mastered the ability to critically think about teaching strategies and lesson development.

By successfully completing this course, students will be able to:

1. Actively participate in a lesson plan development.
2. Work collaboratively with peer students.
3. Master the basic science concepts covered in this course.
4. Create a unique science module to be implemented in the classroom that can be adapted to multiple grade levels.

Course Expectations

This course requires time outside of the scheduled Tuesday/Thursday class time, as detailed in the course schedule. You are required to be a licensed teacher, currently teaching in a elementary or middle school

classroom in 2009-2010 academic year (GDOE, DODEA, or private school). This course is designed around and requires the student to be an active participant in class lectures and discussions. This course assumes each student comes with an interest in teaching and a commitment to attend all scheduled classes for the duration of the course. Since this course involves group collaboration and teamwork, it is expected that you come prepared for discussions and always respect others. Assignments are expected to be turned in on time and should reflect a considerable amount of thought and preparation. It is expected that you attend the class with a positive attitude, patience, and an excitement to develop intellectually.

All assignment are due on time, no late work will be accepted, no grade will be given for late work. You are required to schedule one in school observation prior to March 23rd.

Grading Distribution

Preliminary Lesson Plan Submission and Modification

You will be required submit a lesson plan on the first day of class. This lesson plan will modified throughout the course and is essential to the course content. (100 pts)

Microteaching Lesson

Create a lesson plan designed to teach something new to your peers. The lesson should focus on an area of science relevant to the course that you have taught or would like to teach in your classroom. Your lesson plan should be fact-checked and accurate in content! Required components are: 1) a 15-minute oral in-class presentation and 2) a detailed written lesson plan. (75 pts)

Group Reading Discussions

Each student will be responsible for leading at least one discussion on assigned readings and is responsible for reading all assignments. Readings will be available via email and specific dates can be seen on the syllabus calendar. Readings will be discussed in small groups on the day listed in the syllabus calendar. Both your teachers and colleagues will evaluate you as a discussion leader. Readings can be found online at <http://www.uog.edu/dynamicdata/sgEducation.aspx?siteid=1&p=46>. Click on the Island Science for Teachers link, then click Readings. (30 pts)

Additional Lesson Plans

Students will submit numerous lesson plans over the course. These lesson plans are required to be in direct relation to the content taught in class. Any questions regrading topic selection should be addressed BEFORE the lesson plan is due. (150pst - 75 points each)

Educational Module Project

Create a three-day science educational module that could be used in future science lessons in your classroom. The project topic will need to be approved by the TAs in advance and can comprise anything within the realm of science that is appropriate for third grade students. This will include a summary oral presentation, a detailed lesson plan and in class observation (to be scheduled by March 23rd). (200 pts)

In-depth handouts regarding grading rubric and assignment details will be handed out in class prior to due dates.

Each assignment will be evaluated using a rubric that will be handed out a week prior to the assignments due date. These rubrics should be used a guide to preparing assignments and will clearly show what you points are allotted for. Overall, assignments will be graded on accuracy for achieving assignment goals, display of thoughtful preparation, organization, and oral skills if a presentation is given.

Weight of Assignments:**Grading Scale Based on 100%**

Preliminary LP Submission/Mod	100 pts	94-100 A	73-76 C
Microteaching Lesson	75 pts	90-93 A-	70-72 C-
Creation of Lesson Plan	150 pts	87-89 B+	67-69 D+
Group Reading Discussions	30 pts	83-86 B	63-66 D
<u>Educational Module Project</u>	<u>200 pts</u>	80-82 B-	60-62 D-
Total Points	555 points	77-79 C+	Below 60 F

Spring 2010

Day	Date	Topic	Description
Th	3/4	Introduction	Introductions Teaching Science Survey What is Sea Grant? Sea Grant Findings and Useful Information DUE: Review 1st Lesson Plan
W	3/10	Content	Teachable Science Concepts Guest lecture from Dr. Raymundo Reading: Developmental Foundations of Critical Thinking DUE: Lesson Plan Modification
Th	3/11	Content	Teachable Science Concepts Guest lecture from Dr. Mohamed Golabi Reading:Active Learning
T	3/16	Microteaching	DUE: Microteaching Lesson Presentations In-Class
Th	3/18	Content	Teachable Science Concepts Reading: Studying Motivational Strategies
T	3/23	Content	Teachable Science Concepts Reading(s):td Due: Written Lesson Plan
Th	3/25	Content	Teachable Science Concepts Guest lecture from Dr. Johnson Reading:Teaching with Your Mouth Shut
T	3/30	Lesson Plan Presentations	DUE: Written Lesson Plan Due, Oral 20 min presentation to class.
Th	4/1	Content	Teachable Science Concepts Reading:td
T	4/6	Presentations	DUE: Presentation of final modules to the class
Th	4/8	Presentations	DUE: Presentation of final modules to the class
T	4/13	Presentations	DUE: Presentation of final modules to the class