NREM 695 and 696: Master’s Plan B Capstone

NREM 695 Class Time: Monday, 10:30-11:20 Location: Sherman 111
Instructor: Travis Idol Office Hours: By appointment
Contact Information: Sherman lab 125, 956-7508, idol@hawaii.edu
Availability: www.ctahr.hawaii.edu/idolt/calendar.html

Prerequisites:
NREM 695: NREM 600, NREM 601, NREM 605, a Graduate Research Method Course, and a minimum of 12 graduate elective credits (completed or concurrent for all prerequisites).
NREM 696: NREM 695 or concurrent, M.S. Form II approved by Capstone Panel.

Textbooks:

Course Goals
1) Provide NREM Master’s of Environmental Management (MEM) students an opportunity to develop professional skills, both disciplinary and, where applicable, interdisciplinary, in natural resource and environmental management issues.
2) Provide students with professional resources and environmental management training experiences to gain the knowledge and confidence needed to contribute effectively as a professional in real-world situations.

Course Structure
The capstone is offered as two separate courses. NREM 695-Capstone Preparation is a 1-credit classroom course offered during the Fall semester only. It is intended to prepare Master’s Plan B students to find, develop, and complete their capstone experience. NREM 696-Capstone Experience is a 3-credit practicum offered every semester. The capstone experience should cover a minimum of two months (~320 hours) and not longer than one year. Students enroll in NREM 696 during the semester they plan to finish, along with NREM 500-Master’s Plan B/C Studies, which is now a 2-credit course.

NREM 695: Capstone Preparation (1 cr)

Classroom instruction will focus on the following issues:
1. Approaches, techniques, and case studies of natural resource management assessment and decision-making.
2. Presentations by invited speakers of potential capstone experience and career opportunities.
3. Presentations by students of their proposed capstone experiences

The instructor will provide case study materials and guide the classroom discussions. Small student groups will be assigned for each discussion to make short presentations on:
a. the biophysical and/or socioeconomic aspects of the NREM issues

1The Capstone Panel will consist of three NREM graduate faculty members: (1) Course instructor (Dr. Idol); (2) A given student’s advisor (this member will differ by student); and (3) An additional member of the NREM graduate faculty (to serve a two-year term)
b. the actual approach taken to address the issues
c. recommendations for improvements

The instructor will invite guest speakers, focusing on those who have offered capstone opportunities for undergraduate or graduate NREM students in the past. Students will have an opportunity to ask questions and inquire about capstone opportunities.

The goal of classroom instruction is for students to develop an idea for a capstone experience and present a written and oral proposal to the Capstone Panel for feedback and approval. The proposal should follow that of a research proposal, as covered in NREM 605. This should include, at a minimum, the following sections:
a. The NREM issue(s) relevant to the anticipated work, addressing, where applicable, both biophysical and socioeconomic aspects and their integration
b. A background literature review
c. The objectives of the capstone experience
d. The roles and responsibilities of the student and expected approach to achieving objectives.
e. The expected outputs (products) and outcomes (impact) from the capstone experience.

The written proposal should be 6-8 pages, double-spaced, 12-point Times New Roman font, with 1-inch (2.5-cm) margins on 8.5 x 11-inch paper. A draft will be submitted to the Capstone Panel. The Panel will review the proposal and provide feedback to the student. A revised proposal will be submitted to the panel for approval and will be graded by the course instructor.

NREM 696: Capstone Experience (3 cr)

The goal of the capstone experience is to engage the student in a significant NREM project that applies classroom knowledge and develops professional skills from disciplinary and/or interdisciplinary perspectives. The capstone experience will be developed jointly by the student, the student’s advisor, the student’s research project advisor or employer, and the course instructor, but the student will have the major responsibility for finding and defining the experience.

Prior to undertaking the capstone project, students will provide a project proposal to the Capstone Panel and give an oral presentation as part of a regular or special NREM seminar. The capstone experience itself must include a minimum of 320 work hours to meet the expectations of 5 course credits. Students will be given a timesheet to keep a log of work hours. The employer/supervisor/research project advisor will be required to sign the time sheet at the end of the experience and also periodically (weekly or monthly). Students may substitute a timesheet used by the employer/supervisor/research project advisor, where applicable. It is anticipated that most students will far exceed the minimum hour requirement in order to meet the expectations of their assignment; however, this should not exceed one year.

The student’s performance in the capstone experience will be evaluated in three steps. First, the employer or supervisor will be required to complete an evaluation of student performance using a standard form. Second, each student will give an oral defense presentation of their capstone experience. Third, the student will be expected to provide a written report on his/her capstone experience. The written product should follow the format of a research manuscript and also include the following sections:
a. The basic structure and organization of the employing institution (1-2 pages)
b. A description of the NREM issues addressed in this experience (2-4 pages)
c. The specific role and responsibilities of the student and major activities (2-4 pages)
d. The accomplishments, outputs, and outcomes of the student’s work (3-6 pages)
e. An interdisciplinary analysis of the NREM issues addressed (3-6 pages)
f. An evaluation of the employing institution and recommended improvements (1-3 pages)
g. Reflections on how the NREM program prepared the student for the capstone experience, lessons learned during the experience, and how the experience has affected the student’s future career plans.

The final report should be 20-25 pages long, excluding figures, tables, or appendices, using the same formatting guidelines as the proposal. A draft will be submitted for review by the NREM Capstone Panel. The interdisciplinary analysis (Section E) should describe and illustrate the interdependency of biophysical and socioeconomic aspects of the NREM issues addressed in the capstone experience and the integration of disciplinary approaches used during the experience. If the student is required by the employer and/or advisor to prepare separate products as part of the capstone experience (e.g. a technical report, educational or outreach materials, etc.), then the experience report should briefly summarize this in Sections C and D with references to the other capstone products. Because of the diversity of capstone experiences that are anticipated, these requirements are subject to revision with consultation and agreement of the student and the Capstone panel. The final report will be subject to approval by the Panel and grading by the course instructor. The report and any other written outputs of the capstone experience will serve as the final written requirements of the NREM MEM program, with a copy filed in the NREM office.

**Grading**

Grades will be based on the scale below. As a graduate course, a student must receive a minimum of 80% of the total points for each course to receive credit toward graduation.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tbody>
<tr>
<td><strong>NREM 695</strong></td>
<td></td>
</tr>
<tr>
<td>Case study presentations (3 x 50)</td>
<td>150</td>
</tr>
<tr>
<td>Capstone experience written proposal</td>
<td>150</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>300</strong></td>
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<tr>
<td><strong>NREM 696</strong></td>
<td></td>
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<tr>
<td>Oral proposal presentation</td>
<td>100</td>
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<tr>
<td>Employer evaluation</td>
<td>100</td>
</tr>
<tr>
<td>Capstone experience written product</td>
<td>300</td>
</tr>
<tr>
<td>Capstone experience oral presentation</td>
<td>200</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>700</strong></td>
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EVALUATION OF STUDENT PERFORMANCE

Name of student __________________________________________ Date __________________________

INSTRUCTIONS:
This form (or an alternate) is to be completed by the agency/firm supervisor. It becomes a part of the total evaluation for the student and is to be discussed with the student in final conference(s).
Please give your assessment of the student at the completion of the internship on the items and scale below. Please also note by placing an asterisk beside the rating if you have observed improvements since the beginning of the experience.

RATING SCALE:
4 = excellent; 3 = very good; 2 = average; 1 = fair; 0 = unsatisfactory. (Use N/A for any item you have not had an opportunity to observe.)

A. Work performance
   _____ 1. Ability to learn
   _____ 2. Ability to analyze problems
   _____ 3. Ability to organize and plan work
   _____ 4. Quality of work
   _____ 5. Time to complete tasks
   _____ 6. Ability to meet deadlines
   _____ 7. Initiative to identify needs and propose solutions
   _____ 8. Ability to utilize and apply previously gained knowledge
   _____ 9. Ability to communicate orally
   _____10. Ability to write clearly, accurately
   _____11. Ability to work independently
   _____12. Promptness/punctuality/attendance
   _____13. Dependability
   _____14. Use of professional judgement
   _____15. Interest and enthusiasm
   _____16. Safety consciousness

Comments:

B. Personal Relationships
   _____ 1. Courteousness, sensitivity to others
   _____ 2. Ability to work cooperatively with other employees
   _____ 3. Ability to deal with clients
   _____ 4. Ability to assume effective leadership (when needed)
   _____ 5. Receptivity to suggestions
   _____ 6. Ability to accept constructive criticism
   _____ 7. Ability to be flexible and adaptable
   _____ 8. Ability to handle personal and work-related frustrations

Comments:
C. What did you value most about this student?

D. In what ways can the student improve herself/himself?

E. Other comments

F. Please indicate the grade you feel best represents the overall performance of the student, using the following scale (+ or - may be used to designate additional information).

   A = excellent
   B = good
   C = fair
   D = poor
   F = very poor, failing

___________________________________________________________________________
Agency/Firm Supervisor's Signature     Title
___________________________________________________________________________
Name of agency/firm     Date