Part I: Project Preparation

Introduction

The Senior Project requirement (NR 461) for the Natural Resources Management (NRM) Department is designed to give students experience in identifying a resource issue, researching the problem and developing practical means for solving the problem. The project can include an experiment, field research, library research, or a combination of any of the aforementioned. In any case, the Senior Project is an independent study using a faculty advisor, of your choosing, for guidance. The outcome of the student’s research effort should be a coherent, logically organized Senior Project. Specific library requirements for Senior Project format and submission to the library can be found in Section 4, Part II.

As an alternative to the undergraduate Senior Project, NR 412, Forest and Natural Resources Senior Assessment Project, can be taken during the student’s final year as an undergraduate at Cal Poly. Please keep in mind that NR 412 is only offered during fall quarter. This course provides the student with a variety of topic discussions including but not limited to: integrated sampling and inventory of resource values in forested ecosystems, comprehensive timber harvest planning, watershed and wildlife management applications, and statistics, all culminating into a final student project report, which takes the place of the student’s Senior Project. In NR 412, the contents of the student’s Senior Project will be determined by lecture material and lab assignments as presented by multiple faculty members in the NRM Department. Typically, the final report is a compilation of lecture and lab modules presented by the faculty and their associated assignments. If you are interested, consult with your advisor or the course instructor for more information.

Definition of Senior Project

The Senior Project in the NRM Department at California Polytechnic State University is a study, research effort, or experiment that involves the management of natural resources, and culminates in a formal report. A Senior Project must be selected and completed by each student (NR 412 can be substituted) under a minimum amount of supervision prior to the receipt of the Bachelor of Science Degree in the NRM Department.
Choosing a Subject

In selecting a specific topic, you should draw from experience, issues, and concerns found in natural resources publications, or from consultations with professionals in the field of study. The file of previously submitted projects in the Library may be of help in choosing a topic.

In general, students tend to select topics that are too broad in scope or too complex for the limited time available; this is where consultations with your advisor can be helpful. Internship, summer employment, and Cooperative Education experience opportunities often provide interesting topic areas for Senior Projects. The grade for your Senior Project is not judged on the size or complexity of your document. The problem chosen, therefore, should be as compact and clean-cut as possible.

Study Plan

1. **Select a topic** for study or research and consult with your Senior Project Advisor. Set up regular discussion/review periods with your advisor for the duration of the Senior Project.
2. Write a **brief statement** of how you plan on using the topic to complete your Senior Project requirement. Include a justification for the project (the need for and benefits of the proposed project).
3. Develop a **title** for the project (i.e. group of key words that clearly indicate the essential considerations of the study)
4. Identify and describe the **setting** for your topic/research area (e.g., location, study area, region, etc.).
5. Define the **objectives** for the project, which are action items necessary to complete the project. They are achievable, measurable, and time specific.
6. **Organize** the tasks into a logical sequence of events for completion (flowchart of activity). Develop an **outline of activities** for everything you need to do to complete the tasks identified. Walk through the project in your mind so you don’t overlook major points or significant details that need to be addressed.
7. Estimate the **time** it will take you to complete each task and the **cost** of materials necessary to complete each task (e.g., typing, paper, supplies, mileage, duplication, etc.). Include those items in the budget section of your proposal.
8. **Study Approach** (Procedures): Indicate how all information and data are to be obtained. The study approach or procedures are the means by which the objectives are completed. If your project requires the collection and analysis of field data, an experimental design may be necessary. Consult with your advisor or a statistician.
9. Itemize all materials required and other expenses anticipated specifically for your project (books, duplication costs, gasoline, typing, maps, etc.). Costs will be paid by the student unless other arrangements are made well in advance. Keep all records/receipts for all items purchased, and include these items in a budget.
10. Collect necessary **information** for your Senior Project through library study, field experimentation, and correspondence and/or personal contact with individuals who have experience in the topic you chose.

11. **Organize and analyze** the information you collected.

12. **Organize your results** for typing as concisely as possible as described in the Senior Project Manual.

### Registering for the Senior Project

You, the student, will be allowed to enroll in NR 461 when your Senior Project advisor has approved your proposal prior to registration. NR 461 is the typical course taken by students to meet the Senior Project requirement. One to two quarters prior to registration in NR 461, a student should be researching possible projects, and keeping in touch with their faculty advisors. The quarter before registration in NR 461, the student must write a draft proposal of what their project will entail. After the draft proposal is reviewed by an advisor, the student will then write a formal proposal, and submit it to the faculty advisor at least one week prior to the end of the quarter proceeding when the student will be enrolled in NR 461. Once you have your approved proposal, signed and dated by your Senior Project advisor, they will issue you a permission number to add NR 461.