

GUIDELINES
FISH 499 FISHERIES SENIOR THESIS
FALL AND SPRING SEMESTERS

Course Credits: 2-4 credits. Not to be repeated for more than 4 credits total.

Contact Hours: Time spent with the faculty mentor in individual instruction will vary depending on the student's progress on the thesis; however, at least 80 hours of supervised scholarly activity most occur per semester to complete a senior thesis.

Course Prerequisites: Fisheries major with senior standing and a GPA of 3.2 or higher. Permission of Faculty mentor and the Fisheries Experiential Learning Coordinator/ Instructor (The coordinator may be a mentor) after submission of a pre-proposal.
STAT 200, ENGL 414

Recommended Classes: STAT 401, STAT 402, FISH 315

Meeting Location and Time: N/A

Instructor/ Experiential Learning Coordinator

Dr. Amanda E. Rosenberger

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Office Hours: TBA

Required text: There is no required text for this course; however, students will be required to conduct literature surveys as part of their senior thesis project.

Description: Under the supervision and mentorship of a Fisheries faculty member, students will complete an undergraduate thesis - a year-long, self-designed scholarly project that is the capstone of a student's exemplary academic performance in the Fisheries program. A senior honors thesis should be an original work that adds to the fisheries discipline. Though not as large in scope as an M.S. project, undergraduate research can serve as a launching pad to graduate school or a career. Senior theses could stem from summer research experience as a student intern or take place entirely on campus in a fisheries laboratory. Participation in this program will count towards the Experiential Learning requirement for a B.S. or B.A. in Fisheries.

Goal: Hands-on research provides undergraduate students with an opportunity to enrich their educational experience, accelerate their development as young professionals, and hone skills that are needed to complete graduate-level research. To become familiar with the process of scientific inquiry, including research goal definition, scientific method, technical write-up, oral presentation of results, and publication, a senior thesis is an irreplaceable experience.

The process will also improve the ability of students to find employment and additional educational opportunity after their B.S. or B.A. is completed. Employers and prospective graduate schools value research experience because it demonstrates the ability of a student to successfully complete a large-scale project that requires analytical, critical thinking, and oral and written communication skills. Undergraduate students frequently develop close and long-term professional relationships with their research mentors, and the example that mentors provide can be a lasting inspiration for students to become life-long learners in their field of choice.

Student Learning Outcomes:

- 1) Understand how to develop and complete a scientific research project
- 2) Understand how to critically analyze data and integrate results within the context of existing literature
- 3) Present scientific research effectively in written, visual, and oral formats

Instructional Methods: For the most part, students will learn from individual instruction from their faculty senior thesis mentor. This will involve a great deal of self-directed study.

THESIS TIMELINE

The senior thesis is taken over two semesters. The scheduling and timeline should be agreed upon between the student and faculty mentor within the first month of the semester. Below is an example of a rough timeline that can be used as a springboard for a more detailed, specific one created by students and their mentors. A summer internship experience could potentially serve as the first “semester” of a senior thesis; therefore, you can take 2 credits of Senior Thesis for a letter grade to complete a senior thesis.

First Semester (Letter Grade)

Month 1: Submission of pre-proposal, selection of faculty advisor/mentor, creation of project timeline, and initiation of literature review.

Month 2: Completion of literature review and submission of full proposal.

Month 3: Collection of data.

Month 4: Summary of data and data analysis & progress report to advisor.

Second Semester (Letter Grade)

Month 1: Complete data analysis and summary of results.

Month 2: Complete discussion and interpretation of results.

Month 3: Completed thesis on the topic, including Title, Abstract, Introduction, Materials and Methods, Results, and Discussion with a Literature Cited.

Month 4: Oral or Poster presentation of research at Student subunit AFS meeting or undergraduate research symposium.

ASSIGNMENTS

Timeline: The timeline should provide major landmarks and deadlines for the thesis and follow the outline given above.

Pre-proposal: The pre-proposal is a 1- to 2- page outline of the senior thesis required to be presented to the faculty advisor and Experiential learning coordinator prior to signing up for the senior thesis. The pre-proposal should contain study goals and objectives, general methods to be used to address objectives, and expected outcomes.

Proposal: The proposal is a 10-15 page proposal of the project to be conducted, including background information, specific objectives and hypotheses to be tested, proposed methods, and data analysis approach. The thesis timeline should also be included in this document.

Progress reports: These should be submitted to the faculty advisor at a regular basis (to be decided while creating a timeline), detailing progress in literature review, data collection, data analysis, and write-up.

Thesis: Theses can vary anywhere between 15-100 pages and take the form of one or more research manuscripts (outlined below):

Introduction

- Background
- Objectives
- Expectations/hypotheses

Methods

- Study Site
- Data collection Methods
- Data Analysis

Results

- Cut and dry results/ figures and tables

Conclusions

- Summary of results and interpretation
- Local/ Broader implications

Literature Cited (All literature cited completely, minimal use of web resources, peer-reviewed literature (journal articles))

POLICIES

Academic Honesty: All assignments submitted are to be entirely your own work, unless you receive specific instructions to the contrary. All aspects of your course work are covered by the Honor system. Any suspected violations (e.g. cheating, plagiarism) will be promptly reported and appropriate action(s) will be taken. Honesty in your academic work will develop into professional integrity. The faculty and students of the University of Alaska Fairbanks will not tolerate any form of academic dishonesty.

Late Assignments: All assignments are due to your faculty advisor as indicated by the timeline agreed upon early in the thesis writing process. If you cannot turn in an assignment on time for a legitimate reason, it is your responsibility to contact your faculty advisor prior to the date in question in order not to receive a penalty.

EVALUATION/ GRADING

GRADE based on an absolute 90-80-70-60 Scale, with potential for plus-minus grades. For all senior theses, failure to turn in any of the required assignments is grounds for a failing grade. Because the thesis is based on the individual experience, a grading curve does not apply.

2 CREDIT SENIOR THESIS – FIRST SEMESTER (Letter Grade).

For your first semester of senior thesis, you will need to have a completed proposal with a project timeline attached, a completed progress report turned in to your faculty advisor, and have satisfactorily met deadlines specified in your timeline.

- Proposal 20%
- Data collection and analysis 20%
- Progress Report 50%
- Faculty evaluation of general performance and timeliness 10%

2 CREDIT THESIS – SECOND SEMESTER (Letter Grade)

Grade Breakdown:

Faculty evaluation of general performance and timeliness: 5%

SENIOR THESIS: 80%

Introduction: 20

Objectives: 10

Methods/Approach: 15

Results: 20

Discussion/Interpretation: 25

Literature Cited: 5

Oral or Poster presentation of results: 15%

Support/ Disabilities Services: If you need accommodation because of a disability, please contact the Experiential Learning Coordinator as soon as possible in order to make the necessary arrangements. She will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students.