

All students taking the Graduate Certificate in Fisheries Management are required to complete a capstone project (FW 506). The capstone project is essentially an extended term paper that can be based on a literature review and/or new research data.

Purpose	To contribute to the field of fisheries management with a product that reflects the principles and applications you have learned in your classes.
Format	Format is choice of student and mentor. Final projects can be in any communication format – a written report or “white paper”, a documentary, or even a podcast. Podcasts or video productions require a written script.
Data Collection and Analysis	Use methodology appropriate to the practice of fisheries management. This can include scientific research methods, application of analytical tools such as GIS or remotes sensing, literature review and/or the collection of material for extension and outreach materials.
Standard expected	The project report must effectively communicate findings, results and/or outreach materials to an audience of fisheries management practitioners. You can work on a project of relevance to your employer, but work submitted for the course should be new material completed during the certificate course of study. The project content must be well researched, relevant to its target audience, reliable and academically defensible.
Length and Time Commitment	The length of the research project is not an indication of quality. Actual length will depend on the topic, methods and final product as agreed with the student’s mentor. A project must be succinct as possible and effectively communicated to its target audience. Most written projects range from 5,000 to 10,000 words excluding references and appendices. As a 3-credit course, the expectation for your time commitment is a total of 60-90 hours of work on research, analysis, writing, editing and final product production.

Supervision	<p>All students should identify a "Project Mentor". Dr. Heppell can help you identify potential Project Mentors, and we will provide information to that person so she or he knows what is expected. Your employer or supervisor can serve as your Mentor.</p> <p>As part of your Program of Study, please notify the Fisheries Certificate Program Specialist when you decide which term you will enroll in FW 506. This will allow us to plan for adequate oversight of your project.</p>
Credits	<p>You must obtain a written evaluation of your final product from your Project Mentor to receive pass/fail credit for FW 506 (3 credits). Your project will also be evaluated by the Certificate Program Directors who will provide feedback on its overall quality and merit.</p> <p>If your project cannot be completed during a single term, you can choose to take a grade of Incomplete. Incomplete courses must be completed within one year to receive credit. If you take FW 506 in your final term and receive an Incomplete, you will also need to register for at least 3 credits each subsequent term (or apply for a Leave of Absence) to satisfy OSU's Continuous Enrollment Policy.</p> <p>An outline of your project should be submitted for evaluation by no later than the middle of your term of enrollment in FW 506 (approximately week 5). By the end of the term, you must submit either your final capstone project or a progress report and timeline for completing the project. Final capstone project reports should be submitted at least one week prior to the end of the term to allow adequate time for review and comments.</p>

Writing your Project

Final projects can be in any communication format – a written report or “white paper”, a documentary, or even podcast. Videos and podcasts do require a written script. Regardless of format, though, the project needs to meet high academic standards. The following are basic guidelines for mentors and students.

1. Establish a topic and clearly address it from the beginning of the work and stay focused. Prepare a two to three page project proposal that outlines your project and share this proposal with your mentor. If you change aspects of your project let your mentor know and discuss the change before making it.
2. The Oregon State University Libraries provide access, delivery and reference services that support the research of needs of students taking courses through Ecampus. The [Ecampus library services page](#) has the most complete information.
3. Structure your project carefully. You need a clear introduction, a well structured body of the essay and a high-impact conclusion. Most written projects follow some variation of the following:
 - Abstract/Executive Summary. A short summary of what you did, why you did it, what you found and why this matters.
 - Introduction & research question(s). This explains what your research is about, why it is important and lists the research questions you are trying to answer.
 - Background and method. This section or sections provides the foundation for your research. What does the peer reviewed literature say about the topic, what information is there in other reports and papers? How are you going about conducting your research explained in enough detail so someone else could repeat it. You should also describe similar studies and what they found.
 - Results or case study. Use diagrams and tables to summarize what you found and highlight the most significant aspects of your findings.
 - Discussion and conclusion. Here is where you describe the importance of your findings, the strengths and weaknesses of your study, areas for further investigation by someone else or you in the future, etc. Your concluding pages should highlight the main implications of what you found for fisheries management.

- References (see below).
 - Appendices. Here is where you put additional information, details and results that are too long to include in the main text or are of less relevance to your key findings.
4. Writing style is important – this should be a professional document. Refer to writing guides such as Strunk and White's Elements of Style. Proofread for spelling and grammar – again and again and again. If you are a poor writer, you should have your draft paper edited by someone before sending it to your mentor to review, and you may need to have the final draft professionally edited. You will likely need to do at least 2 drafts before finalizing your product.
 5. Reference your work appropriately, throughout the document and in your bibliography. The OSU Library has resources for how to cite appropriately. Do not use web sites as primary sources of information unless you can find no other source. It's OK to use a footnote or endnote style of reference. You must include a citation in every sentence that includes information sourced from an article or other reference. You can't just put a citation at the end of a paragraph. For example:

Multi-criteria methods are not based on monetary valuations like cost-benefit analysis, but on a more general weighting system (Kiker et al. 2005). The weighting system reflects preferences about the importance of differing outcomes such as environmental protection, economic efficiency or social well-being (Harte and Lonergan 1995; Leung 2006).

You are encouraged to go to this Rutgers webpage to learn more about proper citations:

<http://sociology.camden.rutgers.edu/curriculum/citation.htm>,

which includes a citation generator called Citation Machine.

<http://citationmachine.net/>. You are strongly urged to use it if you are unsure how to cite your references. Unless otherwise instructed by your mentor you can use any of the different "styles" listed although you are urged you to use APA or Chicago. These are the two most common styles.

The Program Directors will be tough on your referencing and citation lists. Referencing correctly is important for two reasons: (1) to give your own arguments greater weight by supporting them with references from peer reviewed journals and other

sources; and (2) to acknowledge the source of a fact and/or other writers' thinking and the influence they have had on you. The 2nd area is where students often run into plagiarism issues when they get lazy about citing properly.

All podcast and videos must have a script that is referenced appropriately and in the recorded version appropriately acknowledges the contribution of others.

Supervision

All students should identify a "Project Mentor" who can help you develop your project and provide critical review. This person may be a faculty member, a courtesy faculty member, faculty at another institution, or a working professional. Dr. Heppell and Dr. Harte can help you identify potential Project Mentors, and we will provide information to that person so she or he knows what is expected. It is then up to you and your Project Mentor to agree upon a set of intermediate deliverables (outlines, abstracts, reference lists, drafts). You must obtain a written evaluation of your final product from your Project Mentor to receive pass/fail credit for FW 506. Your project will also be evaluated by the Certificate Program Directors who will provide feedback on its overall quality and merit.

Timeline

Start thinking about project ideas early in your Program. You may want to run your ideas for a project past the Program Director (Dr. Heppell), who can also give you ideas for appropriate people to approach about serving as your Project Mentor.

As part of your Program of Study, please notify the Fisheries Certificate Program Specialist when you decide which term you will enroll in FW 506. This will allow us to plan for adequate oversight of your project

Although the course (FW 506) is only for one term, it is sometimes difficult to complete a project from start to finish in three months, particularly if you have a job, other classes, or family obligations. You can take an Incomplete for the course (with your Project Mentor's agreement), but a better plan is to get started on the basic information gathering and structure of your project before you actually register for FW 506. Incomplete

courses must be completed within one year to receive credit. If you take FW 506 in your final term and receive an Incomplete, you will also need to register for at least 3 credits each subsequent term (or apply for a Leave of Absence) to comply with OSU's Continuous Enrollment policy.

An outline of your project should be submitted for evaluation by no later than the middle of your term of enrollment in FW 506 (approximately week 5). By the end of the term, you must submit either your final capstone project or a progress report and timeline for completing the project. Final capstone project reports should be submitted at least one week prior to the end of the term to allow adequate time for review and comments.

Work with your Project Mentor on a plan of work and detailed timeline with specific milestones and check-in dates. That way, you'll know if you are falling behind schedule and need to re-evaluate the project plan.