**Upper-division Writing Requirement Review Form** (12/1/08)

## I. General Education Review - Upper-division Writing Requirement

<table>
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<tr>
<th>Dept/Program Subject</th>
<th>WBIO</th>
<th>Course # (i.e. ANTH 455) or sequence</th>
<th>497</th>
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**Course(s) Title**  
Senior Thesis

**Description of the requirement if it is not a single course**

The UD writing requirement for Wildlife Biology students, terrestrial option, is to take at least 3 of the following courses: BIOL 304 (Ornithology); BIOL 306 (Mammalogy); BIOL 341 (Ecology lab); WBIO 470 (Conservation of Wildlife Populations); WBIO 497 (Senior Thesis). Aquatic option students must take at least 3 of the following courses: BIOL 341 (Ecology lab); BIOL 316 (Plant Form and Function); WBIO 408 (Advanced Fisheries Science); WBIO 497 (Senior Thesis).

## II. Endorsement/Approvals

Complete the form and obtain signatures before submitting to Faculty Senate Office.

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<thead>
<tr>
<th>Please type / print name</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Instructor Dan Pletscher and all faculty</td>
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<tr>
<td>Phone / Email 6364; <a href="mailto:dan.pletscher@umontana.edu">dan.pletscher@umontana.edu</a></td>
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<tr>
<td>Program Chair Dan Pletscher</td>
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## III. Overview of the Course Purpose/Description

This course offers undergraduates the opportunity to work with an advisor on a research project. Students in Senior Thesis prepare a research proposal that is critically reviewed for content and for style by their advisor and two other faculty members. Students then carry out the research and write a manuscript, following the guidelines for a potential professional journal, for publication. They then defend this manuscript in front of at least 3 faculty members.

## IV. Learning Outcomes: Explain how each of the following learning outcomes will be achieved.

**Student learning outcomes:**  
Identify and pursue more sophisticated questions for academic inquiry

Students work very closely with a faculty advisor to identify a research “problem.” This typically involves an observation, a literature review to see what has already been researched, and a hypothesis. Essentially what the students do is follow the scientific method.

Find, evaluate, analyze, and synthesize information effectively from diverse sources (see [http://www.lib.umt.edu/informationliteracy/](http://www.lib.umt.edu/informationliteracy/))

Students synthesize the literature to identify an interesting research question. They carry out a research project that typically results in data that must be analyzed, then compare their results back to the literature.

Manage multiple perspectives as appropriate

Interesting research questions typically result when divergent views exist in the literature.

Recognize the purposes and needs of discipline-specific audiences and adopt the academic voice necessary for the chosen discipline

The interests of our students vary widely from social science to the results of conservation applications to basic ecology. Students follow the academic voice appropriate to their research.
Use multiple drafts, revision, and editing in conducting inquiry and preparing written work

The number of drafts varies with the student, but typically at least 2 revisions are necessary before the advisor and the committee are satisfied.

Follow the conventions of citation, documentation, and formal presentation appropriate to that discipline

Manuscripts follow the literature citation and documentation conventions of the appropriate sub-discipline (e.g. bird journals, mammal journals, and herpetological journals all have different styles).

Develop competence in information technology and digital literacy

Review of the literature and data analyses cover this well.

V. Writing Course Requirements Check list

Is enrollment capped at 25 students? If not, list maximum course enrollment. Explain how outcomes will be adequately met for this number of students. Justify the request for variance.

Yes X No
I don’t believe enrollment per semester has ever exceeded 4, and generally a faculty member doesn’t have more than one or two at a time.

Are outcomes listed in the course syllabus? If not, how will students be informed of course expectations?

Yes X No
Because each project is different, we don’t have a syllabus with outcomes for the course. Expectations and outcomes are provided to the student no later than their first committee meeting.

Are detailed requirements for all written assignments including criteria for evaluation in the course syllabus? If not how and when will students be informed of written assignments?

Yes X No
As mentioned above, the entire purpose of this course is to produce a manuscript suitable for publication. Students are informed of this at their first meeting with an advisor.

Briefly explain how students are provided with tools and strategies for effective writing and editing in the major.

Students are generally provided with the guidelines for specific journals; faculty members work individually with students on their writing.

Will written assignments include an opportunity for revision? If not, then explain how students will receive and use feedback to improve their writing ability.

Yes X No
See above

Are expectations for Information Literacy listed in the course syllabus? If not, how will students be informed of course expectations?

Yes X No
See above

VI. Writing Assignments: Please describe course assignments. Students should be required to individually compose at least 20 pages of writing for assessment. At least 50% of the course grade should be based on students’ performance on writing assignments. Clear expression, quality, and accuracy of content are considered an integral part of the grade on any writing assignment.

Formal Graded Assignments

Students produce a proposal that generally involves at least 2 drafts and a manuscript suitable for publication in a particular journal appropriate to the research (which goes through at least 2 drafts, as well).
Informal Ungraded Assignments

None.

**VII. Syllabus:** Paste syllabus below or attach and send digital copy with form. The syllabus should clearly describe how the above criteria are satisfied. For assistance on syllabus preparation see: [http://teaching.berkeley.edu/bgd/syllabus.html](http://teaching.berkeley.edu/bgd/syllabus.html)

Paste syllabus here.

### Wildlife Biology Program

#### Senior Thesis Requirements

A student enrolled for Senior Thesis (WBIO 497) credit conducts independent study with the approval of a faculty advisor and committee. Nonetheless, Senior Thesis is distinct from Independent Study (WBIO 496). A Senior Thesis may involve a variety of different types of activities and analyses such as the collection of field or lab data, secondary data analysis, a policy analysis, or content analysis, and it requires (1) submission of a formal written proposal to the prospective faculty advisor and committee, complete with sections that provide an introduction to, and the significance of, a particular problem; the specific question that the student wishes to address; how an answer to that specific question will refine our understanding of the broader issue described in the introduction; and the methods to be employed; a committee-approved proposal is necessary before work can begin; (2) that the question, significance, and approach be judged by the faculty sponsor to be meritorious and potentially publishable in nature; students will be encouraged to submit a manuscript for publication; (3) that the student present a summary of the problem and his or her findings in Senior Wildlife Seminar (WBIO 494), The Wildlife Society student chapter meetings, or some other appropriate venue; and (4) that a written report be completed and a defense before the committee occur as the basis of an overall evaluation by the faculty advisor and committee. Credits are variable, but should correspond with the anticipated time needed to conduct and complete the project.

In general, Senior Thesis is reserved for students who show evidence that they are budding research wildlife biologists, and the thesis should help them achieve related goals. At a minimum, students should be question-oriented and should want to work independently to solve a problem. Most are probably motivated to attend graduate school, but some may simply want to hone their own independent problem-solving skills.

To be eligible to do a Senior Thesis, a student must have at least a 3.0 Grade Point Average and/or be in the Honors Option for Wildlife Biology. The Senior Thesis advisor must be a faculty member in Wildlife Biology. The three-member committee must have at least one committee member from WBIO/FOR and WBIO/DBS. The student must defend their thesis proposal and thesis during the academic year.
Opportunities exist to apply for external funding to support a student’s research project. A small amount of funding is available for those students enrolled in the Honors College; the EPSCoR program also has such funds. Individuals developing proposals should talk with their faculty supervisors about these possibilities.