# Writing Course Review Form (12/1/08)

## I. General Education Review - Writing Course

<table>
<thead>
<tr>
<th>Dept/Program Subject</th>
<th>DBS/Wildlife Biology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
<td>Mammalogy</td>
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</table>

| Course # (i.e. ENEX 200) | Biol 306 |

## II. Endorsement/Approvals

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

<table>
<thead>
<tr>
<th>Please type / print name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor</td>
<td>Kerry R. Foresman</td>
<td>Jan. 3, 2009</td>
</tr>
<tr>
<td>Phone / Email</td>
<td>-4492; <a href="mailto:foresman@mso.umt.edu">foresman@mso.umt.edu</a></td>
<td></td>
</tr>
<tr>
<td>Program Chair</td>
<td>Janson/Pletscher</td>
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## III. Overview of the Course Purpose/Description:

Provides an introduction to the subject matter and explains course content and learning goals.

Mammalogy is a junior level course which provides and overview of mammalian evolution, systematic, ecology, and behavior. This is a core requirement for students in the terrestrial wildlife biology emphasis. The lecture provides the overview of the topics identified above while the lab provides the skills necessary to identify mammal species from their skull and pelt characteristics.

## IV. Learning Outcomes:

Explain how each of the following learning outcomes will be achieved.

<table>
<thead>
<tr>
<th>Student learning outcomes</th>
<th>Students are required to write a term paper on a topic of their choosing; this requires a literature search and the necessity to read published articles, synthesizing ideas presented and formulating a manuscript to describe the chosen topic. All of the lecture exams are also essay in nature requiring the student to assimilate the concepts presented in the course and express their ideas in the exam essays.</th>
<th>Refer to above description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use writing to learn and synthesize new concepts</td>
<td>The term paper that the student is required to write involves a summary of the literature available on the chosen topic, appropriate to junior/senior level knowledge, development of a 10-page summary with detailed literature references cited.</td>
<td>Term papers are edited and returned to the student for rewriting prior to submittal of the final paper.</td>
</tr>
<tr>
<td>Formulate and express opinions and ideas in writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compose written documents that are appropriate for a given audience or purpose</td>
<td></td>
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<tr>
<td>Revise written work based on constructive feedback</td>
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Find, evaluate, and use information effectively (see [http://www.lib.umt.edu/informationliteracy/](http://www.lib.umt.edu/informationliteracy/))

Again, the student must research their topic through library databases, they must read and synthesize the information presented in the published articles which they find on their topic, and then write a paper that summarizes all of this information.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
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<tbody>
<tr>
<td>Begin to use discipline-specific writing conventions</td>
<td>The term paper must be written in the format of the American Society of Mammalogists (ASM), the professional society for this discipline. It must meet this society’s guidelines for the production of a manuscript.</td>
</tr>
<tr>
<td>Demonstrate appropriate English language usage</td>
<td>Term papers are graded for scientific content as well as appropriate use of the English language in scientific writing.</td>
</tr>
</tbody>
</table>

### 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
  - 70; I have 2 TA’s that help thus, 70 papers are spread between 3 individuals

- **Are outcomes listed in the course syllabus? If not, how will students be informed of course expectations?**
  - x Yes □ No

- **Are expectations for Information Literacy listed in the course syllabus? If not, how will students be informed of course expectations?**
  - x Yes □ No

- **Are detailed requirements for all written assignments included in the course syllabus? If not how and when will students be informed of written assignments?**
  - x Yes □ No

- **What instructional methods will be used to teach students to write for specific audiences, purposes, and genres?**
  - Papers are edited for scientific content and English usage and are returned to the student with detailed comments

- **Will written assignments include an opportunity for revision? If not, then explain how students will receive and use feedback to improve their writing ability.**
  - x Yes □ No

### VI. Writing Assignments: Please describe course assignments. Students should be required to individually compose at least 16 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 write three essay exams, totaling approximately 10 pages of essays. They also write a 10-page term paper, have this
edited, and rewrite their draft based upon the comments received before turning in their final product. They are also required to read and edit two other student’s term papers and they are graded for this exercise. Though the term paper and edits of other student’s papers only meets approximately 15% of the grade in this particular course, this is one of several courses in the WBIO program that are ganged together which carry writing requirements that the student must take.

Informal Ungraded Assignments

| 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 |

Paste syllabus here.

**BIOLOGY 306 - MAMMALOGY**  
*Fall 2008*

**Kerry R. Foresman**  
**Office Hours:** MWF 9:00 - 10:00 am or  
**Office:** HS203 by appointment  
**Phone:** 243-4492  
**email:** foresman@moso.umt.edu  
**Course Web Site:** http://dbs.umt.edu/courses/biol306/default.php

All of the information that will be presented this semester will be posted on this web site. Each week additional material will be placed on these sites as new topics are discussed in class. You will need to download each of the lab exercises prior to your lab and bring these with you; I would encourage you also to print out copies of the PowerPoint lectures and bring these to class so that you have these images available as the material is being discussed.

The lecture will be primarily devoted to generalized topics which pertain to mammalian diversity and ecology as a whole. Specific studies will be presented from recent literature to detail many topics. When this is done, reprints of the research will be available in the lab for your use and copies will be placed on reserve in the library. The laboratory is, in part, designed to stress identification of species by learning skeletal and pelage characteristics. As you study each group of mammal you should not only learn these characteristics but should develop a knowledge of the generalized life history of each species. Specimens of mammals not native to Montana or too rare or fragile to put out for general lab use will be displayed in the hall case next
to room HS 202. These specimens will be changed periodically so you should check this display as you go to lab. You will not be held responsible for any taxonomic information presented in the hall display case. Unless otherwise noted you will be held responsible for all of the taxonomic information presented in lecture and lab, as well as all material detailed in the lab handouts. Most specimens identified in the laboratory will be taken to genus and species. Correct spelling of taxonomic nomenclature is expected.

There are three exams which cover the lecture portion of the course, Exams I and II will be worth 100 points, Exam III will be worth 150 points. These exams will be essay in nature and comprehensive. Examples of last year’s exams will be posted on the course web site. There will be three laboratory exams each worth 100 points, and a laboratory quiz worth 25 points. These exams will be of a practical nature where specimens will be placed out for identification and additional questions. Additionally each student will produce a term paper for the semester which will be worth 120 points (approximately 15% of the total grade) and give a presentation to their lab section worth 25 points. No makeup exams will be given and no additional work or papers will be accepted for credit. Questions on the grading of an exam must be brought to my attention within one week of their return.

Materials placed out during each laboratory period will remain available until each exam is completed. Room HS 202 is open until midnight Monday through Friday, but will not be open on weekends. Most students find that additional time outside of the scheduled lab period is required to master this material. Teaching assistants will be available during the labs and will have scheduled office hours if additional help is needed.

Two books are required for the laboratory portion of the course: The Wild Mammals of Montana, and Key to the Mammals of Montana, both of which are available at the bookstore. There is no lecture text or faculty pac. All lecture PowerPoint presentations and weekly lab exercises will be available on the course web site; I encourage everyone to download a copy of these so that you will have them available during class.

### Mammalogy Lecture - Tentative Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Topic</th>
<th>Readings(*)</th>
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<tbody>
<tr>
<td>August</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 M</td>
<td>Introduction - Mammalian Characteristics</td>
<td></td>
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<tr>
<td>27 W</td>
<td>Mammalian Characteristics; Evolution</td>
<td></td>
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<tr>
<td>29 F</td>
<td>Evolution/Zoogeography</td>
<td></td>
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<tr>
<td>September</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 M</td>
<td>*** HOLIDAY ***</td>
<td></td>
</tr>
<tr>
<td>3 W</td>
<td>Evolution/Zoogeography</td>
<td></td>
</tr>
<tr>
<td>5 F</td>
<td>Recent Zoogeography</td>
<td></td>
</tr>
<tr>
<td>8 M</td>
<td>Techniques: Morphometrics/Electrophoresis</td>
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</tr>
<tr>
<td>10 W</td>
<td>Mammalian Systematics</td>
<td>Readings on web site</td>
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<tr>
<td>12 F</td>
<td>Mammalian Systematics</td>
<td>&quot;</td>
</tr>
<tr>
<td>15 M</td>
<td>Mammalian Systematics</td>
<td>&quot;</td>
</tr>
<tr>
<td>17 W</td>
<td>Paper Discussion - Systematics</td>
<td></td>
</tr>
<tr>
<td>19 F</td>
<td>*** EXAM I ***</td>
<td></td>
</tr>
<tr>
<td>22 M</td>
<td>Skin &amp; Derivatives</td>
<td></td>
</tr>
</tbody>
</table>
24 W  Skin & Derivatives
26 F  Skin & Derivatives
29 M  Antler & Horn Development

October
1 W  Aging Methods                    Tech. Paper #1
3 F  Techniques: Trapping/Marking/Radiotelemetry  Tech. Paper #2

6 M  Home Range & Territoriality
8 W  Home Range & Territoriality
10 F  Home Range & Territoriality
13 M  Home Range & Territoriality
15 W  Paper Discussion - Home Range
17 F  Reproduction/Reproductive Strategies
20 M  Reproduction/Reproductive Strategies
22 W  Reproduction/Reproductive Strategies
24 F  Paper Discussion - Reproduction
27 M  *** EXAM II ***
29 W  Metabolism & Temperature Regulation  Readings on web
31 F  Metabolism & Temperature Regulation  site

November
3 M  Metabolism & Temperature Regulation  “ “
5 W  Metabolism & Temperature Regulation  “ “
7 F  Paper Discussion - Hibernation
10 M  *** HOLIDAY ***
12 W  Echolocation
14 F  Echolocation
17 M  Echolocation

19 W  Echolocation
21 F  Echolocation
24 M  Echolocation
26 W  **THANKSGIVING HOLIDAY**
28 F  **THANKSGIVING HOLIDAY**

December
1 M  Remote Detection Methods  Readings on web
3 W  Remote Detection Methods  site
5 F  Review
9 Tu  FINAL EXAM  8:00 - 10:00 a.m.  ***No early final exams will be given***

Biology 306 - Mammalogy Laboratory
### Date       Laboratory #       Topic(*)

August 26 1   Mammalian Skeleton: Order Carnivora - Families Ursidae and Procyonidae;  
September 2 2   O. Carnivora: Family Mustelidae; ***Deadline for Term Paper Topics***  

<table>
<thead>
<tr>
<th>9</th>
<th>3</th>
<th>QUIZ; O. Carnivora: Families Canidae and Felidae; ***Term Paper Outline Due - Including Preliminary Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4</td>
<td>EXAM #1: Covers Labs 1-3</td>
</tr>
</tbody>
</table>

**Mandatory Field Trip: You will be required to come to one of these sessions:**  
- **Field Trip** - McKlay Flats: Thursday 18th 7-10am/6:30-9:30pm  
- **Field Trip** - McKlay Flats: Friday 19th - 6:30-9:30pm  
- **Field Trip** - McKlay Flats: Saturday 20th - 7-10am/6:30-9:30pm  
- **Field Trip** - McKlay Flats: Sunday 21st - 7-10am/6:30-9:30pm

23 5   Order Insectivora and Order Lagomorpha  
30 6   Order Chiroptera  

October 7 7   Order Artiodactyla: Families Cervidae, Bovidae, and Antilocapridae  
14 8   EXAM #2: Covers Labs 5-7; ***Term Paper Due (No Exceptions)***  

21 9   Order Rodentia: Families, Sciuridae, Castoridae, and Geomyidae  

28 10   Order Rodentia continued: Families Dipodidae, Muridae, and Erethizontidae; **HOLIDAY**  

November 4 11 **HOLIDAY**  
11 12 **HOLIDAY**  
18 13 EXAM #3: Covers Labs 10 & 11; Term Papers Returned for Revisions

25 14 ***Begin Group Presentations***  
December 2 15 Group Presentations; Final Term Papers Due

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**Term Paper Project:**  
You will be expected to work in a group of 3 on a semester project which details the characteristics of a Montana mammal species of your group’s choice. The product of this project will be in two forms, (1) an individual paper which each member of the group will write on their own topic related to the chosen species (this topic should reflect a specific aspect of the chosen species; it should not be a natural history summary for the species), and (2) a group presentation tying together each member’s contribution and presenting an overview of the species’ life history. *Mammalian Species* accounts and *The Wild Mammals of Montana* can be used as a starting framework for project information but all presentations and papers must be as up-to-date as possible and must reflect what is known about the species in Montana. Individual papers must not exceed 10 pages (including references), with double-spaced lines and 12 pt. font. Outlines (typed) of your term paper topic are due October 9th - a preliminary list of
references that you have found should be included with your outline. Though there is no magic number of references that must be included, a strong manuscript would be supported by 15-20+ references. **References to be included must come from solid, peer-reviewed journals, professional books, or well-documented agency reports. No materials from Web-site reports or lay books will be accepted.** [If you are not sure about a particular reference please talk with me]. References should be cited by strictly following the guidelines for the *Journal of Mammalogy* (see the references in *The Wild Mammals of Montana* which follows this convention). Each of your papers will bear a primary author and the names of the other members of the group as co-authors. The primary author is solely responsible for researching and writing the paper. The other members of the group will be responsible for editing this paper prior to its submission so that the manuscript is succinct, accurate, and well-written. Points will be given for both your own paper (draft and final revision) and the editing of your groups papers. Each member of the group will thus produce their own research paper and be responsible for editing two others. Term papers will be due October 21st (NO EXCEPTIONS). With this deadline in mind you should provide your group members with adequate time (at least 3-4 days) to effectively review your manuscript and provide editorial comments which you must then incorporate in to your final draft. This paper will be considered the primary draft of your manuscript. Your paper must be accompanied by the two additional copies containing reviewer’s comments. Your draft will be edited both for content and writing quality and returned for revisions; a final manuscript will be due December 2nd.

**Grading for Term Paper:**
A total of 120 points will be assigned to the term paper exercise. The initial draft which you will turn in will be worth 60 points. The final paper (with appropriate revisions) will be worth an additional 40 points. You will also receive a total of 20 points for the editorial comments that you make on each of the two term papers submitted by those in your group [10 points per review].

**Group presentation:**
Each group will be expected to give a 20 minute presentation to their lab describing their chosen species. Included in this presentation should be an overview of the following topics:
Taxonomic status
Distribution in U.S. and Montana
Distinguishing characteristics
Ecology (Anatomy/Physiology....)
Reproductive Biology

Obviously much of this information is summarized in *The Wild Mammals of Montana*. I will pay particular attention to any additional information which you may present.

Individual term paper topics should be more specialized, expanding upon one or another of these areas. Thus the group will spend approximately 5 minutes providing an overview to their species and then each member will give a 5 minute presentation on their own topic.

Materials from the museum can be used for these presentations (with prior approval); Each group will develop a PowerPoint presentation (computer presentation) for the class.

*** EACH GROUP MUST CHOOSE A DIFFERENT SPECIES THUS SPECIES ARE TAKEN ON A “FIRST-COME, FIRST-SERVED” BASIS. Get your group organized and be the first to choose a species! I will post a running list of species that have been chosen on the class web site. Once you have made your choice you must notify me - NO LATER THAN SEPTEMBER 2nd - of this choice, who the members of your group are, and what individual topics each member has chosen to write upon.