Biology 441, Fall 2002  
Principles of Animal Behavior  
M, W 10:30-11:30 a.m., Irving I 201; Lab: M 2:15-5:15 p.m., Bunnell 408

Instructor: Edward C. Murphy - Room 415A Irving I Bldg.  
e-mail: ffecm@uaf.edu

Phones:  
474-7154 (office)--leave a message if I'm not there.  
479-8224 (home: calls before 9 p.m. only please)

Office Hours:  
T, R 9-11 a.m. (also, you can see me after lecture)  
(Call or let me know at class if you want to see me at another time.)

Teaching assistant: John Citta - Room 305 Irving I Bldg.  
E-mail: ffijc@uaf.edu;  
474-7144 (office).  
451-0911 (home: calls before 9 p.m. only please)

<table>
<thead>
<tr>
<th>Grading Item</th>
<th>Date</th>
<th>% of Grade</th>
<th>W</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Midterm I</td>
<td>W, 16 Oct.</td>
<td>15</td>
<td>X</td>
<td></td>
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<tr>
<td>2. Individual Notebook</td>
<td>W, 30 Oct.</td>
<td>5</td>
<td>X</td>
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<tr>
<td>3. Midterm II</td>
<td>M, 11 Nov. (Lab)</td>
<td>20</td>
<td>X</td>
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<tr>
<td>4. Research Paper</td>
<td>W, 6 Nov.</td>
<td>20</td>
<td>X</td>
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<tr>
<td>6. Final</td>
<td>W, 18 Dec. 10:15 a.m.-12:15 p.m.</td>
<td>20</td>
<td>X</td>
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<tr>
<td>7. Lab Assignments</td>
<td>Throughout</td>
<td>10</td>
<td></td>
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<tr>
<td>8. Class Participation, Intangibles</td>
<td></td>
<td>5</td>
<td>X</td>
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Notes  (These correspond to item numbers listed above.)

3,6 Midterm II and Final will not be comprehensive, but could include questions from previous examination(s).
Once each week for a fifteen minute period, you will record all observations of behavior of an animal of your choice (e.g., Common Ravens at the Commons dumpsters, a pet, birds at a feeder). Details on how to make observations will be provided in the first laboratory.

Research paper should be 8-10 pages of text (double-spaced) and should include about 10 references from the journal literature. For ideas, look through the bibliography in the textbook, the journals listed below, or talk to John or me. Before finalizing your topic, check with one of us. We will read, grade and return papers within one week after they are turned in. You may earn up to half of the possible points (50%) with your first submittal and up to half the remaining points with your second submittal. The resubmission must be made on or before Monday, 2 December. You must turn in your original submittal with your resubmittal.

Your oral presentation of your research paper will follow the format of oral presentations of research at scientific meetings. We will provide guidelines. Your presentation will be 10-12 minutes, followed by a 3 minute question-and-answer period.

Class participation - your questions and comments are appreciated in lectures and labs. There will be short formal discussions in several lecture and lab periods. You should write down any questions you have while doing the assigned readings, and see that your questions are addressed in class.

Misc.: Once typed, lecture notes will be placed on the class BLACKBOARD site:

http://courses.uaf.edu/courses/TBA


Style guides (a sampling):

Grading: Final grades will be assigned based on percentages of total points earned:
A: >90%, B: >80%, C: >70%, D: >60%. At their discretion, the instructors may reduce one or more of these percentages when assigning final grades.
<table>
<thead>
<tr>
<th>Mtg.</th>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M, 9 Sept.</td>
<td>Introduction, definitions, examples In-class writing assignment: Altruism</td>
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<tr>
<td>3</td>
<td>M, 16 Sept.</td>
<td>Proximate and ultimate causes of behavior</td>
<td>2</td>
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<tr>
<td>4</td>
<td>W, 18 Sept.</td>
<td>Behavioral genetics</td>
<td>3</td>
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<tr>
<td>5</td>
<td>M, 23 Sept.</td>
<td>Behavioral development</td>
<td>4</td>
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<tr>
<td>6</td>
<td>W, 25 Sept.</td>
<td>Nerve physiology, information theory</td>
<td>5</td>
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<td>7</td>
<td>M, 30 Sept.</td>
<td>Perception (vision)</td>
<td>5</td>
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<tr>
<td>8</td>
<td>W, 2 Oct.</td>
<td>Perception (concluded)</td>
<td>5</td>
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<tr>
<td>9</td>
<td>M, 7 Oct.</td>
<td>Orientation, navigation</td>
<td>5</td>
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<tr>
<td>10</td>
<td>W, 9 Oct.</td>
<td>Annual Cycles, Endogenous rhythms</td>
<td>6</td>
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<tr>
<td>11</td>
<td>M, 14 Oct.</td>
<td>Review for Midterm I</td>
<td>1-6</td>
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<tr>
<td>12</td>
<td>W, 16 Oct.</td>
<td>MIDTERM I (Lectures 1-10, Chapters 1-6)</td>
<td></td>
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<tr>
<td>13</td>
<td>M, 21 Oct.</td>
<td>Feedback on MIDTERM I</td>
<td></td>
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<tr>
<td>Mtg.</td>
<td>Date</td>
<td>Topic</td>
<td>Reading</td>
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<tr>
<td>15</td>
<td>M, 28 Oct.</td>
<td>Mimicry, aposmatic coloration</td>
<td>7</td>
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<tr>
<td>17</td>
<td>M, 4 Nov.</td>
<td>Habitat selection, territoriality</td>
<td>9</td>
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<td>18</td>
<td>W, 6 Nov.</td>
<td>Communication: status signaling, deception</td>
<td>10</td>
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<tr>
<td>19</td>
<td>M, 11 Nov.</td>
<td>Review for Midterm II</td>
<td></td>
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<tr>
<td>(LAB)</td>
<td>M, 11 Nov.</td>
<td>Midterm II (Lectures 11-18; Chapters 7-10)</td>
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<tr>
<td>20</td>
<td>W, 13 Nov.</td>
<td>Discussion of Midterm II</td>
<td></td>
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<tr>
<td>22</td>
<td>W, 20 Nov.</td>
<td>Mating systems</td>
<td>12</td>
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<tr>
<td>25</td>
<td>M, 2 Dec.</td>
<td>Cooperation: avian and mammalian social systems</td>
<td>14</td>
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<tr>
<td>27</td>
<td>M, 9 Dec.</td>
<td>DISCUSSION: Human behavior</td>
<td>15</td>
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<td>28</td>
<td>W, 11 Dec.</td>
<td>Review</td>
<td></td>
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<tr>
<td>29</td>
<td>W, 18 Dec.</td>
<td>FINAL EXAM (Lectures 21-28; Chapters 11-15)</td>
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Biol 441 test out 2002
<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>9 Sept.*</td>
<td>Geese and crane observations, Creamer's Field***</td>
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<tr>
<td>16 Sept.</td>
<td>Red squirrel calling behavior (start)***</td>
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<tr>
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<td>VIDEO: Red Deer of Rhum</td>
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<td>23 Sept.</td>
<td>Heritability exercise</td>
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<td></td>
<td>Caribou, reindeer observations, LARS***</td>
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<tr>
<td>30 Sept.</td>
<td>Red squirrel calling behavior: discussion of results</td>
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<tr>
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<td>VIDEO: Miracle of the Scarlet Salmon</td>
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<tr>
<td>5 Oct. (SAT)**</td>
<td>Salmon spawning behavior (Clear)***</td>
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<tr>
<td>7 Oct.</td>
<td>Chickadee feeding and vigilance behavior: start***</td>
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<td></td>
<td>MOVIE: Animal Landlord</td>
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<td>14 Oct.</td>
<td>No laboratory (see 5 Oct.)</td>
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<td></td>
<td>Moon observations (start)</td>
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<tr>
<td>21 Oct.</td>
<td>No laboratory (see 5 Oct.)</td>
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<tr>
<td>28 Oct.</td>
<td>DISCUSSION: Moon observations</td>
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<td></td>
<td>VIDEO: A Private Universe</td>
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<tr>
<td></td>
<td>Chickadee observations (summary)</td>
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<tr>
<td>4 Nov.</td>
<td>DISCUSSION: Oral scientific presentations</td>
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<td></td>
<td>Crayfish dominance interactions</td>
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<td>VIDEO: Attenboro in Paradise</td>
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<tr>
<td>11 Nov.</td>
<td>MIDTERM II</td>
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<tr>
<td>18 Nov.</td>
<td>Wasp life histories</td>
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<td></td>
<td>MOVIE: Castles of Clay</td>
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<tr>
<td>25 Nov.</td>
<td>Student Presentations of Research Papers I</td>
</tr>
<tr>
<td>2 Dec.</td>
<td>Student Presentations of Research Papers II</td>
</tr>
<tr>
<td>9 Dec.</td>
<td>Student Presentations of Research Papers III</td>
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</tbody>
</table>

*** Outside activities; wear appropriate clothing and footwear.

** For the out-of-town field trip, bring a lunch and snacks, raingear, cold weather (waterproof, if possible) footwear, hat, and gloves.