Bios 240, Comparative Plant and Animal Physiology
Spring 2015
Course call number 34263

Instructor: Dr. Alan Molumby, molumby@uic.edu, Office: 3084 SEL

Teaching Assistant: Elena Blanc-Betes, mblanc7

Lectures: MWF 10:00-10:50, BSB 145

Office Hours: Molumby MWF at 11, 3084 SEL

Goals and Objectives: To present students with a background in the principles by which eukaryotes maintain their internal functional environment. This course covers the basic physiology of plants and animals in the context of the theme “Homeostasis”. It focuses on how organisms adjust and respond to changes in their internal and external environments. The material considers the basic biophysical challenges faced by cells and organisms and uses a comparative approach to understand the means by which these challenges have been met by living organisms. I have a background in evolutionary biology and experience in entomology (expect a great many invertebrate examples, and less emphasis on human physiology than a class directed at premed students). During the course, I will choose examples that illustrate physiology from the perspective of adaptation, especially in light of how organisms are able to adapt themselves to maintain homeostasis under challenging environments.

Suggested Texts
Hill, Animal Physiology, any edition
Raven, Biology of Plants, any edition

Attendance: Attendance is expected at all scheduled lectures; each exam will be based on material discussed in class. Attendance is required at all scheduled exams, except in cases of illness, mandatory religious obligations or official University activities.

Supplementary materials: These will be put on the Bios 240 Blackboard website.

Examinations: There will be a total of three exams-two midterm exams, and a final. The two midterm exams will be based on material discussed in class and materials covered in the readings, and include only material presented before that exam. The final exam will be split between material presented at the end of the course, and cumulative material from earlier. Midterm exams will include multiple choice questions (40 points each), the final will include multiple choice questions and be 80 questions long (80 points total).

All exams will be at the current lecture classroom. No makeup exams will be given. Official conflicts on final exams should be communicated to us at least 10 days in advance, and hopefully earlier than that, as soon as the student is aware of them.
**Research Papers.** Two research papers, worth 40 points each, will be assigned. Topics will be posted on blackboard after being given in lecture. Papers are due during the first five minutes of lecture. Dates are listed below. Additional details will be forthcoming.

**Expected Grade Distribution.** There will be a total of 240 points to be earned in this course. The following grade distribution is subject to change, but the following grade intervals should translate points into course grades.

- A…..204+
- B…..180-203
- C…..144-179
- D…..120-143
- F…..<120

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<td>Jan 14</td>
<td>Introduction-Metabolism, Control Systems</td>
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<td>Introduction Continued-Why We Fall Apart</td>
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<td>Jan 19</td>
<td>Martin Luther King Day</td>
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<td>Jan 21</td>
<td>Homeostasis, Allostasis, and Adaptation</td>
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<td>Feb 4</td>
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<td>Mar 2</td>
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<td><strong>No Class Spring Break</strong></td>
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**FINAL EXAM To Be Announced**