BI206 – Cellular and Organismal Biology II: Organs and Organisms

Syllabus **Spring 2015**

Instructor: **Dr. Michael Weichhaus**
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Office Hours: **Tue: 15:00-17:00 and Thu: 09:00-12:00**
Class Hours: **MWF 10:30-11:20 Sue Wesselkamper Science Ctr, Room 120**
MWF 13:30-14:20 Eiben Hall, Room 201

Texts:

1. Biology, Custom edition for CUH, 2012, Pearson Learning Solutions
2. Biology e-text, Campbell & Reece 10 ed, Pearson
   *available via E-college

Aims of the course:

- Prepare the students for further education in advanced biology courses, or related fields.
- Introduce the student to the cellular biology of prokaryotes and eukaryotes.
- To help the student on their road to becoming a competent and educated professional.
- To examine and analyze specific content areas, such as molecular or cellular biology, evolution, genetics, physiology, and related areas of biochemistry and biophysics.
- To study the organisms included in the botanical and zoological fields emphasizing Hawaiian flora and fauna.
- Learn how to critically read scientific journal articles.

At the end of the course you will be able to do the following

- Identify biological structures, such as organs, and understand their anatomy and physiology.
- Use anatomy and physiology terminology.
- Identify representative flora and fauna, especially of Hawaii.
- Understand the diversity of organisms including diversity, evolution, and phylogeny.
- Understand how organism systems are related to each other and cellular level processes.
- Understand ecological relationships between organisms and environment.
- Learn about genetic processes affecting the organism including gene regulation.
- To become critical thinkers.

Lecture Assignments

1. Lecture topics are listed on the attached outline. Each lecture has a reading assignment to be completed by the student independently. Exam questions will include material that may **ONLY** be covered by the reading assignment.

2. Each student will be expected to complete 3 summaries of **biological research** articles published in scientific journals. These articles will be provided by the instructor **TWO** weeks, before the assignment is due. Each will consist of a 250-500 word summary.

3. Attendance is expected in lecture sessions. A sign in sheet will be passed around during each class., and unexcused absences (more than 3) may result in a decrease in grade by one grade level. If you know that you will be unable to attend a class then please let me know by e-mail. Unexcused absence for two consecutive weeks may result in the student being withdrawn from the course without notice. The student is responsible to catch-up on all topics/material covered during their absence.

Mastering Biology

1. You MUST participate in the Mastering Biology which should be accessible through E-college.
2. You should check this daily as you will be assigned various assignments with specified due dates.
3. Regardless of your actual score achieved on the assignment, FULL credit will be given for completing the assignment by the due date. Partial credit will be given as long as the assignment is completed before the designated exam. After the exam the assignment will no longer be accessible and you will receive no credit.

Evaluation of Student Performance

1. Separate grades are given for lecture and laboratory. It is possible to receive different grades for lecture and laboratory.

2. There is no curve for exams or final scores. The scale used is given below.

3. There will be three midterm exams and one final exam for this course. Exam schedule is attached.

4. The final examination is a two-hour comprehensive examination including topics from the beginning of the course.

5. Extra credit work is NOT available.

6. Missed exams can only be made up for valid excuses (to be determined by the instructor). In cases of illness, a physician's note is necessary.

7. The lecture grade will be determined in the following manner:

Summaries	9 percent
MasteringBio	6 percent
1st Lecture Exam	16 percent
2nd Lecture Exam	16 percent
3rd Lecture Exam	16 percent
4th Lecture Exam	16 percent
Final exam	21 percent
	100 percent

Strict scale:	90% - 100% = A
	80% - 90% = B
	70% - 80% = C
	60% - 70% = D
	Below 60% = F

Class standing:

The instructor, prior to the withdrawal deadline, will notify students with grades of D or lower. Students receiving deficiency notices are required to arrange a conference with instructor.

Music Devices and Cellphones

Use of music devices and cell phones is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. Use of cellphones and music devices in laboratories is a safety issue. In addition, use of cellphones and music devices in any class is discourteous and may lead to suspicion of academic misconduct. Students who cannot comply with this rule will be asked to leave class and may be subject to laboratory safety violation fines. Please refer any questions to the Dean of Natural Sciences and Mathematics.

ADA Accommodations

Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from the CUH Counseling Center (Dr. June Yasuhara; phone 735 - 4845) by the end of week three of the class, in order for the instructor to plan accordingly. Failure to provide written documentation will prevent your instructor from making the necessary accommodations. Please refer any questions to the Dean of Students and review the procedures at http://www.chaminade.edu/student_life/sss/counseling_services.php.

Academic Honesty

We expect you to behave with integrity and hold both yourself and your peers to the highest standards of ethical behavior. Academic dishonesty encompasses, but is not limited to: (1) plagiarism (i.e., copying another individual's words or ideas without appropriately citing the source); (2) turning in assignments that somebody else has completed; (3) referring to notes or other written/electronic materials, collaborating with others, copying someone else's work, or providing answers to others in any fashion during an examination. Please note that knowledge of others' cheating and failure to report this can also be construed as complicitness in academic dishonesty. Should we have reason to suspect that academic dishonesty has occurred; we will conduct a thorough investigation or may refer the matter to the Dean of Students for investigation. Possible sanctions should you be found responsible for academic dishonesty could include a failing grade for the course, suspension or even expulsion from the University. Such consequences could negatively affect your candidacy for graduate/professional programs or for some jobs.

Organismal Biology Research Article Summaries

1. Each student is to submit a summary of a scientific article pertinent to organismal biology. The principle objective of the summary is to expose and engage the student in reading and understanding scientific literature. Another objective is to increase the student's ability to concisely summarize scientific information.

2. The research articles to be summarized will be provided by the instructor **TWO** weeks before the summary due date below. Students are expected to submit individually written summaries. Group work, interaction with the instructor and seeking help online is desired.

3. There will be three summaries due during the semester. The summaries will count as a total of 9% of your grade (3% each).

4. Summaries must be typed or word processed (use 12 point font). University writing standards are expected. Summaries should be between **250-500 words**.

5. Summaries will be graded for the presence and quality of the following:

- Capturing the research field (What are they studying?)
- Addressing the research question (What is the lack of understanding they are trying to address?)
- Identifying the hypothesis and/or aim the article plans to address (Do they propose a mechanism of how the unknown works, or are they aiming to find out?)

- Clarity
- Conciseness

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Week	Date	Lecture	Reading assignment	Comments
1	1/12	Syllabus of course, Course overview		
	1/14	No class		
	1/16	Basic Principles of Animal Form & Function	Ch 15 (Custom), Ch 40 (Etext)	
2	1/19	Martin Luther King Jr. Day Holiday – No class		
	1/21	Animal Nutrition	Ch. 16(C), 41(E)	
	1/23	Circulation & Gas Exchange 1	Ch.17(C), 42 (E)	
3	1/26	Circulation & Gas Exchange 2		
	1/28	The Immune System 1	Ch.18(C), 43(E)	
	1/30	The Immune System 2		**1st writing assignment**
4	2/2	Osmoregulation & Excretion	Ch.19(C), 44(E)	
	2/4	**EXAM #1**		
5	2/6	Hormones & Endocrine System 1	Ch.20(C), 45(E)	
	2/9	Hormones & Endocrine System 2		
	2/11	Animal Reproduction & Development 1	Ch.21 & 22(C), 46 &47(E)	
	2/13	Animal Reproduction & Development 2		**Summary 1 due**
6	2/16	Presidents' Day Holiday – No class		
	2/18	Animal Reproduction & Development 3	Ch.21 & 22(C), 46 &47(E)	
	2/20	Nervous System 1	Ch.23-35(C), 48-50(E)	**2nd writing assignment**
7	2/23	Nervous System 2		
	2/25	Nervous System 3		
	2/27	**Exam #2**		
8	3/2	Plant Structure, Growth & Development 1	Ch. 10(C), 35(E)	
	3/4	Plant Structure, Growth & Development 2		
	3/6	Resource Acquisition & Transport in Vascular Plants 1	Ch. 11(C), 36(E)	**Summary 2 due**
9	3/9	Resource Acquisition & Transport in Vascular Plants 2		
	3/11	Soil & Plant Nutrition	Ch. 12(C), 37(E)	
	3/13	Angiospoerm Reproduction 1	Ch. 13(C), 38(E)	
10	3/16	Angiospoerm Reproduction 2		
	3/18	Plant Response to Internal & External Signals	Ch. 14(C), 39(E)	
	3/20	**Exam #3**		
		Spring Recess – No class		
11	3/30	History of Life on Earth	Ch.1&2 (C), 25 & 26(E)	
	4/1	Phylogeny 1	Ch.3(C), 28(E)	
	4/3	Good Friday Holiday – No class		
12	4/6	Phylogeny 2	Ch.3(C), 28(E)	
	4/8	Protists 1	Ch.6(C), 31(E)	
	4/10	Protists 2		**3rd writing assignment**
13	4/13	Fungi 1	Ch.6(C), 31(E)	
	4/15	Fungi 2		
	4/17	**Exam #4**		
14	4/20	Plant Diversity	Ch.4 & 5 (C), 29 & 30 (E	
	4/22	Animal Diversity	Ch.7 (C), 32(E)	
	4/24	Invertebrates	Ch.8 (C), 33(E)	**Summary 3 due**
15	4/27	Origin & Evolution of Vertebrates	Ch.9 (C), 34(E)	
	4/29	Sensory and Motor Mechanisms		
	5/1	left open to allow for some lecture flexibility	Chapter 18	
16		**Final Exam Thursday, May 07, 2015, 11:00 –01:00 PM**		

Every effort has been made to insure that the material in this syllabus is accurate and complete. However, occasionally changes must be made to the printed schedule. Thus the instructor reserves the right to make any changes in the contents of this syllabus that he deems necessary or desirable. These changes, if any, will be announced as soon as the need for them becomes apparent.