

Instructor:

BSC 1011: General Biology II

CRN 81859

Tues & Thurs: 2:00 – 3:15 PM

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Dr. Allman

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E-mail: pallman@fgcu.edu Office Hours: Tues and Thurs 9:30 - 11:00 AM, 3:30-4:30 PM

Wed 9:00 - 9:45 AM .....or by appointment

Fall 2015

EH-112

**Course Description:** General Biology II is intended for science majors and examines biological systems from the organismal through functional systems level. Topics include: the theory of evolution, biodiversity, plant and animal systematics, and comparative anatomy and physiology of selected organisms. The curriculum is inquiry based and fully integrated with laboratory and/or field experiences which emphasize active learning strategies.

Required Text: Campbell N.A., and J.B. Reece. BIOLOGY. 2013 (10<sup>th</sup> ed). Pearson Publishing, San Francisco, CA.

## **Learning Objectives:**

- Develop improved reasoning skills and learn how to use available information to draw inferences and conclusions.
- Identify patterns and relationships leading to enhanced abilities to understand and organize information.
- Develop an improved understanding of evolution from the standpoint of the fact of evolution, the course of evolution, and the mechanisms of evolution.
- Know the underlying assumptions for Hardy Weinberg equilibrium and explain how violation of the underlying assumptions results in micro-evolution.
- Define a species, identify the basic mechanisms for speciation, and differentiate between allopatric and sympatric speciation mechanisms.
- Understand how systematics enables biologists to organize living organisms into related groups and be able to distinguish between Linnaean classification and cladistics.
- Know the major fossils leading to *Homo sapiens*, their relationship to other primate groups and distinguish between monophyletic and polyphyletic evolution of humans.
- Distinguish between organisms in the Domain Eukarya (including the Protista, Fungi, Plantae, and Animalia) on the basis of cell structure, comparative anatomy, physiology, and behavior.
- Examine the Domains, Kingdoms, major Phyla, and selected classes of living organisms and through this process gain an understanding of the diversity of living organisms.
- Relate structure to function in selected examples from the major groups of plants and animals.

## Course Policies will be adhered to as follows:

- Your attendance is expected at every class session. Tardiness, leaving early or failure to come to class minimizes your
  opportunity to learn. If you are absent, you are still responsible for all announcements and class notes. <u>An unexcused</u>
  <u>absence may result in an academic penalty.</u>
- All electronic devices (cell phones, I-Pods, MP3 players, etc) are to be turned off during class time. Computers may be used for taking notes during class; but if they are used for any other reason you will not be able to bring them back into the classroom. Failure to follow these guidelines may result in an academic penalty at my discretion. I also reserve the right to confiscate any electronic devices that are being inappropriately used during class. You are strongly advised not to violate this policy.
- Exams will only be given on the date scheduled. Please consider all exam dates if you are making travel arrangements; this is especially true for the final exam. An exam missed for an unexcused absence will result in a zero grade for that exam. If you miss an exam, you MUST inform me before the exam. Exams begin at the start of class (2 PM). If you arrive more than 5 minutes late for an exam, you will receive a 10% penalty on the exam. You cannot leave the room until you hand in your exam. No electronic devices are to be turned on or used during the exam. Not following exam policies and instructions can result in a 10% academic penalty toward your grade.
- *Unusual* circumstances resulting in tardiness or class absence will be evaluated on a case-by-case basis. The circumstances must be communicated to me as soon as possible and not at the end of the semester.
- If you experience a catastrophic event in your life that precludes you from completing the course requirements, you may elect to petition for an incomplete grade **provided that you are passing the course**.

Course Communication: <u>E-mail will be a primary means of communication in this class</u>. Please review the FGCU instructions for activating, forwarding, and getting help with your email at <a href="http://eagle.fgcu.edu/">http://eagle.fgcu.edu/</a></u>. Check your e-mail daily and making sure your account works so that you receive all e-mail messages about the course. All e-mails to me should be sent directly to my e-mail address as posted above; I do not respond to other e-mail addresses (Yahoo, Hotmail, etc) that you may use. Please do not leave messages on my office phone as I will not return your call; use e-mail to contact me. I will do my best to respond to all e-mails within 24 hours. You are also responsible for knowing how to access course related material posted on CANVAS for this class.

## **Evaluation and Grading:**

- There will be *four exams* (15% each) and a *comprehensive final exam* (20%) given during finals week. Exams will consist of multiple choice and/or true false questions that are designed to assess your comprehension of the topics and material covered in lectures and reading assignments.
- Weekly online quizzes (10% overall) will be administered via CANVAS and will test your knowledge of material presented in the previous week's lectures. Online quizzes will be available for 72 hours from Saturday 9:00 AM through Monday at 9:00 PM. Although your lowest quiz grade will be dropped, there will be no make-up quizzes for any reason. You will have 15 minutes to answer the 10 questions.
- Reading Assignment (10% each). You will read a primary literature paper (provided by instructor) during each unit and then complete a 10 15 question assignment on CANVAS that tests your understanding of the content of the paper (total of 4). Papers will be posted on Canvas on Monday before the quiz. The quiz will then be available the following Saturday (9:00 AM) through Monday (9:00 PM).

**Grading Scale:** A: > 90.0 B: 80.0 - 89.9 C: 70.0 - 79.9 D: 60.0 - 69.9 F: < 60.0

Academic Behavior Standards and Academic Dishonesty: All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the *Student Code of Conduct* and *Policies and Procedures* sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at http://studentservices.fgcu.edu/judicialaffairs/new.html

**Disability Accommodations Services:** Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university's guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please contact the Office of Adaptive Services. The Office of Adaptive Services is located in Howard Hall 137. The phone number is 239-590-7956 or TTY 239-590-7930

Student Observance of Religious Holidays: All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, *upon prior notification to their instructors*, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence.

Tentative Schedule: I reserve the right to modify the syllabus as needed to accommodate situations that arise during the semester.

Month	Day	Date	Topic	Text Assignment	
Aug	Thurs	20	Course Overview		
	Tues	25	Historical Context of evolutionary theory	CH 22	
	Thurs	27 <sup>1</sup>	Modern Perspective of evolutionary theory	CH 22	
Sep	Tues	1	Evolution of Populations	CH 23 + Reading Assignment	
	Thurs	<b>3</b> <sup>1,2</sup>	Mechanisms of Evolution	CH 24	
	Tues	8	Speciation	CH 24	
	Thurs	10 <sup>1</sup>	Origin of Life on Earth	CH 25	
	Tues	15	Unit 1 Exam		
	Thurs	17	Phylogenetics	CH 26	
	Tues	22	Protists	CH 28	
	Thurs	24 <sup>1</sup>	Plant Diversity I: Colonization of Land	CH 29	
	Tues	29	Plant Diversity II: Evolution of Seed Plants	CH 30 + Reading Assignment	
Oct	Thurs	11,2	Plant Diversity II: Evolution of Seed Plants	CH 30	
	Tues	6	Plant Anatomy and Growth	CH 35 & 36	
	Thurs	8 <sup>1</sup>	Review		
	Tues	13	Unit 2 Exam		
	Thurs	15	Fungus	CH 31	
	Tues	20	Understanding Animal Diversity	CH 32	
	Thurs	22 <sup>1</sup>	Animal Diversity I: Porifera and Cnidaria	CH 33	
	Tues	27	Animal Diversity II: Lophotrochozoans	CH 33 + Reading Assignment	
	Thurs	29 <sup>1,2</sup>	Animal Diversity III: Lophotrochozoans & Ecdysozoans	CH 33	
Nov	Tues <sup>¥</sup>	3	Animal Diversity IV: Deuterostomes	CH 34	
	Thurs	5 <sup>1</sup>	Animal Diversity IV: Deuterostomes	CH 34	
	Tues	10	Unit 3 Exam		
	Thurs	12	Animal Form and Function	CH 40	
	Tues	17	Animal Form and Function	CH 40 + Reading Assignment	
	Thurs	19 <sup>1,2</sup>	Animal Nutrition	CH 41	
	Tues	24	Circulation	CH 42	
	Thurs	26	Thanksgiving – NO CLASS		
Dec	Tues	1	Gas Exchange	CH 42	
	Thurs	3	Unit 4 Exam		
	Tues	8	Comprehensive Final Exam (12:30 PM – 2:45 PM)		

<sup>&</sup>lt;sup>1</sup> = weekend quiz on lecture material <sup>2</sup> = weekend reading assignment quiz <sup>¥</sup> = last day to drop course without academic penalty