

<b>Spring 2015</b>		
<b>Biology 308: Fundamentals of Ecology and Evolution</b>		
<b>Instructor:</b> Dr. Larry Rockwood  Dr. Lorelei Crerar	<b>Biology Office:</b> 703-993-1050 <b>Section 001-Class Time:</b> 9am – 1015am T/R <b>ENGR 1101</b> <b>Section 002-Class Time:</b> 3pm – 415pm T/R <b>EH 004</b>	<b>Office:</b> Exploratory Hall Room 1203 <b>Office Hrs:</b> T/R 1030-12pm; W 3-4pm Exploratory Hall Room 1218 <b>Office Hrs:</b> M-R 730-9; T/R 12pm-3pm; W
<b>Date</b>	<b>Topic</b>	<b>Readings in:</b> <i>Life, the Science of Biology, 9<sup>th</sup> /10<sup>th</sup> Edition</i>
January 20	1-Evolution Introduction	Chapter 21 /21
22	2-History of Evolutionary Thought	Chapter 25 / 25
27	3-The Hardy-Weinberg Equilibrium	Chapter 25 / 25
29	3-The Hardy-Weinberg Equilibrium (cont.) 4-Mechanisms of Evolution	Chapter 21 / 21
February 3	4-Mechanisms of Evolution (cont.)	Chapter 23 / 23
5	5-Mutation: The Source of Variation	Chapter 24 / 24
10	6-Species and Speciation	Chapter 24 / 24
12	7- Coevolution	Chapter 24 / 56
<b>February 17</b>	<b>Exam I</b>	
19	8 - Ecology: Levels of Organization	Chapters 56 and 54 /54
24	9 - The Physical Environment and Climate	Chapters 54; 57.1 /54
26	10 - Ecosystems: Biomes	Chapter 58 / 58
March 3	10 - Ecosystems: Biomes (cont.)	Chapter 58 / 58
March 5	11 - Community Ecology	Chapters 57 and 59 /57; 59
<b>March 9 - 15</b>	<b>Spring Break</b>	
March 17	11 - Community Ecology	Chapters 57 and 59 /57; 59
19	12 - Ecosystems and Energy Flow	Chapter 58 / 54
March 24	12 - Ecosystems and Energy Flow	Chapter 58 / 54
<b>March 26</b>	<b>Exam II</b>	
31	13 - Biogeochemical Cycles	Chapter 58 / 58
April 2	14 - Population Ecology	Chapter 55 / 55
7	15 - Life Tables	Chapter 55 / 55
9	16 - Life Histories	Chapter 56 / 56
14	17 - Interspecific Competition	Chapter 56 / 56
16	17 - Interspecific Competition (cont.)	Chapter 56 / 56
<b>April 21</b>	<b>Exam III</b>	
23	18 - Predator-prey Interactions	Chapter 56 / 56
28	18 - Predator-prey Interactions (cont.) 19 - Escape from Predation	Chapter 56 / 56
30	20 - Plant-Herbivore Interactions	Chapter 56 and Section 39.2 / 56; 39.2
<b>May 7</b>	<b>The Final Exam is Comprehensive</b>	<b>Section 001: 7:30 – 10:15am</b> <b>Section 002: 1:30 – 4:15pm</b>

**Notes:**

A. Unless the instructor announces otherwise, if a scheduled exam is canceled by snow or for any other reason, the exam will be given during the next scheduled class period.

B. **Blackboard.** Powerpoints and other material will be available on Blackboard. **Blackboard is no substitute for coming to class and taking notes.**

C. Last Day to Add: January 27, 2015

Last Day to Drop: February 20, 2015

Selective Withdrawal Period: February 23 – March 27, 2015

D. If you are a student with a disability and you need academic accommodations, please see your instructor and contact the Disability Resource Center (DRC) at 703-993-2474. **All academic accommodations must be arranged through that office.**

E. Important Web Page: GMU Writing Center <http://writingcenter.gmu.edu/>

#### F. iclicker

In section 001 (Dr. Rockwood), we will experiment with using 3X5 cards for quizzes instead of iclickers. More details on the first day of class.

#### G. Quizzes

There will be daily quizzes throughout the semester. Normally there will be at least one question of the day asked at the beginning of the class period. There will be questions on the first day of class! Therefore it is essential that you arrive on time be ready to work; come prepared. There may be several questions requiring responses during one class period. You will receive one grade per class period. The purpose of these quizzes is to promote active learning and discussion among your peers. However, you are responsible for answering each question individually. Answering questions for another student will be considered an Honor Code violation. Since the class meets 25 times during the semester (28-3 exams) you will be expected to have participated in 20 of these quizzes. Obviously, if you do not attend class you will receive zero points on quizzes for that day. Please be ready on January 20, first day of class. Quizzes count a total of 10% of your final grade. Point values are subject to adjustment if fewer quizzes are administered. Since we are allowing you to drop the lowest 5 quiz scores, you may not miss more than 5 classes without losing points and damaging your potential grade. If you think you cannot make it to class 20 times during the semester, we suggest you drop the class or withdraw.

#### H. Laptop Computers

The Biology Department requires that all students own a laptop computer. We recommend a PC, but a Macintosh will work as well. You need Microsoft Excel or a free version of that program (Open Office). These computers are for use in lab/recitation. **We require that laptops/tablets NOT be used during lecture.** There is a great deal of research stating that students who do not have a laptop in class perform much higher on exams from taking notes during the lecture. You should also have phones and other electronic devices turned off and stowed away during class. It also might be prudent to get a full night's sleep before coming to class!

#### I. Exams

There are three hourly exams and a final. **There are no make-up exams, per se.** If you miss an exam, you must have documented proof that you were ill or injured (doctor's note required). You will then be required to take a version of the missed exam on the same day as the final exam. This make-up exam will be short answer essay as opposed to hourly exams which are more reliant on multiple choice questions. Therefore it is prudent to take the hourly exams as scheduled.

The final exam is comprehensive and the average score on the final is lower than the average on hourly exams.

**This is not kindergarten. It is your responsibility to know when exams are and to contact the Biology office (703 993 1050) or your instructor if think you will miss an exam or have missed an exam. Failure to do so will result in a grade of zero on the missed exam if we have not heard from you by 5:00 PM on the day of the exam.**

Each exam will be of a mixed format: a combination of short answer essays, problems, graphs, as well as multiple choice and matching questions. To study for the exams it will be useful to study, in addition to notes you have taken in class, the text book, and the Power Points. There will be extra credit points on exams that potentially result in raising your grade by 3%. **Therefore, when the final grade is computed for the course, there will be no curve.**

**Again, the final examination is comprehensive and scores are 10% lower than on other exams for most students.**

#### J. Writing Intensive Requirement

All students at George Mason are required to take a writing intensive (WI) course in their major. **Biology 308 is the writing intensive course** for the BA and BS in Biology. This means that you must write a paper of approximately 3000 words in length and complete other assignments for at least 500 additional words. This paper is graded, evaluated and returned to you. You must then resubmit your paper, taking into account the suggestions of the grader during the last week of classes along with your original paper. The submitted written work will be graded again. The paper will be based, at least in part, on data generated in the laboratory. Your recitation instructor will work closely with you on your written assignments and opportunities for consulting with a writing tutor will also be available. **You must submit the paper to pass this course. Failure to submit a paper will result in a grade of incomplete no matter how well you have done in the remainder of the course!**

#### Grading Summary

	Points (Dr. Crerar)	Percentages (Dr. Rockwood)
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Laboratory plus Recitation	300	30.0
Three hourly exams (125 points or 12.5 % each)	375	37.5
Final Exam	225	22.5
Quizzes	100	10
<b>Total</b>	<b>1000</b>	<b>100</b>

#### Grading Scale

Letter Grade	Percentage	Registrar's Equivalent on a Scale of 0-4.0
A+	> 96	4.0
A	90.0-96	4.0
B+	88.0-89.99	3.33
B	80.0-87.99	3.00
C+	78.0-79.99	2.33
C	70.0-77.99	2.00
D	60.0-69.99	1.00
F	< 60	0.00

#### Academic Integrity

GMU is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit to those people in the proper, accepted form. When doing homework, the work must be yours. It is totally unacceptable to copy the work of another student in this course in any form.

#### GMU Email Accounts

Students must use their Mason email account to receive important University information, including messages related to this class. See <http://masonlive.gmu.edu> for more information.

#### Other Useful Campus Resources:

Writing Center: A114 Robinson Hall; (703) 993-1200; <http://writingcenter.gmu.edu>

UNIVERSITY LIBRARIES "Ask a Librarian" <http://library.gmu.edu/mudge/IM/IMRef.html>

Counseling and Psychological Services (CAPS): (703) 993-2380; <http://caps.gmu.edu>

#### University Policies

The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at <http://universitypolicy.gmu.edu/>. All members of the university community are responsible for knowing and following established policies.