

Biology 002 (General Biology 2)
Spring Semester 2009
Section 1001 (TuTh 2:00-3:15pm)
Marquette Hall 100 (MH100)
Prerequisites: BIOL 001, CHEM 001

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Office: WLS207
Office Hours: Tu 4:00-5:00, W 11:00-12:00, F 2:00-3:00
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Discussion Sections: 4001 Tu 10:00 TW141
4002 Tu 1:00 TW141

General Biology 2

BIOL 002 is the second semester introductory biology course for biology majors. This course (in addition to BIOL 001) is also recommended for preprofessional students pursuing careers in biological related disciplines (e.g. medicine, biomedical sciences). Several degree programs at Marquette University require this course for completion of major. BIOL 001 and 002 are prerequisites for the upper level biology courses.

This course can be considered a “building block” for your later studies. We will cover a range of topics that will introduce you to molecular biology, biochemistry and genetics. Upper level biology courses are taught assuming that you have a working knowledge of these topics. It is therefore in your best interest to understand the material beyond knowing it for an exam. Ask questions when you have them. Use the resources presented to you, including, but not limited to: your book and its associated website; D2L; your TA; your instructor. Hopefully you will find this course informative, interesting and at times entertaining.

Text Book

Biology; Eighth Edition (2008), by Campbell/Reece; Benjamin Cummings.

Website: <http://www.masteringbio.com>

Exams will be comprised of material covered in the lectures. Chapters associated with lecture material are listed in the syllabus next to the lecture’s topic. Most of the time, the chapters will contain more information than covered in class. While much of this information will be interesting, you will only be responsible for lecture-related material. Please make use of not only your textbook, but also the textbook’s website and included CD-ROM to aid you in your understanding of this material. Both of them contain useful features such as quiz questions and animations that should help to clarify basic principles/points.

D2L

A site for this course exists on the Marquette University D2L cluster (<http://d2l.mu.edu/>). Information regarding this section of bio002 will be posted on the site along with useful links and tools. You have automatic access to this site if you are registered for this class.

Office Hours (see top of page)

I have listed several hours during the week when I *should* be available in my office. I will try to be available during these times, but situations may arise when I will be unavailable. I will make efforts to inform you of these times during class or as announcements on D2L. If these hours do not work for you, feel free to make an appointment with me for some other time. You may stop by without an appointment, but I cannot guarantee that I will be free to help at that time.

Contact

The best way to get a hold of me is through email. An account has been set up specifically for this class (bio1002.schlappi@marquette.edu). I check this account regularly, and will try to get back to you within 24 hours. **Do not use my regular MU account**, I cannot guarantee to respond in time if you use it. The phone number listed above is my office phone and has voicemail on it.

Academic Dishonesty

The academic dishonesty policy followed in this course is in accordance with Marquette University's undergraduate bulletin. Basically stated, do your own work. You will get out of this class what you put into it, so don't cheat. This course is laying a foundation for you to build upon, and anything not understood/learned now will more than likely come back to haunt you later.

Exams

Exams will take place at the Varsity Theater unless otherwise stated. Each exam will be worth 100 points each. The format will be multiple choice with the occasional true/false question. Your exams will be scored by computer, so it is important to have **multiple #2 pencils** and a **good eraser** with you on exam day.

There will be a total of 6 exams this semester. Four of these will be held during the semester and will cover new material presented since the last exam (with the exception of the 1st exam, which will cover material presented since the start of class). The final exam will consist of two separate exams. Part I will consist of information covered since the last exam and will be **required** of all students. Part II will be a cumulative exam covering information from the whole semester. This will be an **optional** exam and can replace your lowest scoring exam. This exam cannot lower your grade.

Exam Dates:	Exam I	Th 1/29	2-3pm
	Exam II	Tu 2/24	2-3pm
	Exam III	Th 3/26	2-3pm
	Exam IV	Th 4/16	2-3pm
	Final Exam	TBA	(Part I - required) (Part II - optional)

Absence from Exams

Missing an exam is strongly discouraged. **There will be no make-up exams!** You may miss one exam due to legitimate reasons such as incapacitating illness or injury, death in the family, or unavoidable absence from campus due to performance in an official function of the university. You are then required to take the cumulative final exam. You will be excused *only* with an official excuse form (obtained from your college office). **Only one absence can be excused in this way.**

Sample Exams

Sample exams from previous years will be posted on D2L. Make also use of the quiz questions at the end of each chapter in the textbook and on the textbook website.

Grading

Your final grade will be based on the average of your top 5 exam scores.

Grading Scale:	A	92-100%
	AB	87-91.9
	B	81-86.9
	BC	76-80.9
	C	70-75.9
	CD	64-69.9
	D	55-63.9
	F	<55

Lecture and Exam Schedule

#	Date	Topic	Textbook
1	1/13	Introduction; review of biomolecules	Chapter 5
2	1/15	Enzymes, energy, metabolism; glycolysis	Chapter 8; 9
3	1/20	Krebs, respiration (electron transfer chain & ATP synthesis)	Chapter 9
4	1/22	Fermentation and other respiration	Chapter 9
		Introduction to photosynthesis	Chapter 10
5	1/27	Photosynthesis I	Chapter 10
6	1/29	EXAM I (covers lectures 1-5)	
7	2/3	Chromosomes, eukaryotic cell cycle	Chapter 12
8	2/5	Cell cycle control, cancer; meiosis	Chapter 12; 13
9	2/10	Mendelian genetics	Chapter 14
10	2/12	Genetic linkage, chromosomes	Chapter 15
11	2/17	Recombination and genetic mapping; DNA	Chapter 15; 16
12	2/19	DNA replication	Chapter 16
13	2/24	EXAM II (covers lectures 7-12)	
14	2/26	Gene expression and the genetic code	Chapter 17
15	3/3	Transcription and translation	Chapter 17
16	3/5	Control of gene expression	Chapter 18
3/9-3/13 SPRING BREAK			
17	3/17	Control of gene expression, continued	Chapter 18
18	3/19	Mutations, cancer, genetic rearrangements	Chapter 18
19	3/24	DNA technology and genomics	Chapter 20; 21
20	3/26	EXAM III (covers lectures 14-19)	
21	3/31	Genomics and evolution	Chapter 21; 23; 26
22	4/2	Viral genetics and viruses	Chapter 19
23	4/7	Prokaryotes (Bacteria and Archaea)	Chapter 27
4/9-4/13 EASTER BREAK			
24	4/14	Eukaryotic microbes; Fungi	Chapter 28; 31
25	4/16	EXAM IV (covers lectures 21-24)	
26	4/21	Plants (life cycles, organ systems, basics)	Chapter 29; 30; 35
27	4/23	Plant development	Chapter 38; 39
28	4/28	Vertebrate development	Chapter 47
		General themes in development	
29	4/30	Animal cloning, stem cells	Chapter 20
30	TBA	FINAL EXAM(S):	
		TBA EXAM V (covers lectures 26-29)	
		TBA OPTIONAL CUMULATIVE FINAL EXAM	

Blogs:

http://scienceblogs.com/transcript/2008/12/how_transcription_affects_genome.php