

BIOL 101 Survey of Biology (Fall 2009)

Instructor: Dr. Jim Barron, office – 132 Science, 657-2918
Office Hours: MWF 10:30-11:30 or By Appointment or Walk In ANYTIME
Email: jbarron@msubillings.edu
Textbook: *Biology: Concepts and Connections 6th ed.* by Campbell et al.

Expected Outcomes and Assessment (i.e. objectives and grading): The objectives of this course are to expose you to the broad range of biological science, from molecular and cellular biology through organismal biology to ecosystem ecology and the effect of human activities. To assess your understanding and knowledge of the concepts you will be graded on ONE lecture exam and a COMPREHENSIVE final exam. You will also be graded on your completion of 20-22 Homework Exams that you will take on the website www.coursecompass.com. Homework Exams will test knowledge of factual material, will encourage students to keep abreast of their studying and should help to identify weak areas in understanding prior to major exams. Lecture and final exams will consist of multiple choice, matching, fill-in-the-blank, short answer and essay questions covering material from lecture, handouts, and the text, and will assess factual knowledge as well as a deeper understanding of concepts and the ability to combine concepts to synthesize answers to broader questions.

- Homework Exams must be completed at 80% to count. The number of 80% exams completed determines your score. 9=50%; 10=55%; 11=60%, 12 = 65%; 13=70%, 14=75%, 15=80%, 16=85%, 17=90%, 18=95%, 19+=100%. The resulting percentage will be worth 50% of your final grade
- The mid-term lecture exam will be worth 25% of your final grade
- The Final will be **comprehensive** and will be worth 25% of your final grade

Grades are guaranteed: 90-100%=A; 80-89.9%=B; 70-79.9%=C; 60-69.9%=D; below 60%=F

I **may** use minus (-) grades at my discretion if I feel it is warranted. In all cases, these would only help you. For example, a score of 69 should be a D, but I may give it a C-. A score of 70 will always be a solid C. I will not use plus (+) grades.

COME TO LECTURE AND READ THE BOOK. (test material will come from both)

Extra Credit - Although there will be some 'extra credit' questions on each exam, I will not accept ANY 'extra credit' reports or other special projects for the purpose of raising grades.

Students with disabilities, whether psychological, physical or learning, who believe they may need accommodations in this class, are encouraged to meet with Disability Support Services located in the Academic Support Center. Students who are registered with DSS and need accommodations in this class should meet with me early in the semester.

Academic Misconduct: I WILL NOT TOLERATE CHEATING OR PLAGIARISM. Refer to the student handbook (Part IX Section B) for MSU-B's definition of cheating and the consequences for academic misconduct. Penalties include a zero on the work in question, potentially an F for the course, and a referral to the Vice Chancellor for Student Affairs for further action.

Make-up Exams: ALL makeup exams will be given on FRIDAY, DEC. 11 from 7:00 am to 9:00 am in Science 106. Makeup exams will be essay exams.

Welcome to Biology 101 – Survey of Biology. The material that we will be covering this semester tends to be fairly unfamiliar to most non-majors, and is often found to be fairly difficult. Please recognize this up front – **You will have to work hard to do well in this course.** However, I am here to help, and I don't think that anyone who puts a lot of effort into this course will do poorly. Our textbook (*Biology: Concepts and Connections*) is an excellent, readable, up-to-date non-majors text. Additionally, the textbook has its own website (<http://www.coursecompass.com>) that should prove quite useful. **You will be required to use the website to take approximately 20-22 “Homework Exams” during the semester, one for each chapter we cover in lecture. The “course ID” for this course is: barron14717. You will need this to enroll on the website. You will also need a valid email address, and a “registration code” that you will get either from your textbook or from Pearson (I think it costs \$30).** If you are having trouble logging on to the website, see me ASAP.

As I said, the text is excellent, but it will only help you if you put effort into reading it. **Each chapter should be read at least twice** – once prior to the lecture where the material will be covered, and again shortly after lecture so that you can more fully grasp the material and make connections between new material and concepts already mastered. I hope that you all will be ACTIVE READERS - that means jotting down notes or questions occasionally as you read; it means taking the time to look at the illustrations and figure out the biology that they are showing you; it means reading (and thinking about) the “chapter overview outline” that is given at the beginning of each chapter, and then reading the chapter review and taking the quiz at the end of each chapter. Finally, it means taking the initiative to go to the web and look at the materials for each chapter (there are some cool animations available here).

Try to have fun with this – the text and website are valuable resources. If you really put the effort into them, they will pay dividends for you, I promise. **You will probably find this course to be fairly difficult**, but you have all the tools you need to do well if you want to. Good Luck.

Date	Topic	Reading
	WEEK 1	
Sept. 9	Introduction/Science of Biology	Chap. 1
Sept. 11	Science of Biology (cont.)	Chap. 1
	WEEK 2	
Sept. 14	Chemistry of Life	Chap. 2
Sept. 16	Chemistry of Life (cont.)	Chap. 2
Sept. 18	Chemistry of Life (cont.)	Chap. 2
	WEEK 3	
Sept. 21	Molecules of Cells (organic molecules)	Chap. 3
Sept. 23	Molecules of Cells (cont.)	Chap. 3
Sept. 25	A Tour of the Cell	Chap. 4
	WEEK 4	
Sept. 28	A Tour of the Cell cont.	Chap. 4
Sept. 30	The Working Cell	Chap. 5
Oct. 2	The Working Cell (enzymes)	Chap. 5
	WEEK 5	
Oct. 5	How Cells Harvest Energy	Chap. 6
Oct. 7	How Cells Harvest Energy	Chap. 6
Oct. 9	Photosynthesis	Chap. 7
	WEEK 6	
Oct. 12	Cell Division	Chap. 8
Oct. 14	Patterns of Inheritance: Genetics	Chap. 9
Oct. 16	Genetics (cont.)	Chap. 9
	WEEK 7	
Oct. 19	Molecular Biology (Transcription/Translation)	Chap. 10
Oct. 21	EXAM 1	Chaps. 1-10
Oct. 23	Molecular Biology (cont.)	Chap. 10
	WEEK 8	
Oct. 26	Gene Technology	Chap. 12
Oct. 28	Evolution	Chap. 13
Oct. 30	Evolution	Chap. 13
	WEEK 9	
Nov. 2	Species and Speciation	Chap. 14
Nov. 4	Species and Speciation	Chap. 14
Nov. 6	Tracing Evolutionary History	Chap. 15
	WEEK 10	
Nov. 9	Bacteria and Protists	Chap. 16
Nov. 11	Veteran's Day – No Class	
Nov. 13	Evolution of Plants	Chap. 17
	WEEK 11	
Nov. 16	Evolution of Fungi	Chap. 17
Nov. 18	Evolution of Animals	Chap. 18
Nov. 20	Evolution of Animals	Chap. 18
	WEEK 12	
Nov. 23	Human Evolution	Chap. 19
Nov. 25	Thanksgiving Break	
Nov. 27	Thanksgiving Break	
	Week 13	
Nov. 30	Biosphere and Ecosystems	Chap. 34
Dec. 2	Behavior	Chap. 35
Dec. 4	Population Ecology	Chap. 36
	WEEK 14	
Dec. 7	Population Dynamics	Chap. 36
Dec. 9	Communities and Nutrient cycles	Chap. 37
Dec. 11	Review and Catch UP	
	FINAL EXAM	
Dec. 16	8:00 – 9:50 AM FINAL EXAM	(Cumulative, with emphasis on material since the midterm)