

BIO 130-01, Biology I, Fall 2011

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Bio 130: Biology I
Syllabus
Fall 2011

Time: Tuesday and Thursday, 8:00 – 9:15 am

Location: FJ-B

Course Instructor: Dr. Melissa J. Parsons

Email: parsonsm@rhodes.edu or melissa.parsons@stjude.org

Phone: 901-843-3555 (office) 678-296-5055 (cell)

Text: Biology: Campbell and Reece (9th edition), Benjamin Cummings

Office Hours: Tuesday and Thursday, 9:30 a.m. – 10:30 a.m., FJ-102E

Overview

Cells are the fundamental units of life. This course will be an examination of the structure and function of life at the cellular level. Topics will include the organization of prokaryotic and eukaryotic cells, the role of proteins in cell structure and metabolism, cellular membrane structure and function, bioenergetics, interactions between a cell and its environment, genetics and the mechanisms of heredity.

Expectations

Attendance: I expect that you will attend classes on a timely manner. There will be material covered in class that will be part of the exam and not found in the textbook. **During lecture exams, you may not leave the classroom until you have finished your exam. If you leave the room, I will collect your exam at that time.**

Participation: I expect that you should be engaged in the classroom and contribute with comments and questions during lecture and class discussions.

Cell phones: Please turn your cell phones off while in class. There will be absolutely no texting while in class. **No cell phones allowed during examinations.** Cell phones must be stored out of sight during all exam, quizzes, and presentations.

Sickness: Please notify me (via e-mail or phone) as soon as possible of any sickness that may preclude you from attending class or taking an exam. Doctor's notice might be required.

Disabilities: Accommodations will only be made to those who are registered with the office of Student Disability Services mccowenm@rhodes.edu

Honor Code

It should go without saying that your conduct in this course must adhere in every regard to the Rhodes College Honor Code. This system is critical to maintaining the Rhodes Community, and we must all be diligent in our responsibilities. For more information on the Rhodes honor code system go to <http://www.rhodes.edu/Honor/index.cfm>.

Attendance Policy

A record of attendance in lecture will be kept and a penalty of 1% per absence, which accounts for 5% of your total grade, will take in effect after your third absence. You must recognize that each absence impairs your ability to learn the material and to do well in the course. If you find you are having difficulty, your attendance record may be of relevance when you discuss your progress with your professors.

Grading

Your final course grade will be based upon your performance on examinations and quizzes, as well as on detailed reports submitted after attending college-sponsored research seminars. Grades will be based on a total point system of 500 points. The total points for each course component and relative weights of these components are as follows:

Component	Description	%	Points
Examinations	The average of your final exam grade and the three highest grades out of your four midterm exams	80%	400
Quizzes	The average of your 10 highest quizzes taken during the semester	10%	50
Seminars	Attendance at 2 seminars is expected	5%	25
Attendance	No more than three absences will be allowed in this course*	5%	25

*After three un-excused absences, you will lose 0.5 points from your attendance score for every absence thereafter.

Final letter grades will be assigned according to the following scale:

Grading Scale for Biology I Lecture				
Grade	Score		Grade	Score
A	465-500		C	365-384
A-	450-464		C-	350-364
B+	435-449		D+	335-349
B	415-434		D	315-334
B-	400-414		D-	300-314
C+	385-399		F	299 or less

Midterm grades and evaluation for withdrawal (withdraw-passing vs. withdraw-failing) will be based upon all of your graded work up to that point.

Examinations

There will be four midterm exams plus a comprehensive final examination at the end of the semester. In calculating your overall examination average, the lowest of your four midterm exam grades will be dropped. The final exam score will not be dropped when calculating the final course grade and you must take the final examination in order to pass the course.

Alternate exam times or make-ups for missed exams will be granted only in the most unusual of circumstances, normally limited to documented medical emergencies involving the student or a member of the student's immediate family or other extenuating, severe circumstances. Please contact me by email or phone as soon as possible if you feel that you are unable to take an exam at the scheduled time so that we have adequate time to discuss possible alternatives. Asking me the morning of an exam if the exam can be taken later, for example, is not likely to result in a re-schedule.

Quizzes

Quizzes will be taken via the Moodle course management system, which is accessible through the Rhodes home page or at <https://moodle.rhodes.edu/clogin.php>. There will be 12 quizzes and your lowest two will be dropped. Each quiz will be available for a 24-hour

period starting at 7:30 AM on the respective date indicated in the lecture schedule; access is automatically closed after 24 hours unless other arrangements have been previously made in accordance with the policies of the office of Student Disability Services. A grade of zero will be assigned for any quiz not completed within the allowed time.

Your quiz grades provide important and accurate feedback about how well you are learning the course material. Thus, it is **strongly advised** that you do not use **notes, books, or other forms of assistance while taking a quiz**. In addition – for practical reasons, quizzes each year include numerous questions that were asked before in preceding years. Therefore, your obligations under the Honor System include the following:

When studying for quizzes you will not look at older copies that former students may have archived in violation of this rule. You also will not show copies of any quiz from this course to any other student, nor will you archive them for future students.

No extended or alternate time will be provided to students who are unable to complete a quiz because of technical failures unless it has resulted from a system-wide problem.

Students are individually responsible for maintaining a reliable connection to the college network, for installing correct versions of software on any personal computers used for taking quizzes, and for learning how to operate efficiently within the Moodle system. The Rhodes ITS Department (help@rhodes.edu; ext. 3890) will assist you with all hardware, software, and network questions.

Seminar Series

Each semester several seminars will be sponsored by the Biology Department, and you are expected to attend two of these seminars as part of your class involvement. Within one week after attending the seminar, you must submit a **seminar evaluation form** to the Biology Department Assistant in FJ-102W. Late submissions will not be accepted.

You should print off the seminar evaluation form before you attend your first seminar, so you can know in advance what kind of evaluation is expected of you. When attending seminars please be on time, remain for the full presentation (including the question & answer period), and listen respectfully to the speakers. ***You are strongly encouraged to ask questions of the speakers during the question & answer period.***

Access to supplemental course materials

Supplemental course materials such as lecture PowerPoint presentations, videos, etc. will be made available either via Moodle or via the college *Acad_Dept_Pgm* file server. The link \\fileserv1\Acad_Dept_Pgm\Biology\Biology_I\Public will connect you to the correct sub-folder of the server if you are connected to the campus network – to access from off

campus, contact the ITS HelpDesk (help@rhodes.edu) for instructions on establishing a connection.

Day	Date	Topic	Reading*
CELL AS THE UNIT OF LIFE: STRUCTURE AND FUNCTION			
Thursday	08/25	Introduction: Themes in the Study of Life	Chapter 1
Friday	08/26	Practice Quiz: Opens at 7:30 a.m. and closes at 7:30 on Tuesday 08/30	
Tuesday	08/30	Introduction to Cells	Chapter 6, Sections 2-5
Wednesday	8/31	Quiz 1	
Thursday	09/01	Cell Architecture and Cell Motility	Chapter 6, Sections 6-7
Tuesday	09/06	Membrane Structure and Function	Chapter 5, Sections 1 and 3 and Chapter 7, Sections 1
Wednesday	09/07	Quiz 2	
Thursday	09/08	Cellular Transport	Chapter 7, Sections 2-5
Tuesday	09/13	Cellular Communication	Chapter 11
Wednesday	09/14	Quiz 3	
Thursday	09/15	The Blueprints for our Cells: DNA	Chapter 5, Section 5 and Chapter 16
Tuesday	09/20	What Makes our Cells Work: Proteins, and Review for the Exam	Chapter 5, Section 4
Wednesday	09/21	Quiz 4	
Thursday	09/22	EXAM I	
THE CENTRAL DOGMA: DNA TO RNA TO PROTEIN			
Tuesday	09/27	From Gene to Protein Part 1: Transcription	Chapter 17, Sections 1-2
Wednesday	09/28	Quiz 5	
Thursday	09/29	From Gene to Protein Part 2: Translation	Chapter 17, Sections 3-6
Tuesday	10/04	The Cell Cycle	Chapter 12
Wednesday	10/05	Quiz 6	
Thursday	10/06	Meiosis and Introduction to Inheritance	Chapter 13
Tuesday	10/11	Reading Day! (have fun, kids!)	
Wednesday	10/12	Quiz 7	
Thursday	10/13	Exam II	
Tuesday	10/18	<i>No classes: Fall Recess</i>	
Wednesday	10/19	<i>No quiz: Fall Recess</i>	
GENETICS AND CANCER			
Thursday	10/20	Intro to Genetics Part I	Chapter 14, Sections 1-3
Tuesday	10/25	Intro to Genetics Part II	Chapter 15, Sections 1-2
Wednesday	10/26	Quiz 8	
Thursday	10/27	Pedigree Analysis	Chapter 14, Sections 4-5
Tuesday	11/01	Linked Genes, Genetic Disorders and Epigenetics	Chapter 15, Sections 3-5

Wednesday	11/02	Quiz 9	
Thursday	11/03	Regulation of gene expression	Chapter 18
Tuesday	11/08	Cancer	Review paper: Hallmarks of Cancer_Next Generation Comment Paper: What are the hallmarks of cancer?
Wednesday	11/09	Quiz 10	
Thursday	11/10	EXAM III	
METABOLISM			
Tuesday	11/15	Introduction to Metabolism	Chapter 8, Sections 1, 3-5
Wednesday	11/16	Quiz 11	
Thursday	11/17	Glycolysis and Citric Acid Cycle	Chapter 9, Sections 1-3
Tuesday	11/22	Oxidative Phosphorylation and Fermentation	Chapter 9, Sections 4-6
Wednesday	11/23	<i>No quiz: Thanksgiving Break</i>	
Thursday	11/24	<i>No Classes : Thanksgiving Break</i>	
Tuesday	11/29	Photosynthesis	Chapter 10
Wednesday	11/30	Quiz 12	
Thursday	12/01	EXAM IV	
Tuesday	12/06	Review Session	
Saturday	12/10	FINAL EXAM (Cumulative)	5:30 pm

This syllabus will be followed closely, but it is subject to change depending on how the course progresses.

* **Readings** should be reviewed for general familiarity **before** the corresponding lectures and **read again in greater detail** in studying for exams and in supplementing the notes you take in class when studying. Guidance will be given in lecture regarding which specific details and concepts from these readings may be most emphasized on quizzes and exams.