

**CELL BIOLOGY
BIOLOGY 360-01
SPRING 2008**

INSTRUCTOR: Dr. Waltke Paulding
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Ofc. Hours: 11:00-12:00 TW

CLASS MEETING TIME: TR 9:00-9:50
Room: ALB 107

TEXTBOOK: Essential Cell Biology, Alberts, et al., Second edition, Garland Science, Taylor and Francis Group, New York and London, 2004.

COURSE DESCRIPTION & OBJECTIVES: Cells are the fundamental building blocks of living organisms. During this course, we will be focusing on subcellular structures and processes. Successful performance in this course will require a large amount of factual memorization, but **most importantly, critical thinking**, which I define as the ability to develop multiple approaches to solve a problem and being able to evaluate what information and approach is most effective within a given context.

READING: The reading requirements for the course are listed on the course syllabus on the following page. You are responsible for reading this material *prior* to the date listed. Exams will contain material from both the lecture and the readings.

EXAMS: Exams may contain multiple choice, matching, and short-answer/essay questions. There will be five exams for the term, including the final exam. Please keep in mind that the study of biology continually builds upon itself, so in essence, the material is cumulative. Therefore, it is in your own best interest to master each topic in order to give the best answers to questions on later exams.

MAKE-UP POLICY: If you miss one of the first four exams with a suitable excuse (letter from a doctor or university official), you may take a make-up exam at the end of the semester. If you miss one of the first four exams without a suitable excuse, your grade for that exam will be a **zero**. If you miss the Final exam (exam 5) with a suitable excuse, you will receive a grade of **Incomplete** for the semester. As soon as possible next semester, you must contact me to make arrangements to take a make-up **essay** exam. If you miss the final exam without a suitable excuse, your grade on the final exam will be a **zero**.

GRADING: Your grade will be determined by a combination of exams (85%) and two (2) research article analyses (15%), one group (7.5%) and one individual (7.5%).

Final grades will be assigned according to the grading scale provided.

A = 94%	B+ = 88%	C+ = 77%	D+ = 67%	F = below 60%
A- = 91%	B = 84%	C = 73%	D = 63%	
B+ = 88%	B- = 80%	C- = 70%	D- = 60%	

SPECIAL NOTE: The lecture and exam schedule is presented as a *tentative* schedule and may change at the discretion of the instructor.

READING AND EXAM SCHEDULE:

<u>Day</u>	<u>Date</u>	<u>Topic</u>	<u>Chapter</u>
T	1/15	Introduction to Cells	1
R	1/17	Chemical Components of Cells	2
T	1/22	Energy, Catalysis, and Biosynthesis	3
R	1/24	Protein Structure and Function	4
T	1/29	TBA	
R	1/31	EXAM I	
T	2/5	DNA and Chromosomes	5
R	2/7	DNA Replication, Repair, and Recombination	6
T	2/12	From DNA to Protein: How Cells Read The Genome	7
	2/14-2/15	NO CLASSES: WINTER HOLIDAY	
T	2/19	Control of Gene Expression	8
R	2/21	TBA	
T	2/26	EXAM II	
R	2/28	How Genes and Genomes Evolve	9
T	3/4	Manipulating Genes and Cells	10
R	3/6	Membrane Structure	11
T	3/11	Membrane Transport	12
R	3/13	EXAM III	
	3/17-3/24	NO CLASSES: SPRING BREAK	
T	3/25	How Cells Obtain Energy from Food	13
R	3/27	Energy Generation in Mitochondria and Chloroplasts	14
T	4/1	Intracellular Compartments and Transport	15
R	4/3	Cell Communication	16
T	4/8	Cytoskeleton	17
R	4/10	TBA	
T	4/15	EXAM IV	
R	4/17	Cell-Cycle Control and Cell Death	18
T	4/22	Cell Division	19
R	4/24	Genetics, Meiosis, and the Molecular Basis of Heredity	20
T	4/29	Tissues and Cancer	21
R	5/1	TBA	22
R	5/6	FINAL EXAM: 8:30-10:20	

Department of Biology Grading Policy

April 29, 2002

The Dept of Biology is unanimous in its concern for the problem of university wide grade inflation. We believe that grade inflation impacts on the future quality of the education provided at Xavier University. All members of the Dept of Biology are agreed on the meaning of the following letter grades:

A grade; The student's performance is exceptional.

A student who is able to attain a grade of A in a course is doing exceptional work. The student is clearly able to use concepts to analyze a question or problem and to synthesize a solution with little or no direct intervention or direction by faculty or staff. The student has a grasp of wide ranging concepts to solve multi-step problems by organizing the information and applying the appropriate methods of analysis, and must be able to integrate this information into a complete picture. This would be demonstrated primarily through written examinations, solutions of problems, reports and papers. The student must also demonstrate an excellence in the ability to write clearly and concisely, and to organize and express thoughts to others in written and oral form

B grade; The student's performance is good.

A student who is able to attain a grade of B in a course has a good understanding of the course material. Such a student is able to use major concepts to analyze a question or problem and synthesize a solution with some direction by faculty and staff. This student possesses a good understanding of the information from texts and lectures and can adequately utilize this information to analyze questions and reach appropriate conclusions. This ability would be demonstrated primarily through written examinations, solution of problems, reports and papers. The student must also demonstrate an above average ability to write clearly and concisely, and to organize and express thoughts to other in writing, and to some degree in oral form.

C grade; The student's performance is satisfactory.

A student who is able to attain a grade of C in a course has a satisfactory understanding of the course material. Such a student is able to recognize concepts and to use them to solve relatively simple problems using these concepts, but with more complex problems this student will require significant assistance of faculty and staff. This student will have the ability to extract information from a text and lecture and to answer direct questions. The student will be able to use basic information to reach simple conclusions, but will probably be unable to analyze complex problems by synthesis of such basic information into more complex forms. This would be demonstrated primarily through written examinations, solutions of problems, reports and papers. The student must also demonstrate an average ability to write clearly and concisely, and to organize and express thoughts to others in writing.

D grade; The student's performance is minimally acceptable.

A student who is able to attain a grade of D in a course has a minimal understanding of the course material. Such a student will be able to only minimally use basic concepts and extract only the most basic information from the texts and lectures. The student will have little or no ability to utilize course concepts in

reaching the simplest of conclusions. This student will only minimally be able to answer the most direct questions regarding such course concepts. This would be demonstrated through written examinations, solutions to problems, reports, and papers. The student must also demonstrate an average ability to write clearly and concisely. Should this not be the case this student will be required to seek help from University writing lab.

F grade; The student has not been able to master the most basic concepts necessary for understanding of the material.

A student who receives a grade of F in a course has demonstrated a significant lack of understanding of the most basic course concepts. Such a student also demonstrates failure to complete assignments, and failure to use concepts or to reach the simplest of conclusions. This would be demonstrated primarily through written examinations, solutions of problems, reports and papers.

Name:

Group Friends (2):

Place a check by the courses you have previously taken.

Genetics

Organic Chemistry

Vertebrate Physiology

Biochemistry