REGULATION OF CELL FUNCTION
BMS 603
Spring 2016

COURSE POLICY

Course Director:

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Required Textbooks

Lehninger Principles of Biochemistry, 6th Edition, Nelson and Cox, W.H. Freeman and Company, New York, 2013.
Molecular Cell Biology, 7th Edition, Lodish et al., W.H. Freeman and Company, New York, 2012.

Textbooks are available at the Marshall University Bookstore. There are companion websites at http://bcs.whfreeman.com/lehninger and http://bcs.whfreeman.com/lodish7e.

Classes

BMS 603 is a 2 credit hour course. Classes will be held from 1:00 - 2:50 PM from January to March on Mondays, Wednesdays and Fridays in Room 102 at the Biotechnology Science Center (BSC). While not required, attendance at all classes is strongly recommended. There is a possibility that there will be changes in the course schedule. You will be notified in advance if any changes occur.

Examinations

Two examinations will be given in this course, each during regularly scheduled class time. Only under **truly exceptional circumstances** will a student be permitted to take an examination at a time other than during the scheduled examination period. Exceptional circumstances include: death or serious illness in the immediate family, childbirth, illness requiring hospitalization and illness serious enough to warrant a written dispensation from a physician. Minor illnesses are **NOT** exceptional circumstances. A written doctor's excuse stating the nature of the illness will be required. If arrangements have not been made beforehand, the student **MUST** contact the course director within 24 hours after the scheduled exam period to discuss rescheduling the exam.

The format of each exam will consist of 50% multiple-choice and 50% of one or more of the following – essay, fill-in-the-blank, matching and short answer.

Homework

There will homework assignments throughout the course for a total of **70 points**.

Grades

Student performance is based on the scores achieved on two block exams and the homework. There is no cumulative final. The block exams will be based on 10 points/lecture. There are 27 lectures in the course. The point totals for each exam are as follows.

Exam 1	12 lectures	120 points
Exam 2	15 lectures	150 points
	27 lectures	**270 points**

Grades are calculated on a straight percentage scale, based on a total of **340 points (exams = 270 points, homework = 70 points)**. Final letter grades will be assigned as follows based upon the average percentage obtained on the two exams and the homework. Grades will be posted on MUOnline as soon as reasonably possible after each exam.

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

Class Policies

University policies can be viewed at http://www.marshall.edu/president/board/policies.html.

Academic Dishonesty

Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather

Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at 696-6245.

Students with Disabilities Policy

Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy

MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use

Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

Course Objectives

After completing this course, students should have a thorough understanding of the biochemistry, metabolism and structure of cells, and the molecular mechanisms that determine the function of cells. The student should be able to describe:

1) How cell metabolism is regulated.
2) How nitrogen is metabolized in cells.
3) Basic concepts in nutrition and how nutrition affects function of cells and tissues.
4) How cells communicate with their environment and other cells through signaling pathways.
5) The mechanisms of cell growth and death including:
    a. Cell cycle regulation
    b. Mitosis
    c. Meiosis
    d. Apoptosis

Student Learning Outcomes	How Outcome Will be Practiced	How Outcome Will be Assessed
Describe regulation of cell metabolism	In-class discussion, homework	Exam questions
Describe nitrogen metabolism	In-class discussion, homework	Exam questions
Describe basic concepts in nutrition	In-class discussion, homework	Exam questions
Describe cell communication and signaling	In-class discussion, homework	Exam questions
Describe the mechanisms of cell growth and death	In-class discussion, homework	Exam questions

BMS 603 2016 LECTURE SCHEDULE
MWF 1:00 – 2:50 PM

			CELL STRUCTURE & FUNCTION III	
1	Monday	January 11	Electron Transport	
2			ATP Synthesis	
3	Wednesday	January 13	Nitrogen Metabolism 1	
4			Nitrogen Metabolism 2	
5	Friday	January 15	Nitrogen Metabolism 3	
6				
	Monday	January 18	MLK DAY - HOLIDAY	
7	Wednesday	January 20	Integration of Metabolism 1	
8			Integration of Metabolism 2	
9	Friday	January 22	Nutrition 1	
10			Nutrition 2	
11	Monday	January 25	Metabolic Disorders	
12			Metabolomics	
			CELL GROWTH & DEVELOPMENT	
13	Wednesday	January 27	Signaling 1	
14			Signaling 2	
	Friday	January 29	**EXAM 1** (Lectures 1-12)	
15	Monday	February 1	Signaling 3	
16			Signaling 4	
17	Wednesday	February 3	Signaling in Development	
18			Patterns of Development	
19	Friday	February 5	Apoptosis	
20			Autophagy	
21	Monday	February 8	Mitosis & Meiosis 1	
22			Mitosis & Meiosis 2	

23	Wednesday	February 17	Cell Cycle 1	
24	Wednesday	February 24	Cell Cycle 2	
25	Friday	March 4	Stem Cells	
26			Centrifugation	
27	Wednesday	March 9	Differentiation	
	Friday	March 11	**EXAM 2** (Lectures 13-27)	