BSC 679 Extremophile Microbiology Fall 2015

Instructor: Dr. Jennifer Mosher
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Classroom: Science 376
Office Hours: MW 10–12 PM; T 10–12 PM
Time: MWF 1:00 - 1:50 PM

Required Text: None. Reading material and links will be provided by instructor.

Course Description: - Introduction to extremophile microbes and extreme environments, adaptability and survival, genomes and physiology. (3 credit hours, prerequisite: graduate standing).

Course Student Learning Outcomes	**How students will practice each outcome in this Course**	**How student achievement of each outcome will be assessed in this Course**
Students will have gained an understanding of extremophilic microbes by: • Diversity of microorganisms and their basic characteristics. • Metabolic processes and nutritional needs of microorganisms. • Molecular and cellular features of different members.	Read assigned literature Attend class and pay attention Participate in class discussions Give oral presentations of selected topic Complete class project	Lead literature discussions Give oral presentation Design novel extremophile microbe

****Official University Policies** – By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy be going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802

Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment

IMPORTANT POLICIES

Grading and Course Requirements:

Letter Grades will be assigned based on what percent of the total points are earned.

A = 90% or more of the total points; **B** = 80 – 89.9% of the total points; **C** = 70 – 79.9% of the total points; **D** = 60 – 69.9% of the total points; **F** = 59.9% or less of the total points

Points are earned as follows:

100 pts –Attendance and participation
100 pts – Oral presentations/Lead literature discussion
100 pts –Special Project – design a new microbe that survives in an extreme environment (I will go over details later).

Attendance. Attendance at all scheduled lecture is expected. Lectures are only given once. If you miss class, please obtain notes/information from a classmate. **Written excuses for legitimate absences must be obtained.**

Conduct in class: Please behave respectfully during class. Behaviors such as excessive chatting with other students, note passing, texting, websurfing, etc., are disruptive to the instructor and to other students. Students habitually engaged in these activities may be asked to leave the class that day. If you need to text, e-mail, or surf the web during class, please DO NOT COME to class. These activities are potentially disruptive to other students who are trying to learn. Please turn off (silence) your cell phones, pagers, etc.

Office Hours – Feel free to drop by at any time during posted office hours, however people who call ahead for an appointment will be given priority. ***An appointment is required outside of posted office hours.***

Blackboard - Powerpoint Outlines or notes **MAY** be made available on Blackboard. These outlines are provided by the instructor as a courtesy to the students. The instructor reserves the right to change, delete, update or otherwise modify these files at any time. There is **no guarantee** that outlines will be posted. These outlines are not intended to substitute for taking your own notes in class. They are not guaranteed to be comprehensive. There may be information given during lectures that is not in the PowerPoints. These outlines are not a substitute for regular class attendance. Generally, students who rely solely on the PowerPoint notes do not do as well on the tests as students who take their own notes or use a combination of their own notes and the posted PowerPoints. **ANNOUNCEMENTS will be posted on Blackboard and sent to Marshall emails. You are expected to check regularly so as not to miss any important course-related information.**

Approximate Schedule and Material to be Covered – The following is an ***estimated*** class schedule of topics to be covered. Specific lecture topics covered may vary.

WEEK #	Date	TOPIC	
1	8/24/2015	Syllabus/Introduction	
2	8/31/2015	Physiology/Environments	
3	9/7/2015	Archaea vs bacteria	
4	9/14/2015	Thermophiles	
5	9/21/2015	Psychrophiles	
6	9/28/2015	Acidophiles	
7	10/5/2015	Alkaliphiles	
8	10/12/2015	Halophiles	
9	10/19/2015	Piezophiles	
10	10/26/2015	Radiophiles	
11	11/2/2015	Multiple “philes”	
12	11/9/2015	Genomic adaptations	
13	11/16/2015	Integration	
	11/23/2015	Fall Break/Thanksgiving	No Class
14	11/30/2015	Dead Week/Special Project Due	Friday 12/5/15 5pm