

## Syllabus: Molecular Medicine (BSC 480/582)

Semester: Spring, 2016

Lecture Location: Room S307 (Science Building)

Lecture Time: Mon/Wed/Fri; 2:00-3:00 PM

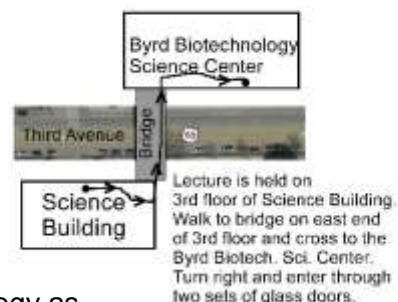
Instructor: Elmer M. Price, Ph.D.

Office: 241Q Byrd Biotechnology Science Center

Phone: 304-696-3611

Email: pricee@marshall.edu (*Please use the Subject Line: "BSC 480 or 582" so I'll know it's an important email; I get dozens of less important emails every day*)

Office Hours: Mon/Wed/Fri, 12:00 – 1:00 **or** by appointment (use email to arrange) **or** just drop by my office or research lab (219 Byrd Biotech Sci. Ctr.) anytime and I'll probably be able to chat. Every year students get lost trying to find my office. So, here's a map! ----->>>



Course Description: This course focuses on advanced molecular biology as applied to diseases. Human and veterinary health will be the main focus.

Credit Hours: 3

Prerequisites/Co-requisites: BSC 322 and 324. Also, it is assumed that you remember a lot from BSC 120.

### Course Description

This class entails the study of molecular biology principles underlying health and disease.

### Student Learning Outcomes

Course Outcomes	Opportunities to Practice Course Outcome	Course Outcome Assessment(s)
Articulate and describe molecular biological principles common to all cells	In-class discussions and homework	In-class discussions and major presentation
Articulate and describe molecular biological principles in specialized cells	In-class discussions and homework	In-class discussions and major presentation
Discuss the application of molecular biology to select diseases	In-class discussions and homework	In-class discussions and major presentation
Interpret, present and discuss molecular biological solutions to current topics	In-class discussions and homework	In-class discussions and major presentation

### **Course Objectives**

- Understand the themes that run through molecular biology
- Recognize biomolecule structures and functions
- Relate biological form to function and dysfunction
- Integrate molecular pathways into cellular function and dysfunction
- Integrate cellular function into tissue function and dysfunction
- Understand the genetic basis of health and disease
- Gain a working knowledge of state-of-the-art molecular techniques
- Learn how to apply molecular tools to study health and disease

### **Required Texts**

- *None*; Material will be posted on Blackboard or handed out in class.

### **Lecture Attendance Policy**

Physically attending class (*instead of simply chatting with a friend who did attend class, or watching a YouTube video on the subject*) is the main determinant regarding whether a student gets a good grade. As a student, you can't learn (and can't get a good grade) if you don't show up. There will be no tests in this class, **but there will be a final exam**. Most of the final grade will be based on class participation.

### **Cell Phone/Electronics Policy**

I don't need to tell serious students what a reasonable cell phone policy is. Unless you are personally on an organ transplant waiting list and you are waiting for a text informing you of the availability of an organ, you'd better not have your phone in your lap. And if you DO keep peeking at your phone in your lap, I'll notice (it's VERY obvious) and just think that you are odd for looking at your lap all period.

### **Grading Policy**

There will be daily in-class discussions which will contribute significantly to your final grade.

The final grade will be based on THREE components; class participation, major presentation, and final exam. The value of each component is:

**In Class Participation: 40%**

**Major Presentation: 30%**

**Final Exam: 30%**

The final letter grade will be determined as follows:

A: 90-100%; B: 80-89.4%; C: 70-79.4%; D: 60-69.4%; F: <59.4%

Extra credit does not exist.

### **Policy For Students With Disabilities**

Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit <http://www.marshall.edu/disabled> or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271. Please take advantage of this opportunity as soon as possible, early in the semester.

### **Policy Regarding Inclement Weather or Other Dangerous Events**

Marshall will rarely close due to bad weather. However, when it is necessary to change the schedule every effort will be made to notify the local media. Closings and delays will be announced by these local services. If the university is open, but the student feels that the conditions are too dangerous for them to attend, they will not be penalized for missing class; please do not exploit this policy. Contact your professor as soon as reasonably possible on such days.

In the case of a fire alarm, students are to leave the building quickly and orderly. In the case of a tornado, students are to move into the hall, away from windows and doors. MUPD phone number is 696-4357 (696-HELP). You probably have a pizza joint or a nail salon on your phone's contact list; add the campus police, too. Rethink your priorities, people.

*Students are encouraged to sign up for the automatic Marshall University emergency text messaging system to be notified of emergency situations and other important announcements. To sign up, go to: myMU; log in; click on MU Alert (a red triangle in the Launchpad), and complete the information to participate in MU's emergency notification system.*

### **GENERAL POLICIES**

By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to <http://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](http://www.marshall.edu/academic-affairs/?page_id=802)

These links will direct you to Marshall University's policies regarding: 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

### **Learning Objectives**

The instructor has several objectives for his students during this semester. They are listed below in order of increasing significance to the student's long-term success (in science, in college, and in careers [aka your life]).

1. The gain of simple knowledge, and any student can achieve this modest objective by simply memorizing the material.

2. A more significant objective is the actual comprehension of the material. Does the student actually understand the material, or are they only parroting the material during the tests. One who comprehends the material can answer test questions using information learned in class, even if the exact question was never discussed.

3. In order to use the information learned in class in future years, the student must be capable of applying the knowledge to new events. An ability to apply new knowledge is a sign of creativity that leads to exceptional careers.

4. Finally, the best and brightest have the capacity to synthesize new paradigms, new theories, and new designs that advance their chosen field. Students must learn to create new ideas, design new experiments, and actually perform the work that yields a new information, discoveries, or technologies.