BSCI170, SUMMER ONLINE

Welcome to BSCI170, Principles of Molecular & Cellular Biology. This is a majors course, intended for biology, chemistry, and other B.S. degree seekers, as well as pre-professional students. Many other majors (KNES, PSYC, ANSC, etc.) require this class. In order to take this course, you need to be ready to take MATH130, MATH135, 140, or 220. There are no other pre-requisites.

Course Description

BSCI170 is part of the introductory course sequence for biology majors, as well as a required or recommended course for science majors in a very broad sense. Whether you are a student of biology, psychology, or kinesiology, for example, you will be given the opportunity to learn a lot about how life works that you will find relevant to your field. This course will focus on the molecular and cellular basis for all life on this planet, covering fundamental processes that underlie nearly every aspects of organismal function, behavior and evolution.

Starting from the structure of atoms and simple compounds, you will see how the functions of large molecules and the structures they form emerge at increasing levels or organization and complexity. As the semester proceeds you will examine the anatomy of cells in relation to their functions, investigate the metabolic pathways that convert energy from one form to another and fuel the chemical reactions on which life depends, and wonder at the elegant simplicity of how DNA encodes all the information needed to build even the most complex of creatures.

The lecture and lab are two different classes and students CANNOT expect the lab grade to "help" their lecture grade anymore. Lecture content can be challenging for many students as it covers a lot of material, requires a new vocabulary, and includes a substantial amount of chemistry. Be ready to work hard, work smart, and do not hesitate to ask for help.

Course Goals

BSCI170 is an introductory biology course and a prerequisite for many courses you will take in future semesters. In addition to achieving a broad appreciation of fundamental biological concepts, we expect that by the end of the semester you will:

- Understand how the properties of atoms and molecules determine the structure and function of cells.
- Know the substrates and products of major metabolic pathways and be able to discuss how those pathways are interconnected, coordinated, and regulated to meet the energy needs of organisms.
- Understand how DNA stores information required to build an organism from simple molecules, and that information stored in DNA is used to make RNA, proteins, and other complex biological molecules.
- Relate what you have learned about cells and molecules to aspects of everyday life such as nutrition and big issues of the day including cancer and diabetes.

Expectations

In order to allow everyone to get the most out of this course, there are a few basic rules everyone is expected to follow:

- Be respectful of your fellow students (and instructor). You are expected to adhere to university standards for online behavior, showing respect for your fellow students at all times when posting or commenting online.
- Follow the University Honor Code. All assignments you submit will be your original, individual work. You will not copy from sources in written assignments, and will not have assistance with quizzes or tests.
- All communications with Dr. Keller or your fellow students will be conducted through ELMS. If you have a question or comment about course material, please post it to the appropriate discussion board so other students can contribute to and learn from that discussion. Do not email Dr. Keller directly unless it is about a personal matter or to discuss specifics of a graded assignment.

Know Your Rights! (And Responsibilities)

In order to help you understand your rights, The Office of Undergraduate Studies has created a web page that consolidates all of the information you need about taking any class here at UMD: http://www.ugst.umd.edu/courserelatedpolicies.html (Links to an external site.)

Contact Information

Dr. Michael Keller

kellermi@umd.edu

Textbook

We will be using a free online textbook Biology 2e from OpenStax, available online or for download at:

https://cnx.org/contents/jVCgr5SL@15.43:IjCrkDE3@9/Introduction

If you already have another biology textbook, feel free to use that as well - all recent textbooks are similar in content and organized in pretty much the same way.

Assignments, Exams and Grading

Your performance in BSCI170 will be assessed through assignments, quizzes, and exams:

- SYLLABUS QUIZ **(10 pts)** - During the first two days of class you must take the Syllabus Quiz to demonstrate you are familiar with the design and expectations of the course.
- UNIT QUIZZES **(150 pts)** - There are eight units in the course, each ending with a 10-20 point Unit Quiz. A Unit Quiz can be taken at any time, with a time limit of 30 minutes, but must be completed by the end of the posted due date. Unit quizzes are open note, but you may not work with other people or use resources other than your notes and textbook.
- EXAMS **(300 pts)** – There will be three online exams during the course, each worth 100 points. Each Exam will be available only on its assigned day and must be completed within 60 minutes once started. Exams are closed book.
- SUPPLEMENTAL ASSIGNMENTS - There will be a few additional opportunities to earn points through special assignments, including:
    - Post Introduction on Discussion Board for 5 points

Final letter grades will be determined on a 10% point scale.

Accommodations

We will do everything within reason to accommodate students with physical, emotional, or learning disabilities. However, all special accommodations MUST be made the University Disability Support Service (DSS, 301-314-7682) and discussed with Dr. Keller, either by email or in person by appointment.

Academic Integrity

All students are expected to abide by the University of Maryland Code of Academic Conduct. The standard penalty for cheating, plagiarism, or other misconduct is an XF in the class. For individual graded assignments (anything with just your name on it) all work will be your own, without direct copying of material from others, even if the work is the outcome of a group assignment (each group member will do their own writing, graphing etc). If you are not sure what you are doing is correct, ASK!

A special note about posting your work on-line

PLEASE – pay attention to uploading any of your homework, study guides, old tests, old lab reports, etc. online. Office of Student Conduct (OSC) considers these "posts" when looking at

cases of plagiarism and student facilitation. When a student uses one of the posted 'assignments' as an 'aide' for their work, in addition to that student being charged with plagiarism the student WHO POSTED the information is also charged with facilitation. Play it safe and do not use these sites!!

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