Course Syllabus: Biology 201 04

Foundations of Biology I: Cell and Molecular Biology

Fall 2017

Instructor: Dr. Karen K. Resendes
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Course Structure:

Lecture: MWF 10:30-11:30AM
HSC 166

Laboratory: T 7:40 -10:40AM
HSC342

Office Hours: M 1PM- 2:30PM Hoyt 222
T 2M-3PM Patterson 315
W 1PM-2:30PM Hoyt 222
R 10AM-11AM Patterson 315

OR other times by appointment
Simply email, call or ask me for a time that will work for you. The sole purpose of making an appointment is that I want to be sure that I will be in my office at the time you want to meet with me and you know which office to find me in at that time.

Required:

1. Texts:
   Campbell and Reece, Biology, 11th Edition

2. Composition-style, quad-lined laboratory notebook

3. Frequent visits to the Bio 201 D2L page on:
   -Online Assignments
   -Laboratory Handouts
   -Detailed reading lists
   -Electronic Resources
   -Lecture Diagrams

COURSE OBJECTIVES: Students who successfully complete this course should:
   - develop a college level understanding of processes that are fundamental to living organisms (cell structure and function, cell metabolism, energy acquisition and use, cell division, DNA structure and function, and molecular evolution).
   - demonstrate proficiency with the scientific method of inquiry as it pertains to fieldwork and the laboratory and demonstrate proficiency with quantitative skills as they apply to data collection and analysis.
   - demonstrate proficiency with reading scientific literature, critical evaluation of information, integration of scientific information, and scientific writing.
   - demonstrate a sense of integrity and responsibility for their own learning.
COURSE COMPONENTS:

EXAMS: There will be four exams throughout the semester followed by a comprehensive final exam. The four semester exams and the comprehensive final are worth 50% of the course grade so you must do well in your exams to pass the class (C-). The final exam will be administered on the date set by the final exam period and in the same room where we meet for lectures. Attendance for exams is required.

Lab Modules and Research Papers – One portion of the Bio 201 lab includes a multi-week long, laboratory modules. During these modules you will perform mini research projects that pertain to different topics and are designed to reinforce concepts learned in class. The results of the experiments done in one of the module will be written up in the style of a primary research paper from the Tri-Beta Biology Honors Society Undergraduate Research Journal; BIOS. You will be provided with guidelines on how to do this correctly You will also be provided with a lab protocol before you start to each lab module. You must read it so that you know what you are doing before you start. At the beginning of each module there will be a 5-points quiz on the protocol.

Lab Workshops and Worksheets – During the course of the semester there will also be four laboratory skills workshops during which you will learn essential, practical skills such as using pipettes, making solutions and microscopy. You will be given worksheets containing the instructions plus some discussion questions and problems, which you will fill out during the workshops. Please read them before you start. There will be a 5-point quiz on each.

LAB NOTEBOOKS – Maintaining a lab notebook is an essential part of scientific documentation and analysis. This provides you, along with any others in your “scientific community,” with documentation of all your thoughts, hypotheses, ideas, observations, data analysis, conclusions, etc. You must use pen; pencils are not permitted. Try to make a habit of writing as much as possible in your lab notebook. You must use quad lined notebook for lab. Lab notebooks will be collected at various times of the semester and graded. Specific guidelines for lab notebooks will be handed out the first day of class. In addition, students should be prepared for each new lab exercise. Preparation involves reading the lab exercise, writing down important background information, purpose, and basic methods.

BIOLOGY SEMINARS: You will be required to attend two biology seminars during the semester. Attendance at each seminar will be assessed by the collection of a notecard where you must write two questions for the speaker. Biology luncheons such as student internship presentations will not count for seminar credit, but they will provide important information for students seeking contacts, employment, or reference experience.

SENIOR CAPSTONE POSTER SESSION: Foundations students will have the opportunity to attend and review biology and molecular biology senior capstone projects. Foundations students will be assigned 2-3 senior capstone projects and given a sheet that has specific questions for assessing the goals, methods, and discussion for each capstone poster. Attendance and completion of the sheet is required.
COURSE GRADING:

Point breakdown
Exams (5; 100 pts each) 500
Literature Module Assignment 30
Enzyme Lab 30
PCR Lab 30
Lab Research Paper (Two drafts, 70pts. ea) 140
Lab skills workshop worksheets (20 pts. ea.) 80
Lab quizzes (7; 5 pts. ea.) 35
Biology Seminars (2; 10 pts. ea.) 20
Senior Capstone Poster Session 15
In Class Worksheets/Activities 20
Mastering Biology Assignments 100

Total 1000 points

NOTE: Points total is subject change, especially if number of quizzes or worksheets are adjusted. Your grade in the course is a straight percentage, the number of points you have earned divided by the total possible points. I will try to keep these up to date on D2L but you can easily keep track of your own grade.

A...... 93% or greater  C...... 73% - 76.95%
A-...... 90% - 92.95%  C-...... 70% - 72.95%
A+...... 87% - 89.95%  D+...... 67% - 69.95%
B-...... 83% - 86.95%  D...... 63% - 66.95%
B+...... 80% - 82.95%  D-...... 60% - 62.95%
B...... 77% - 79.95%  F...... below 60%

ACADEMIC INTEGRITY: The issue of academic integrity is taken very seriously at Westminster. Students are expected to abide by the College Policy on Academic Integrity. The policy can be found at: http://www.westminster.edu/acad/pdf/undergraduate_catalog.pdf.

Academic integrity is particularly important when dealing with scientific writing. Written assignments must be the student’s own work. Quotes, data or ideas taken from another source must cite that source fully and correctly. I will be using turnitin.com to determine that your work is in fact your own. If you don’t understand how to do this, please ask. Work that is not the students own, i.e. copied from an external source, a classmate or class material is considered plagiarized, and will receive a score of zero. In addition, a written report will be sent to your academic advisor, and to the Dean. Note: plagiarism also includes extensive, unnecessary quoting from another source, even if it is cited. More than one incident of plagiarism may result in failure of the course. If in doubt – ask.

ATTENDANCE: Attendance at labs, field trips and exams is mandatory. Please identify any conflicts between these and college sponsored activities or events and report them to me at least one week in advance of the activity so that a make-up exercise can be arranged. It is your responsibility to inform your instructor of your expected absence; an e-mail from your coach will not suffice. The only excused absences for exams or labs are the ones stated in the Westminster catalog (college-sponsored activities; personal medical emergencies, etc.). Students must make contact with the instructor within 48 hours of an exam or laboratory missed due to an emergency in order to arrange an alternative assignment.
While attendance to lectures is not mandatory, there is a strong correlation between attendance and final grade. Your exams are the most important factor in determining your final grade, and it is your responsibility to make sure you understand the material. If you miss a lecture, you must find out what you missed and make sure you understand the content. If you need help at any time, with any of the material – please ask. My door is always open.

ELECTRONIC DEVICES:

Please refrain from using any device in class that might disrupt the lecture or your colleagues. This includes, but is not limited to: cell phones, pagers, PDA, iPods (I know this list is a little dated but you get the idea). Laptops and tablets are allowed but strictly for note taking only.

SUGGESTIONS FOR DOING WELL IN THIS CLASS:

Take good class notes. If you have difficulty with this, check your notes with one or more students in the class. Don’t hesitate to ask other students or the professor questions—it will probably help clarify things for everyone in the classroom.

Whenever you have any questions or problems with understanding the textbook, readings, or my lectures, stop by my office early on in the course. Remember, I am here to help and guide you, but I will not do it for you. Take advantage of the Learning Center whenever possible.

Plan ahead for a test. Spend at least 5-7 days (yes, that’s 5-7 days) preparing for the test, 2 hours each night, then get a decent night’s sleep the night before the test.

Study where you’re free from distractions (e.g. noise, TV, roommates). To study means to concentrate, understand, and commit certain material to memory. Memory can be facilitated by understanding concepts, organizing material in a manner that makes sense to your learning style, repeating words and ideas out loud, and writing them down repeatedly. Occasionally take a break, walk around and reward yourself for your efforts.

Form a study group with those who are taking the same class, sit next to in class, or have as lab partners. Cover your notes and quiz yourself or each other as you study. Encourage each other to study rather than talk gossip. Studying in college can be fun and should build a network of trusted friends. You only need to get together for a short while. Then you can go back and brush up on material that you might have missed or that requires more studying.

Compose your own test questions, especially for multiple choice and essay questions. The purpose of this exercise is not to guess what questions are going to be on the test. Instead, think about it as a way to arrange material and prepare your mind to read and answer specific types of questions.

Schedule for Fall 2017 term is located on the D2L course page.