



Oregon State University

Ecampus

Course Name: The Molecules of Life

Course Number: BB 100

Credits: 2 Credits

COURSE PREREQUISITES

None

LEARNING RESOURCES

1. Textbook: Biotechnology for Beginners by Arnold L. Demain
2. Instructor notes, practice exams, and audio/video of lectures (when technical problems do not exist) will be available through the Schedule page on Canvas.
3. Individual meetings/phone calls/ emails with the instructor are encouraged.

Note to prospective students: Please check with the OSU Bookstore for up-to-date information for the term you enroll ([OSU Bookstore Website](#) or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.

COMMUNICATION

All students in the course (ecampus and campus students) receive an OSU student account and an OSU email address. You are responsible for reading your OSU email account daily. Failure to read your OSU email regularly will result in a loss of points. If you have questions about your OSU email account, please contact ecampus.

WEB MATERIALS

The class Web page will be active through Canvas and will contain the schedule of topics covered in the class.

Topics Covered	Textbook pages
1. A Taste of Biotechnology	1-27
2. Enzymes	29-55
3. The Wonders of Recombinant DNA	57-93
4. Cellular Factories	95-137
5. From Viruses to Vaccines	139-167
6. Biotechnology and the Environment	169-195
7. Green Biotechnology	197-233
8. Cloning and Transgenic Organisms	235-261
9. Health and Biotechnology	263-291
10. Genomics	293-333

Ecampus students should be aware that videos are sometimes used from a previous term. Consequently, dates, as discussed in the videos may not match dates of the course. The correct dates for all matters in the course are given on the Schedule page.

EXAMINATION INFO

(I) Exam #1: Announced on the Schedule page on Canvas

(II) Exam #2- Announced on the Schedule page on Canvas

(III) Final Exam (comprehensive) - Announced on the Schedule page on Canvas

EXAM POLICIES

Ecampus exams are taken online on Canvas and require proctoring. Proctors must be arranged with and approved by ecampus at the beginning of the term. Contact them at

http://ecampus.oregonstate.edu/services/proctoring/finding_proctor.htm or at 800-667-1465 or 541-737-9204. It is required that exams be taken within the time “window” shown on the Web page. Failure to follow these instructions will result in voiding of the exam and assignment of an ‘F’ grade.

Makeup exams will be given only for absences excused by the instructor in advance of the exam. Excused absences will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments. Excused absences will not be given after the absence has occurred, except under very unusual circumstances. Regrades of exams will be performed when there is an error and the student requests it. All requests for regrading must be made in writing/email within three days of the day the exam is returned to the class as a whole. After that period of time, grades will be fixed and will not be changed. Regrade requests must clearly explain why the original grading was either incorrect or misunderstood. Illegible, misspelled, or unintelligible written requests will automatically be denied.

Makeup exams 1) are of a different format from the classroom exam and 2) are designed NEVER to be easier than the classroom exam. The following situations are NOT grounds for missing an exam:

1. You misread the date of the exam on the syllabus.
2. You went to the wrong room.
3. You did not get the proctor approved and/or exam arrangements made in time to take the exam.
4. You waited to the last minute to take the exam and the window to take the exam expired.

GRADING

Course Points Distribution - Exam 1 (30%), Exam 2 (30%), Final Exam (40%).

There is no extra credit possible beyond the occasional questions asked on exams and therefore I do not (and in fact cannot) take improvement during the term into consideration in assigning grades. No fixed grading scale will be used to assign letter grades and no fixed numbers of letter grades are set. Since there is no fixed grading scale (90/80/70/60, for example) grades are therefore "curved," since this is the definition of what "curved" means. Grades will be assigned on

groupings as determined by the instructor at the conclusion of the course. Approximate letter grades will be given during the term. Undergraduates will be evaluated and graded separately from graduate students.

Letter grades at the end of the term are posted on the student's OSU account, NOT Canvas. I don't know how to access a student account. If you have questions, please ask ecampus.

LETTERS OF REFERENCE

I am frequently asked to write letters of reference for students from the class. Since I must know a student personally to write a letter of reference, it is almost never possible for me to do this in the ecampus. If you are curious, I do have a written policy for letters of reference –

<http://oregonstate.edu/dept/biochem/hhmi/ahernletters.html>

COURSE POLICIES

Please note the date and time of the class exams. Reading and studying the assigned material before the lecture date is essential for success. Waiting to the last minute to study or prepare is a prescription for disaster.

POLICY ON INCOMPLETES

A grade of I is appropriate when 1) a course requirement has not been completed due to circumstances beyond the control of the student and 2) at least half of the work for the course has been completed at a level of C- or better. For medical problems that prohibited the student from fulfilling a requirement of the course, a note from a doctor is required. The request may be supplied without the note, and the request (if acceptable) will typically be granted, conditional on the note being provided later. For other circumstances, supporting evidence, such as a

note from an advisor, will be helpful to the petitioner's case.

The following is a list of reasons that are **not** acceptable:

- The course proved to be more time-consuming or difficult than expected.
- Work in other courses ended up taking too much time.
- Work or travel associated with a job ended up interfering with course work.
- Time conflicts prohibited contact with the instructor or TAs during office hours,
- The student misunderstood the requirements or grading schemes of the course.
- The student wishes to avoid a low grade.
- The student wishes to retake the course at a later date

LEARNER OUTCOMES

The intention of the course is for students to:

1. Acquire basic technical language used in modern biotechnology
2. Recall key elements of basic biotechnology principles, including cell types, enzymes, relevant molecules, historical information, viruses, cloning, and genomics
3. Communicate (through writing) key concepts relevant to biotechnology
4. Understand and apply simple concepts of biotechnology to relevant, specific problems.
5. Gain perspectives of how biotechnology has in the past and will in the future impact our lives

LEARNER EXPECTATIONS

1. Advance preparations, including reading relevant information before lectures are given.
2. Avoid last minute studying
3. Questions to answer concepts/processes that the student does not understand BEFORE it is too late.
4. Recognition that an understanding of a complex topic like

biochemistry requires considerable background prior to the class, a considerable amount of information to be acquired in the class, and sufficient time and effort to put these together to master the material.

GENERAL OSU AND DEPARTMENTAL POLICIES

Please note: "Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, no later than the first week of the term. In order to arrange alternative testing, the student should make the request at least one week in advance of the test. Students seeking accommodations should be registered with the Office of Services for Students with Disabilities."

The Department of Biochemistry/Biophysics follows the university policies on student conduct. These can be found at <http://oregonstate.edu/admin/stucon/regs.htm>.

Cheating or plagiarism by students is subject to the disciplinary process outlined in the Student Conduct Regulations. Students are expected to be honest and ethical in their academic work.

Academic dishonesty is defined as an intentional act of deception in one of the following areas:

- *cheating- use or attempted use of unauthorized materials, information or study aids
- *fabrication- falsification or invention of any information
- *assisting- helping another commit an act of academic dishonesty
- *tampering- altering or interfering with evaluation instruments and documents
- *plagiarism- representing the words or ideas of another person as one's own

Behaviors disruptive to the learning environment will not be tolerated and will be referred to the Office of Student Conduct for

disciplinary action.

“The goal of Oregon State University is to provide students with the knowledge, skill and wisdom they need to contribute to society. Our rules are formulated to guarantee each student's freedom to learn and to protect the fundamental rights of others. People must treat each other with dignity and respect in order for scholarship to thrive. Behaviors that are disruptive to teaching and learning will not be tolerated, and will be referred to the Student Conduct Program for disciplinary action. Behaviors that create a hostile, offensive or intimidating environment based on gender, race, ethnicity, color, religion, age, disability, marital status or sexual orientation will be referred to the Affirmative Action Office.”

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.