

# BB 451/551: General Biochemistry

## Syllabus for Ecampus

### INSTRUCTOR INFO

**Dr. Kevin Ahern**

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### COURSE PREREQUISITES

CH 331&CH 332 or CH 334&CH 335&CH 336

### LEARNING RESOURCES

1. Textbook: Biochemistry, 7<sup>th</sup> Edition by: Berg, Tymoczko, and Stryer
2. Instructor notes, practice exams, and audio/video of lectures (when technical problems do not exist) will be available through the Schedule page on Blackboard.
3. Individual meetings/phone calls/ emails with the instructor are encouraged.

### WEB MATERIALS

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

<b>Topics Covered</b>	<b>Stryer (7<sup>th</sup> edition) pages</b>
Citric Acid Cycle	497-524
Lipids and Membranes	345-370
Membrane Transport	371-400
Mitochondria/ Oxidative Phosphorylation	524-564
Lipid & Steroid Metabolism	759-790
Fatty Acid Metabolism	639-672
Nucleotide Metabolism	735-758
DNA Replication/ Recombination/Repair	113-123 and 819-850
Transcription	851-886
Protein Synthesis	887-920
Gene Regulation	921-956
Sensory Systems	957-976
Immune System	977-1006

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

**EXAMINATIONS** (must be taken in appropriate time windows announced on Schedule page - Web Materials link in [Announcements](#))

(I) Exam #1 – announced on Schedule page link on the Announcements page - "Web

Materials and Free Course Book"

(II) Exam #2- announced on Schedule page link on the Announcements page - "Web Materials and Free Course Book"

(III) Final Exam - announced on Schedule page link on the Announcements page - "Web Materials and Free Course Book"

All ecampus exams are administered by a proctor approved by ecampus.

### **EXAM POLICIES**

Exams have been taken by students from all over the world (including war zones) in this course. They simply require a proctor approved by OSU's ecampus. at the beginning of the term. Contact them at

[http://ecampus.oregonstate.edu/services/proctoring/finding\\_proctor.htm](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 windows defined on the Schedule page.

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 within three week 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. 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.

Mid-term exams are strictly limited to 50 minutes in length. The final exam is strictly limited to 110 minutes in length. Students who do not finish exams in those timeframes will lose one point for every minute they exceed the time limits.

### **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. If you ask if grades in the course are curved, you will lose points. If you ask how to get extra credit, you will lose points. 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.

If your grade is low and you wonder how to improve it, the answer is to improve your performance against the average compared to what you did previously. Since the average varies with each exam, it means you need to do your best. Because grades are assigned on a “curve,” there is no way for me to tell you “how many points” you need to get a desired grade. This is only possible for grading schemes that use fixed percentages – 90% = A, 80% = B, etc. Asking this question without being aware of this section of the syllabus will result in a loss of points.

### **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 e-campus. 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.

I expect you to be involved and responsible for your own education, as much as possible. Students who ask questions that are answered in the syllabus are not being responsible. The aim of this statement is not to discourage students from discussing their standing in the class, but rather to have students participate more fully in their own education. I will gladly discuss any student's grade as it stands at any time in the course, but students need to use resources available to them to their fullest. Similarly, students need to consult exam keys and relevant videos and transparencies before asking questions or requesting regrades.

Students taking examinations are not allowed to use a calculator, books, or notes of any kind. Other than a pencil/pen, no other materials are allowed for student use on exams. The sole exception to this is that on the final exam ONLY, students are allowed to bring with them and use one note card with information on it handwritten by the student. The notecard must be no larger than 5x8 inches and printers may not be used to make it. All items on the card MUST be handwritten or hand-drawn.

One of the most common problems students have is waiting to the last possible hour to take the exam within the exam window and then having a problem, such as a flat tire, catching a cold, or having a technical problem that is under your control. I am generally not sympathetic to these situations. The best way for you to avoid such problems is to schedule your exams earlier in the time window so that if something unexpected happens, you have additional time to fix it.

### **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 the technical language used to communicate biochemistry information and to use that language to describe biochemical processes, such as metabolism, and molecular biology.
2. Recall key elements of basic biochemistry principles, including metabolic pathways, molecule names, molecular structures (as noted), respiratory control, enzymes, and the central dogma.
3. Extrapolate information based on the material presented
4. Communicate (through writing and speaking) key concepts relevant to biochemistry
5. Understand and apply general concepts of biochemistry to relevant, specific problems.
6. Predict the direction of flow of genetic and metabolic information from an understanding of the control mechanisms and energy considerations of each.

### **LEARNER EXPECTATIONS**

1. Advance preparations, including reading notes 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."