

Course Syllabus:

CP4490 Biochemistry for Life Sciences Summer 2018

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Lectures: Mon - Thr 9:00am – 11:30 am Rm: TBA

Office Hours: Mon – Wed 11:30am – 12:30 pm and by appointment

Office hours are available for the students who need further clarification of concepts presented in lecture or have any general questions or concerns about the course. You may also email me with any questions or concerns. Please use your Old Westbury email account or Blackboard. I will not respond to emails coming from personal email addresses. Please allow me 24hrs to respond.

Textbook: Essential Biochemistry 4th Ed. Pratt & Cornely
ISBN: 978-1-119-31933-7

Course Description: One semester survey course designed for life science majors. Topics will include molecular structures and functions of biological macromolecules such as proteins, lipids, carbohydrates, and nucleic acids, and metabolism of glucose, lipid, and nitrogen and regulation of metabolism. **This course is not open to biochemistry majors for credit.** *Prerequisite: CP3310 Organic Chemistry II with a grade of C or better*

Objectives: Students who apply themselves and master the material covered in CP4490 will:

- Recognize the basic structures of biological molecules and understand how general structures contribute to their functions in the cell.
- Recognize many of the metabolic pathways of the cell and understand how they are regulated and integrated in the cell.
- Apply the general principles of the Central Dogma of biology to the investigation and understanding of cellular processes.
- Be able to communicate in the language of biochemistry.
- Be able to demonstrate an understanding of core knowledge in biochemistry.
- Be able to acquire and synthesize scientific information from a variety of sources.

Classroom Policies:

- Attendance is required. Please arrive on time. Students are responsible for obtaining information missed during any absence.
- I encourage you to ask questions at any time during lecture.
- No phones and other electronic devices allowed during lecture.
- Students with special needs should consult the instructor at the beginning of the term.
- The course is primarily lecture based but some time will be devoted to small group activities.
- Lecture materials, various handouts and grades will be available on Blackboard. I will also communicate with you using Blackboard. Therefore, it is your responsibility to log onto Blackboard on daily basis.

Grading: Total 500 points

Quizzes at the end of every chapter	50 points
3 Exams	300 points (100 points each)
1 Final (cumulative)	150 points

THERE WILL BE NO MAKE-UP EXAMS.

Course grading scale (tentative)

A	90-100 %	B-	77-79 %	D+	64-66 %
A-	87-89 %	C+	74-76 %	D	60-63 %
B+	84-86 %	C	70-73 %	D-	55-59 %
B	80-83 %	C-	67-69 %	F	< 55 %

Suggestions for success in CP4490:

- Personally engage in the learning process: pay attention, ask questions, and think.
- Ask for help. Use office hours and email.
- Form a study group.
- Keep up with reading.
- Review lecture notes right after class.
- Try to connect what you've learned from class to the real world.

Academic Misconduct: Academic dishonesty or cheating of any type will not be tolerated. Any student participating in any form of dishonesty will receive a zero for the exam in question. Every instance of academic dishonesty is reported to the Academic Standards Committee, which may impose further penalties. For the full policy on academic integrity, see attached.

TENTATIVE LECTURE SCHEDULE

Date	Topic
May 29	Chapter 1 The Chemical Basis of Life Chapter 2 Aqueous Chemistry
May 30	Chapter 3 From Genes to Proteins Chapter 4 Protein Structure
May 31	Chapter 5 Protein Function Chapter 6 How Enzymes Work
Jun 4	Chapter 6 How Enzymes Work Chapter 7 Enzyme Kinetics and Inhibition
Jun 5	Review
Jun 6	Exam 1 (Chapters 1-6)
Jun 7	Chapter 7 Enzyme Kinetics and Inhibition Chapter 8 Lipids and Membranes
Jun 11	Chapter 9 Membrane Transport Chapter 10 Signaling
Jun 12	Chapter 10 Signaling Chapter 11 Carbohydrates
Jun 13	Chapter 12 Metabolism and Bioenergetics Chapter 13 Glucose Metabolism
Jun 14	Review
Jun 18	Exam 2 (Chapters 7-12)
Jun 19	Chapter 14 The Citric Acid Cycle Chapter 15 Oxidative Phosphorylation
Jun 20	Chapter 15 Oxidative Phosphorylation Chapter 17 Lipid Metabolism
Jun 21	Chapter 17 Lipid Metabolism Chapter 18 Nitrogen Metabolism
Jun 25	Chapter 19 Regulation of Mammalian Fuel Metabolism Review
Jun 26	Exam 3 (Chapters 13-19)
Jun 27	Review
Jun 28	Final (comprehensive)

ACCOMMODATIONS FOR STUDENTS WITH SPECIAL NEEDS:

If you have or suspect you may have a physical, psychological, medical or learning disability that may impact your course work, please contact Stacey DeFelice, Director, The Office of Services for Students with Disabilities (OSSD), NAB, 2065, Phone: [516-628-5666](tel:516-628-5666), Fax [516-876-3005](tel:516-876-3005), TTD: [516-876-3083](tel:516-876-3083). E-mail: defelices@oldwestbury.edu. The office will help you determine if you qualify for accommodations and assist you with the process of accessing them. All support services are free and all contacts with the OSSD are strictly confidential. SUNY/Old Westbury is committed to assuring that all students have equal access to all learning activities and to social activities on campus.

SCHOOL OF ARTS AND SCIENCES

POLICY ON ACADEMIC INTEGRITY

Plagiarism and cheating are condemned at all institutions of higher learning. These acts detract from the student's intellectual and personal growth by undermining the processes of studying, reading, note-taking and struggling with one's own expression of ideas and information. Moreover, cheating inevitably involves secrecy and exploitation of others. See "Academic Integrity" and related topics in the *Old Westbury Catalog, 2006-2008*, p.46.

Plagiarizing means "presenting somebody else's words or ideas without acknowledging where those words and ideas come from" (Ann Raimés, *Keys for Writers*, 5th ed., p.188). Examples include:

- copying material from the Internet or other sources and presenting it as your own
- using any author's words without quotation marks; using any quotation without credit
- changing any author's words slightly and presenting them as your own
- using ideas from any published sources (even in your own words) without exact credit. **Note:** This includes all material from the Internet or electronic databases.
- using long passages in a paper that have been written or rewritten by a friend or tutor
- turning in any assignment written by someone else

However, using quotations or borrowed ideas while giving exact credit is good academic procedure.

Other types of academic dishonesty include unauthorized collaboration or copying of students' work (cheating); falsifying grades or evaluations; and others. They are treated as equivalent to plagiarism.

When detected and verified, plagiarism and other academic dishonesty will be punished severely. Normally, the first offense will result in a failure on the specific assignment; a second offense or a particularly flagrant first offense will result in failing the course. A second verified instance of plagiarism within the School of Arts and Sciences, after report of a first verified instance, will normally result in failing the course in which the second instance occurs. Know what plagiarism is and how to avoid it; for guidance see Raimés or any other college writing handbook. **Please note: in this matter, ignorance is never an acceptable excuse.**

Revised effective 5/20/08