

**BIOCHEMISTRY 3621 SECTION 002
TENTATIVE LECTURE SCHEDULE
FALL SEMESTER, 2013**

**TR 9:30 am – 10:50 am
Curry 204**

Instructors: Drs. Ron Mittler and Vladimir Shulaev, SRB 420, SRB 422

Phones: (940) 565-3590 (940) 369 5368

Office Hours: TR 11:00 am —12:20 pm and BY APPOINTMENT

Prerequisite: Must have taken CHEM 3601 (Organic Chemistry or Equivalent)

Catalog Course Description: BIOC 3621. Elementary Biochemistry. 3 hours. Chemistry of biomolecules; amino acids, proteins, enzymes, carbohydrates, lipids, nucleotides, nucleic acids, vitamins and coenzymes; metabolism of biomolecules, generation and utilization of energy. Prerequisite(s): one term/semester of organic chemistry. Counts toward chemistry minor for biology majors when taken concurrently with BIOC 3622. For students needing one term/semester biochemistry course; admission to the biology/biochemistry major, or consent of department. May not be used in the degree if credit is earned in BIOC 4540 or BIOC 4550.

Required Text: *Biochemistry*, 6th Edition by Mary K. Campbell and Shawn O. Farrell, Cengage Learning (formerly Thomson Brooks/Cole), 2009. The web site for Cengage is <http://www.academic.cengage.com>. PowerPoint and PDF files of the lectures are available on the Ecampus WebCT website.

Course Objectives and Goals for BIOC 3621: To learn and understand the major classes of biomolecules found in living organisms, the control and regulation of protein structure and function, enzyme kinetics, nucleic acid structure, lipid structure and function, membrane transport, biochemical evolution, carbohydrate structure and function, and introduction to the major metabolic pathways.

Tentative Lecture Schedule and Course Requirements: The tentative lecture schedule given below basically follows the text sequence. However, some chapters will be emphasized more strongly than other chapters. This is a tentative lecture and exam schedule, subject to change. If and when there are changes, announcements will be made in class. Attendance is necessary to gain the understanding and knowledge to do well on the exams. **Students should read the appropriate material in the text BEFORE the lecture. Students are responsible for all material covered in lectures, whether it comes directly from the text or not.**

Testing and Grading: Four (4) examinations (including the final examination) will be given. The final examination will **NOT** be comprehensive. The lowest of the first three examination grades will be dropped. **The final examination must be taken and will comprise one third of the total grade.** Only exams missed with **prior approval** or **documented** emergency/illness may be rescheduled, with format of the rescheduled exam at instructor discretion (usually discussion and/or oral make-up exams). **All cell phones and camera phones must be turned off and completely out of sight during all examinations. Note that no class member will be admitted to take an exam after the first class member taking the exam has departed the classroom.** If an exam is scheduled on a day the university is closed due to bad weather, that exam will be given in the next class period. In addition, pop quizzes occasionally may be given at the first of the class period.

Notes: Students interrupting class by talking, being disruptive, or using cell phones or ipods will be asked to leave the classroom. February 25 – Last day for change in pass/no pass status and last day to drop the course or withdraw from the university with a grade of W for the course if not passing. September 8 – Last day to drop course with consent of instructor. However, the student is responsible for knowing **all** drop dates and withdrawal

dates. It is the responsibility of the student to be familiar with the university policy on cheating, plagiarism, and student code of conduct found at the web site www.unt.edu/csrr/categories_of_misconduct.

Disabilities Accommodation: The Department of Biological Sciences complies with the Americans with Disabilities Act. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 by the 12th class day for accommodation.

Date	Chapter/Topic
Aug. 29	Ch. 1 Science of biochemistry, organization of cells, introduction to thermodynamics
Sep. 3	Ch. 2 Water, hydrogen bonding, solvent properties, pH and buffers.
Sep. 5	Ch. 2 Continued
Sep. 10	Ch. 2 Continued
Sep. 12	Ch. 3 Amino acids and peptides
Sep. 17	Ch. 3 Continued
Sep. 19	Ch. 5 Protein purification and characterization
Sep. 24	Ch. 4 Three-dimensional structure of proteins
Sep. 26	EXAM 1: Ch. 1, 2, 3, and 5
Oct. 1	Ch. 6 Enzyme kinetics and inhibition
Oct. 3	Ch. 6 Continued
Oct. 8	Ch. 7 Enzyme mechanism, regulation and control
Oct. 10	Ch. 8 Lipids and membranes
Oct. 15	Ch. 8 Continued
Oct. 17	Ch. 15 Energy changes and electron transfer in metabolism
Oct. 22	EXAM 2: Ch. 4, 6, 7, and 8
Oct. 24	Ch. 15 Continued
Oct. 29	Ch. 16 Carbohydrates
Oct. 31	Ch. 16 Continued
Nov. 5	Ch. 17 Glycolysis
Nov. 7	Ch. 17 Continued
Nov. 12	Ch. 18 Storage mechanisms and control in carbohydrate metabolism
Nov. 14	Ch. 18 Continued
Nov. 19	Ch. 19 Citric acid cycle
Nov. 21	EXAM 3: Ch. 15, 16, 17, and 18
Nov. 26	Ch. 19 Continued
Nov. 28	Thanksgiving – no class
Dec 3	Ch. 20 Electron transport and oxidative phosphorylation
Dec. 5	Ch. 20 Lipid metabolism
Dec. 12	EXAM 4 (or FINAL EXAM) Ch. 19, 20, and 21; Thursday, 8:00 am – 10:00am

Dates to Remember:

Monday, September 2	Labor Day Holiday – no labs on Monday only
September 11, Wednesday	Last day to drop without consent of the instructor
October 8, Tuesday	Last day for students who are not passing to drop or withdraw and still receive a grade of “W”
October 9, Wednesday	First day instructors can drop students for non-attendance (grade = “WF”)
November 28-29	Thanksgiving Holiday – labs do not meet
November 6, Wednesday	Last day for students to drop the class with consent of instructor
November 13, Wednesday	First day qualifying students may request an incomplete (grade = “I”)
November 22, Friday	Last day instructor can drop students for non-attendance (grade = “WF”)