

CHEM 370 Syllabus Spring 2011

Class Schedule: MWF 8 – 8:50 AM, La Tourette Hall 200 (formerly Faraday West)

Instructor: Dr. Gary M. Baker, La Tourette Hall 426

Office Hours: MW 9 – 10:00 AM, Thu 10 – 10:50 AM (I teach at 11 AM on Tu and Th).

E-mail: gbaker@niu.edu.

All concerns and questions from individual students must be addressed during office hours or by e-mail (include your name and z number). Office phone calls will not receive a response. I will meet with groups of 5 students, or more, anytime or anywhere (within reason) – LH Conference room, Caribou, Starbucks, Borders....

Textbook: *General, Organic, and Biochemistry*, Denniston *et al.*, 7th ed., 2011

There are no good choices, in my opinion, of a dedicated textbook in biochemistry with a level of coverage that is appropriate for CHEM 370. This is one of the reasons that I selected a comprehensive textbook that also includes general and organic. The biochemical coverage is not as in-depth. In addition, a basic understanding of biochemistry requires significant background in various general and organic chemical concepts. An integrated textbook provides a consistent set of resources for all students that can be easily referred to as needed (by simply thumbing through the earlier chapters). Case in point: How many of you can still compare and contrast the structure and properties of an amine and an amide? The properties and bioactivities of many practical compounds, such as pharmaceuticals and proteins, are difficult to discuss without knowing this.

Course Description:

CHEM 370 is a beginning biochemistry course for non-chemistry majors with emphasis on nutrition and clinical applications. Textbook coverage begins with chapter 16. Supplemental activities will be provided to give students further practice and reflection in various application areas.

Tentative Course Schedule:

Section	Chapters	Exam Date or Holiday
I	Chapter 16 – Carbohydrates Chapter 17 - Lipids and their Functions	Mon, Jan 17, is a holiday Jan 26 (W) - Quiz 1 Feb 2 (W) - Quiz 2 Feb 11 (F) – Exam 1
II	Chapter 18 – Protein Structure and Function Chapter 19 – Enzymes	Feb 23 (W) - Quiz 3 Mar 2 (W) – Quiz 4 Mar 11 (F) – Exam 2
<i>Mar 13 – 20</i>		<i>Spring Break</i>
III	Chapter 21 – Carbohydrate Metabolism Chapter 22 – Aerobic Respiration and Energy Production	Mar 30 (W) - Quiz 5 Apr 6 (W) - Quiz 6 Apr 15 (F) – Exam 3
IV	Chapter 23 – Fatty Acid Metabolism	May 9 (M) 8:00-9:50 AM – Exam 4 (includes a comprehensive component)

Course Format:

Class format will consist of instructor presentation, but will also include class activities in relevant application areas. There will be opportunities here for students to make connections to their chosen career area (e.g. nutrition or clinical science). Students are encouraged to make these connections and to bring them up in class for further discussion or analysis. Think, pair, share activities will be given in class to activate background knowledge and to discover areas where more conceptual work is needed. Other pedagogical strategies will be used, such as decision trees or guided inquiry, to assist students with more difficult conceptual areas, such as acid-base properties. Accordingly, class attendance is very important to your success in the course as it will promote cooperative learning and ensure that you do not miss any material that could end up on exams.

Course Policies:

Attendance: I do not record it but regular attendance is strongly encouraged for the reasons listed under Course Format.

Grading: There are four exams. Exams 1, 2, and 3 will each count 15% and will be focused on the respective section material, as outlined under Tentative Course Schedule. Exam 4 will focus on section IV material, but will also include a comprehensive component to assess mastery of core concepts relevant to general, organic, and biochemistry. The section IV content of exam 4 will weight 15%, and the comprehensive part will count 20%. The final 20% of your grade will be based on a set of six quizzes, given to students promptly at 8:00 AM on a Wednesday. Students will have until 8:10 to complete and hand in the quiz. Exams will begin promptly at 8:00 AM and must be handed in no later than 8:55 (the exception is exam 4). Exam questions will consist of simple objective type (multiple choice, matching...); other questions will require a two or three sentence written response, the drawing of chemical structures, or a simple calculation. Please note that ***no electronic devices (smart phones, tablets...)* may be used during an exam**, other than a simple calculator. There will also be seating rules for every exam, which will be explained in class.

Missed Exams: My general policy is no make ups or pre-exams. An unexcused absence means a zero. Exemptions will be granted only if appropriate arrangements were made with the instructor ***prior*** to the scheduled date for an exam (and only if a legitimate, verifiable reason is presented). I do understand that unforeseen emergencies arise; these will be handled case-by-case, but be aware that the burden of proof is on you. For excused cases, a make-up activity (or possibly a different exam) will be administered.

Academic Dishonesty: If you are suspected of cheating, your program coordinator will be notified and you may receive an "F" for the course. A report will also be filed with the university judicial office.

Other:

Anyone needing special accommodations due to a disability is urged to speak to me early in the semester. CAAR forms are required before I can make any accommodations.