

**Syllabus**

Metabolism (CHEM 4140 )

MWF 8:00 – 8:50 am (3 credit hours)

NCF 115

Instructor: Dr. Kelly E. Johanson

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Office hours\*: Monday/Wednesday 1pm – 3pm

Tuesday 9:00 am – 11am

\*Please contact me if you need additional help outside of office hours or if these hours do not work with your schedule.

**Required text:**

Fundamentals of Biochemistry, Life at the Molecular Level 3rd Edition, 2008, Donald Voet, Judith G. Voet and Charlotte W. Pratt.

**Course Outline and Objectives:**

A study of biochemical energetics and the many biochemical pathways of carbohydrate, lipid, protein, and nucleic acid metabolism. The student will gain insight into the metabolism of biochemical substances on the molecular level, and insight into the universal and integrated nature of metabolism. Prerequisite: CHEM 4130.

This course will cover key metabolic pathways such as glycolysis and the citric acid cycle. We will learn both the compounds involved in these pathways as well as mechanisms of regulation and control of each pathway. We will also discuss one or more enzymes from each pathway in detail. Students will be expected to learn the mechanisms of these enzymes and apply this knowledge to other parts of the pathway. This course will enhance your knowledge of metabolism in preparation for medical school, graduate school, and other pre-professional programs.

In the text, we will cover chapters 12-22. We will not be able to cover every detail of each chapter; therefore, you will be responsible for material in the text as it relates to the topics covered in lecture.

**Quizzes/Exams:**

There will be 6 quizzes (25 points each), 3 exams (100 points each), a group project (50 points), and a cumulative final exam (200 points). The lowest exam and lowest 2 quiz grades will be dropped. Quizzes will be announced a week in advance. Exam dates are given on the next page. Throughout the semester there will be opportunity for earning bonus points by completing pop quizzes. There will be no make-up opportunities for bonus assignments.

The group project will consist of a short (2-3 page) paper along with a 5 minute Power Point presentation to the class.

The first three quizzes and two exams will be averaged to determine your mid-semester grade

The final grade will be determined as follows:

$$(\text{Exam grades}) + (\text{Quiz grades}) + (\text{bonus}) + (\text{Project}) + (\text{Final}) / 550 = \%$$

A 90% - 100%

B 80% - 89%

C 70% - 79%

D 60% - 69%

F below 60%

**Course Policies:**

1. Please turn off all cell phones before class.
2. Please do not text during lecture. You may be asked to surrender your cell phone and/or leave class if this occurs.
3. Grades on exams/quizzes may be disputed up to two days after being returned.
4. Missed quizzes and exams will be subjected to the following policy: If one exam or up to two quizzes are missed, these will be considered your dropped grades. If more than one exam or two quizzes are missed, please see me to discuss your specific circumstances. Make-up exams and quizzes will only be given in extreme circumstances (i.e major illness). If you feel you should be allowed to make-up a missed exam or quiz, you must (a) contact me by phone or email no later than 5pm the day of the missed quiz or exam and (b) provide documentation for your absence within one week of the missed quiz or exam.
5. Please take advantage of office hours to ask questions about upcoming exams/quizzes. However, questions about multiple concepts or those that require a long explanation should not be saved for the morning of an exam – Please plan ahead!

**Evacuation policy:**

In the event that classes are cancelled due to a hurricane evacuation, assignments and course materials will be posted to Blackboard. Please log on to the Blackboard site as soon as possible after the evacuation

**Exam Dates:**

\*\*Note – these dates will not change except in cases of evacuation. If we have not finished the listed chapters, you are only responsible for the material covered prior to the exam.

September 14	– Exam 1 (Chapters 14, 15)
October 2	– Exam 2 (Chapters 15, 16, 17)
October 30	– Exam 3 (Chapters 17, 18, 20)
Final	– December 8 (10:30 am)

**Academic Misconduct:**

The Xavier Faculty Handbook guidelines on academic misconduct will be followed in this course.

*If a student's test, examination paper, laboratory report, term paper, or other written assignment gives evidence of not being completely his/her own work, he/she may be given an F for the course. A student who communicates with anyone during the course of an examination or test, unless with the permission of the instructor, may be immediately dismissed from the room and given an F. Such communication includes attempts to read from another's paper. If a student is found to have brought study materials into the examination room without the instructor's permission, it may be assumed that he/she intended to use such materials unlawfully, and he/she may be penalized accordingly.*

*The faculty member is to report immediately to his/her chair and dean any incident involving academic dishonesty and be prepared to make this report in writing. Written evidence supporting the charge should also be submitted.*