

## Chem 501 - Introduction to Biochemistry

The chemistry of biological systems.

Fall 2019

9:00 - 9:50 MWF, Bolton 150

### *Prerequisites*

Jr status AND C or better in Chem 341 or 345. These prerequisites are in place because the knowledge gained from these courses is vital to understanding and doing well in 501 and that knowledge is needed from the very beginning of class. The curriculum is designed in a sequential fashion in order to build on concepts and knowledge from one course to the next to provide optimal conditions for successful completion. Taking courses out of sequence or skipping required courses puts the student at a severe disadvantage and is not something this department supports. It is in your best interest to take this course only when you are fully prepared and not before.

### *Instructor*

Kristene Surerus, Associate Professor of Chemistry and Biochemistry

Chem 845

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web site Canvas

office hours are MW 10 – 11 am and by appointment

Please contact me with questions about the course – I will readily set up an appointment to meet with you face-to-face, by phone or by email. I will endeavor to respond to emails within 24 hours of receipt M-F (no guarantee that I will respond on weekends). Please put 'Chem 501' in the subject line and it is *recommended that you use your UWM account* to maximize the chances that I receive and can respond to your email (the UWM server does filter out accounts from some organizations but will always send through accounts from UWM). If you phone and I'm not available to answer, please leave a message on the answering machine with your name and number and I will respond as soon as possible.

### *Text*

Principles of Biochemistry by Nelson & Cox, 7th edition, 2017, W.H. Freeman and Company

Hardbound Book ISBN-13: 978-1-4641-2611-6

Loose Leaf Book or eBook are also acceptable as would be the 5<sup>th</sup> or 6<sup>th</sup> editions

At [uwm.ecampus.com](http://uwm.ecampus.com) prices listed as of 3/21/19

\$281.17 new, \$164.86 used, \$17.22 rent semester, \$76.99 180 days online

### *Important Dates*

First Day of Classes	Sept 3	Last Day to Drop With W	Nov 10
Last Day to Add	Sept 16	Last Day of Classes	Dec 12
Last Day to Drop Without W	Sept 30		

### Grading

- There will be online quizzes for each chapter that can be taken at your convenience within the timeframe allotted.
  - Ch. 1-6 quizzes will be open 9/4 through 9/24
  - Ch. 7, 8, 10, 11, 13 14 quizzes will be open 9/26 through 10/17
  - Ch. 12, 15-17, 19, 21, 23 quizzes will be open 10/19 through 11/7
  - Ch. 9, 24-28 quizzes will be open 11/9 through 12/5
- There will be four in-class exams – these are tentatively scheduled for Wednesday, Sept. 25, Friday, Oct. 18, Friday, Nov. 8 and Friday, Dec. 6 with each exam worth 100 points (in-class exams count toward 60% of the final grade).
  - All the quiz scores will be averaged to determine the quiz average. If a quiz is not attempted it will be assigned a score of zero for calculating the quiz average. No quiz scores will be dropped from the calculation of the quiz average. The quiz average will be compared to the scores of the four in-class exams. The lowest score between the quiz average and the four in-class exams will be dropped from the calculation of the final grade.
  - **There will be no makeup exams given.** If you miss an exam you must notify the instructor in writing, in this case the quiz average will replace the missed exam.
- The final exam will be cumulative and is scheduled for Monday, December 16, 10:00 am – 12:00 noon and will be worth 200 points (40% of the final grade).
- There is no extra credit or make-up work available to improve the course grade.

On average, students should spend 48 hours per credit per semester on class activities, so approximately 144 hours for this course. Note that this workload is an estimate only; students are assessed on their performance, not on the time put into the course.

Click here for [University Policies for Syllabi](#)

*If you will need accommodations in order to meet any of the requirements of this course, please contact me as soon as possible.*

A grade of Incomplete can only be given to a student who has carried the course successfully until near the end of the semester but, because of illness or other unusual and substantiated cause beyond the student's control, has been unable to take or complete the final test or to complete some limited amount of term work.

Click here for the [grievance procedure](#) to appeal a course grade.

## Preliminary Schedule

Sep. 4	Ch. 1 Foundations	23	Ch. 16 TCA Cycle
6	Ch. 2 Water	25	Ch. 17 Fatty Acid Catabolism
9	Ch. 3 Amino Acids	28	Ch. 19 Ox Phos
11	Ch. 3 Amino Acids	30	Ch. 21 Lipid Biosynthesis
13	Ch. 4 Peptides/Proteins	Nov. 1	Ch. 12 Biosignaling
16	Ch. 5 Protein Function	4	Ch. 23 Hormonal Regulation
18	Ch. 6 Enzymes	6	Review
20	Ch. 6 Enzymes	8	Exam 3 Ch. 12, 15-17, 19, 21, 23
23	Review	11	Ch. 24 Genes & Chromosomes
25	Exam 1 Ch. 1-6	13	Ch. 25 DNA Metabolism
27	Ch. 7 Carbohydrates	15	Ch. 9 DNA Info Tech
30	Ch. 8 Nucleic Acids	18	Ch. 26 RNA Metabolism
Oct. 2	Ch. 10 Lipids	25	Ch. 27 Protein Metabolism
4	Ch. 11 Membranes/Trans	27	Ch. 27 Protein Metabolism
7	Ch. 13 Bioenergetics	29	Ch. 28 Reg of Gene Expression
9	Ch. 13/14	Dec. 2	Ch. 28 Reg of Gene Expression
11	Ch. 14 Glycolysis	4	Review
14	Ch. 14 Glycolysis	6	Exam 4 Ch. 9, 24-28
16	Review	9	Review
18	Exam Ch. 7, 8, 10, 11, 13, 14	11	Review
21	Ch. 15 Carb Regulation	Dec. 16	10am-noon Final Exam