Chemistry 3330

Biochemistry I: Structure and Function

Instructor: Veronica Gonzalez
Office: TBD
Phone: (915) 831-2407
Email: vgonzalez4@utep.edu

Class meets: TR 7:30-8:50AM
UGLC 116 (no food or drinks allowed)

Scope: A study of the major classes of biomolecules, including amino acids, proteins, nucleic acids, carbohydrates and lipids and their physiological relevance; with introductions to biochemical techniques and enzyme kinetics.

Prerequisite(s): CHEM 2221 w/C or better AND CHEM 2321 w/C or better OR CHEM 2124 w/C or better AND CHEM 2324 w/C or better

Textbook: Lehninger *Principles of Biochemistry* (8th Edition); Nelson and Cox; W. H. Freeman and Company. Access to the Achieve homework platform is required and includes the e-book and homework platform. The cost is approximately $100. You have two weeks to purchase access.

Achieve Course Link: https://achieve.macmillanlearning.com/courses/y6wkyc

Course Grading: The course will consist of Achieve homework, lecture/article quizzes, four-unit exams and a comprehensive final, each weighed equally.

1. **Achieve Homework**
   One Adaptive Quiz and one End of Chapter homework assignment will be assigned for each chapter. Late homework will be accepted at a 20% deduction.

   a. **Adaptive Quizzes** (10-11): Pre-lecture assignments that help prepare for the lecture. The time commitment for these assignments is about 1 hour each. There will be many questions provided to guide your preparation. These quizzes will be assigned weekly.

   b. **Chapter Homework** (8-10): Post-Lecture assignments should be completed after mastering the chapter. These assignments contain 15-25 questions each depending on the assignment. Chapter Homework will be assigned weekly however they will be due the week the unit exam is administered. Points will be deducted for submitting late Chapter Homework.

2. **Lecture/Article Quizzes**
   a. Lecture Quizzes- Students may be given quizzes at the beginning of class. These quizzes will be open for the first 10 minutes of class on Blackboard. Expect at least once a week.

   b. Article Quizzes: Students will be given at least 1 article per unit that is related to the course material presented in class. Students will be given a quiz on these articles.

   c. Article Review: Students will be asked to find an article using the UTEP Library databases and produce a quiz of their own.
3. **Unit Exams (4):** Four-unit exams will be given during the semester. These exams will cover 3-4 chapters.
   a. Unit 1: Chapter 1-3
   b. Unit 2: Chapter 4-6
   c. Unit 3: Chapter 7-9
   d. Unit 4: Chapter 10-12

4. **Comprehensive Final Exam:** The final exam will include chapters 1-12.

**Make-up Exams:** Since the lowest grade will be dropped, no make-up exams are given.

All suspected cases or acts of alleged scholastic dishonesty (CHEATING) will be referred to the Dean of Students’ Office. See Blackboard for more information on Exam Policies.

**Grade Scale:**

Each category will be evenly averaged, and the lowest exam grade will be dropped.

<table>
<thead>
<tr>
<th>Average Grade</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>89.5 - 100%</td>
<td>A</td>
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<tr>
<td>79.5 – 89.4%</td>
<td>B</td>
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<tr>
<td>69.5 – 79.4%</td>
<td>C</td>
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<tr>
<td>59.5 – 69.4%</td>
<td>D</td>
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<tr>
<td>0 - 59.4%</td>
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Instructor may provide limited extra credit opportunities to the entire class. All other requests beyond what the instructor provides will not be granted to ensure fairness in the course.

**Withdrawal Policy:** The last day for students to withdraw from any course with a "W" is Nov 3. Please note that it is the student's responsibility to officially withdraw from a course before the drop deadline. Instructor assumes no responsibility for dropping students.

**Class Attendance:** Though attendance will not be recorded, it is highly encouraged you attend all lectures. If you must miss a class, you need to make a special effort to learn what occurred during your absence from your peers.

**Disability:** If you have or suspect a disability and need accommodations you should contact Disabled Student Services Office at 747-5148 or at dss@utep.edu or visit Rm 106 Union East Bldg.
## Schedule of classes

(We may end up going slower or faster depending on how the class is doing.)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Week</th>
<th>Dates</th>
<th>Course Objectives, Assignments and Due Dates</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
<td>Aug 29 – Sept 3</td>
<td>T: Introduction to course, syllabus and Achieve Homework platform</td>
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<tr>
<td></td>
<td></td>
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<td>R: Chapter 1: The Foundations of Biochemistry</td>
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<tr>
<td>1</td>
<td>2</td>
<td>Sept 5 – Sept 10</td>
<td>Sept 4th Labor Day Holiday – University Closed</td>
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<td><strong>Sept 5: Adaptive Quiz CH 1</strong></td>
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<td>T: Chapter 1: The Foundations of Biochemistry</td>
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<td>R: Chapter 2: Water, the solvent of life</td>
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<td>1</td>
<td>3</td>
<td>Sept 11 – Sept 17</td>
<td><strong>Sept 11: Adaptive Quiz CH 2</strong></td>
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<td>T: Chapter 2: Water, the solvent of life</td>
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<td>R: Chapter 3: Amino Acids, Peptides and Proteins</td>
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<td>4</td>
<td>Sept 18 – Sept 24</td>
<td><strong>Sept 18: Adaptive Quiz CH 3</strong></td>
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<td>T: Chapter 3: Amino Acids, Peptides and Proteins</td>
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<td>T: Chapter Homework 1, 2 and 3</td>
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<td>R: Unit 1 Exam – Sept 21</td>
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<td>2</td>
<td>5</td>
<td>Sept 25 – Oct 1</td>
<td><strong>Sept 25: Adaptive Quiz CH 4</strong></td>
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<td>T: Chapter 4 – The Three-Dimensional Structure of Proteins</td>
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<td>R: Chapter 4 – The Three-Dimensional Structure of Proteins</td>
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<td>2</td>
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<td>Oct 2 – Oct 8</td>
<td><strong>Oct 2: Adaptive Quiz CH 5</strong></td>
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<td>T: Chapter 5 – Protein Function</td>
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<td>R: Chapter 5 – Protein Function</td>
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<td>T: Chapter 6 – Enzymes</td>
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<td>R: Chapter 6 – Enzymes</td>
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<tr>
<td>2</td>
<td>8</td>
<td>Oct 16 – Oct 22</td>
<td>T: Chapter 6 – Enzymes</td>
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<td>T: Chapter Homework 4, 5 and 6</td>
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<td>R: Unit 2 Exam – Due Oct 12</td>
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<td>3</td>
<td>9</td>
<td>Oct 23 – Oct 29</td>
<td><strong>Oct 23: Adaptive Quiz CH 7</strong></td>
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<td>T: Chapter 7 – Carbohydrates and Glycobiology</td>
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<td>R: Chapter 7 – Carbohydrates and Glycobiology</td>
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<td>3</td>
<td>10</td>
<td>Oct 30 – Nov 5</td>
<td><strong>Oct 30: Adaptive Quiz CH 8</strong></td>
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<td>T: Chapter 8 – Nucleic Acids and Nucleotides</td>
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### Chemistry 3330

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<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>3 Nov 6</td>
<td>R: Chapter 8 – Nucleic Acids and Nucleotides</td>
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<tr>
<td>Nov 12</td>
<td><strong>Nov 6: Adaptive Quiz CH 9</strong></td>
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<td>T: Chapter 9 – DNA-Based Information Technology</td>
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<td></td>
<td>T: Chapter Homework 7, 8 and 9</td>
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<td>R: Unit 3 Exam – Nov 9</td>
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<tr>
<th>Date</th>
<th>Event Description</th>
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<tr>
<td>4 Nov 13</td>
<td>R: Chapter 10 - Lipids</td>
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<td>Nov 19</td>
<td><strong>Nov 13: Adaptive Quiz CH 10</strong></td>
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<td>T: Chapter 10 - Lipids</td>
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<td></td>
<td>R: Chapter 10 - Lipids</td>
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<tr>
<td>13 Nov 20</td>
<td>R: Chapter 10 - Lipids</td>
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<td>Nov 26</td>
<td><strong>T: Nov 23-24 Thanksgiving Holiday – University Closed— No Classes</strong></td>
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<td>14 Nov 27</td>
<td>T: Chapter 11 – Biological Membranes and Transport</td>
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<tr>
<td>Dec 3</td>
<td>R: Chapter 11 – Biological Membranes and Transport</td>
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<td>15 Dec 4</td>
<td>T: Chapter 12 – Biochemical Signaling</td>
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<td>Dec 10</td>
<td><strong>R: Unit 4 Exam – Dec 7</strong></td>
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<td>16 Dec 11</td>
<td><strong>Comprehensive Final Exam Dec 12</strong></td>
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Calendar is subject to slight variation.
Nov 3rd is the Fall Drop/Withdrawal Deadline

**Exam rules**

- You must show your ID before taking the exam
- Remove baseball caps and all hats
- Listening to music is not allowed. Remove all headphones or ear-buds and put them away.
- Go to the restroom before exam. If you must use the restroom, you will be asked to empty your pockets (leave phone behind) and you will be escorted to and from the restroom by a TA.
- No talking or sharing of any material during the exam.
- **No cell phone use during exams**. Phones must be put away in pocket or backpack.
- No talking during an exam.
- Try not to disrupt those around you after you finish an exam.
- No looking around at exams of others sitting near you. People with wondering eyes will be asked to move to another seat.
- All belongings (especially electronics) must be on the floor put away out of sight.
- No drinks, cups, food, etc. are allowed on your desk during an exam.
  No cheat-sheets (these will earn you an automatic zero and a trip to the Dean of Students to explain yourself).

If exams are assigned online, Respondus LockDown Browser may be required.
Policies regarding Respondus can be found on Blackboard.