Instructor: Dr. Edith Osborne
Email: edith.osborne@angelo.edu
Phone: 325-486-6629
Office: Cav 204A

Office Hours: Office hours will be held virtually by email or by appointment via Blackboard Collaborate (for video or audio conferencing). Collaborate appointments should be requested via email.

Course Information

Course Description
Coordinated examination of enzymatic processes in the living cell.

Prerequisite and Co-requisite Courses
CHEM 4331 Biochemistry

Student Learning Outcomes
After completion of this course students will be able to:
  • analyze complex chemical problems and draw logical conclusions.
  • understand and apply scientific reasoning in the chemical sciences.
  • demonstrate technical and analytical skills in chemistry and biochemistry.

Course Objectives
During this course, students will be:
  • Gaining factual knowledge (terminology, classifications, methods, trends)
  • Learning fundamental principles, generalizations, or theories
  • Learning to apply course materials (to improve rational thinking, problem solving and decisions)
Course Delivery
This is a blended course with roughly 90% of the course delivered online via Blackboard\(^1\). The class will include online activities, and it will also require attending in class quizzes and tests.

Required Texts and Materials

Communication
Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check your email and Blackboard frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

Grading

Evaluation and Grades
Course grades will be determined as indicated in the table below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities and homework</td>
<td>75</td>
</tr>
<tr>
<td>Paper and presentation</td>
<td>25</td>
</tr>
<tr>
<td>Regular exams (100 points each)</td>
<td>300</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
</tr>
<tr>
<td>Comprehensive final exam</td>
<td>150</td>
</tr>
<tr>
<td>Total</td>
<td>650</td>
</tr>
</tbody>
</table>

Grading System
Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

- A $\geq 90\%$
- B $\geq 80\%$
- C $\geq 70\%$
- D $\geq 60\%$
- F $< 60\%$ (Grades are not rounded up)
Assignment and Activity Descriptions

Exams: There will be three 100 point regular exams during the semester and a comprehensive final exam of 150 points during the final exam period. Exam questions may be multiple choice, short answer, matching, and may require application of the covered material. Due to the cumulative nature of the course, some concepts from previous chapters may be necessary to solve problems in later chapters. Exams will not be curved. During exams, all items except your nonprogrammable calculator and pencil will be placed at the front of the room. You may not wear hats during the exam.

Make-up exams: No make-up exams will be given except for university-sponsored events. If you miss an exam for an accepted excuse, i.e. a death in your family or personal illness, the final exam score will be used to replace the missed exam. Only one exam can be replaced in this fashion. If you miss two exams, you will not pass the course. If you miss the final, you will not pass the course. If you have taken the three hour exams, you may use the final exam percentage score to replace your lowest exam score. Example: your exams are 60 pts, 70 pts, and 80 pts and your final is 100 pts. The final exam is worth 150 points, so 100 points is $100/150 \times 100 = 67\%$, so you can replace the 40 pt exam with 67 pts.

Quizzes: Quizzes on selected pathways will be given throughout the semester. On the pathway quizzes, you will draw out the selected pathway in its entirety. This will allow more time for fair evaluation of other important course materials on the exams. No reference materials (notes, worked problems or text) may be used on paper quizzes. The lowest two quiz scores will be dropped. Quizzes missed for university-sponsored events or other excused absences must be made up within one week of the missed quiz.

Homework and activities: Online homework from Sapling Learning will be assigned. There will also be some on-line activities and homework on Blackboard. In calculating your grade, I will drop 10% of this category of points and normalize to 50 points for the category.

Paper and presentation: Information from reputable websites (MedlinePlus, Protein Databank, NIH, pharmaceutical manufacturers), texts, and peer-reviewed journal articles will be used to write a short paper and prepare a short presentation to describe a metabolism related topic. More information about the assignment will be posted on Blackboard.

Grading corrections: Any discussion of corrections must be made within three weekdays of the return of the assignment.
Courtesy: For in class activities, please be on time, refrain from eating, and turn off cell phones. Attendance will be taken at the beginning of each face to face meeting.

**General Policies Related to This Course**

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)
- [Angelo State University Catalog](#)

**Academic Integrity**

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university’s [Statement of Academic Integrity](#).

**Accommodations for Students with Disabilities**

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#). The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the ASU Writing Center.

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

Title IX at Angelo State University

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.
Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.
For more information about Title IX in general you may visit www.angelo.edu/title-ix.

Course Schedule

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
</tr>
</thead>
</table>
| January 13| Introduction
Chapter 11 Biological Membranes and Transport         |
| January 20| Martin Luther King Jr. Day Holiday– January 20
Ch 11 continued                                      |
| January 27| Ch 12 Biosignalling
**January 29: Metabolism Paper Topic Due**              |
| February 3| Ch 12 continued
Chapter 13 Bioenergetics and Biochemical Reaction Types |
| February 10| Ch 13 continued
Chapter 14 Glycolysis, Gluconeogenesis, and the Pentose
Phosphate Pathway
Exam One, Chapter 11-13                                |
| February 17| Ch 14 continued
Chapter 15 Principles of Metabolic Regulation           |
| February 24| Chapter 16 The Citric Acid Cycle                       |
| March 2   | Ch 16 Continued                                        |
| March 9   | Spring break                                           |
| March 16  | Chapter 17 Fatty Acid Catabolism                       |
| March 23  | Chapter 18 Amino Acid Oxidation and the Production of
Urea
Exam Two                                               |
<p>| March 30  | Chapter 19 Oxidative Phosphorylation                   |
| April 6   | Chapter 21 Lipid Biosynthesis                          |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 13</td>
<td>Chapter 22 Biosynthesis of Amino Acids, Nucleotides, and</td>
</tr>
<tr>
<td></td>
<td>Related Molecules</td>
</tr>
<tr>
<td></td>
<td>Exam Three</td>
</tr>
<tr>
<td>April 20</td>
<td>Chapter 23 Hormonal Regulation and Integration of</td>
</tr>
<tr>
<td></td>
<td>Mammalian Metabolism</td>
</tr>
<tr>
<td>April 27</td>
<td>Ch 23 continued</td>
</tr>
<tr>
<td>May 4</td>
<td>Final Exam</td>
</tr>
</tbody>
</table>

1. [https://blackboard.angelo.edu](https://blackboard.angelo.edu)
2. [https://www.angelo.edu/student-handbook/](https://www.angelo.edu/student-handbook/)
3. [https://www.angelo.edu/catalogs/](https://www.angelo.edu/catalogs/)
5. [https://www.angelo.edu/services/disability-services/](https://www.angelo.edu/services/disability-services/)
6. [https://www.angelo.edu/content/files/14197-op-1011-grading-procedures](https://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
8. [https://www.angelo.edu/dept/writing_center/academic_honesty.php](https://www.angelo.edu/dept/writing_center/academic_honesty.php)
9. [https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)