Course Details

Meeting Times  MWR 8:30-9:20, CIB 101
Instructor  Dr. Wayne Hatch, Reeves 264
Out of Class contact: wayne.hatch@usu.edu, 613-5393 (Zoom through Canvas – days TBD)

Catalog description
Principles of cell biology, energetics, and genetics; plant structure, function, and development. Three lectures and one lab. To receive University Studies Breadth Life Sciences (BLS) credit, students must complete both BIOL 1610 and either BIOL 1620 or BIOL 3300. The BIOL 1610 and BIOL 3300 option for BLS credit is available only to students majoring in Biological Engineering or Environmental Engineering. The BIOL 1610 and BIOL 3060 option for BLS credit is available only to students in the Bioinformatics Emphasis of the Computer Science Major.

General Course Objectives

- Become competent in the nature of science
- Explore the chemical basis of life
- Understand the working cell model
- Explore how life obtains and utilizes energy
- Gain knowledge of the function of genes and their inheritance
- Explain principles of evolution
- Identify evolutionary relationships among species

Recommended Pre-requisites
Prior or concurrent enrollment in CHEM 1110 or CHEM 1210, prior biology courses.

Textbook
We will just use the book and not any of the other online content.
The 3rd edition will be used, but the 1st and 2nd editions have the majority of the same information and a student can be successful using either edition.

Class Participation
In-person class
Face-to-face class will be held but social distancing requirements will limit how many students can meet at the same time. Because of this course material will be presented to students through recorded lectures
in Canvas. Scheduled class time will then be dedicated solely to activities to help students better understand concepts. Students should physically attend class at least once a week on either Monday or Wednesday. For these days, Dr. Hatch will prepare a lesson to students learn the material. Thursdays will be for those who would like to attend twice a week, and the class will be driven by what students want to discuss. I would encourage those who want extra help to attend on Thursdays. Students can sign up for the day they will attend class here.

**Online Lectures**
Course material will be presented through videos posted to Canvas. Follow the weekly schedule as to which videos to watch and when.

**Chapter Learning Objectives**
Each chapter has a set of learning objectives that can be found on Canvas or in the Microsoft OneNote Notebook. It is highly recommended that each student completes these and master these on their own. Exams will test student’s mastery of these objectives.

**Microsoft OneNote**
Microsoft OneNote will be utilized during lectures to share information with the class. It is freely accessible for all USU students. To access the Class Notebook in OneNote click here.
To login:
Username: A#@aggies.usu.edu
Password: Your USU password

**Poll Everywhere**
To help facilitate participation in class, the online polling service, Poll Everywhere, will be used. This will be free for students. Students will not be required to register but may do so if they would like to review questions from class. To register go here.
Dr. Hatch’s presentation page is [https://pollev.com/waynehatch740](https://pollev.com/waynehatch740)

**Successfully navigating this course**
The most important task in this course is to master the learning objectives and communicate that mastery. To do so, a student must:
1st. know what the learning objectives are by accessing them on Canvas.
2nd. do whatever it takes to learn the concepts. This may include reading the text, taking notes in class, completing practice questions, using any free content online, discussing the material with peers or Dr. Hatch (by the way, he loves discussing the material; and no, he didn’t always know it; and no, he doesn’t know everything about it; he especially enjoys listening to students discuss it).
3rd. demonstrate mastery by completing quizzes, assignments, and exams.

**Assessments**
This course is primarily a course to provide a foundation of biological concepts for further studies in biology. Because of this, the assessments in this class are strictly designed to assess the student’s knowledge of core biological concepts. This will be done with exams and quizzes. Extra assignments will be few as listed below.
Exams
Six written tests worth 100 points each will be given throughout the semester. Each test will cover one section of material from the text. Questions for the exams will be based off of the learning objectives for each chapter that will be provided on Canvas. These exams will be given in the testing center and will open on the scheduled Thursday and close on Friday of the week listed on the schedule. There will not be a final comprehensive exam, but the final section exam will be given during finals week. Retake exams will be available for those that request it.

Quizzes
Quizzes (5-10pts) will be taken in Canvas. These will assess student’s knowledge of the material from each chapter. There will be 23 quizzes throughout the semester with each quiz corresponding to each chapter of material. These quizzes will help the student to stay on top of learning the material and provide the student a formative assessment.

Assignments
Assignments in addition to quizzes will be given regularly throughout the semester. The amount will be determined as the semester goes and will also be 5-10pts each.

Extra
- Students may attend 3 biology seminars or watch an equivalent documentary for 5 points each. The student will write a paragraph summarizing the contents of the seminar or video and submit it to Dr. Hatch for credit.
- Completion of the IDEA course evaluation will be worth 5 points. Students will receive an email prior to the end of the semester, or they can be accessed through Canvas.

Grading
6 exams 600pts
23 quizzes ~150pts
Assignments 50pts
Total ~800pts

Percentage Grading Scale:
100-93 = A  89-87 = B+  79-77 = C+  69-67 = D+  below 60 = F
92-90 = A-  86-83 = B  76-73 = C  66-63 = D
82-80 = B-  72-70 = C-  62-60 = D-

Late work
All work will be submitted in Canvas by the due dates listed there. Students should contact Dr. Hatch if any issues arise concerning submitting course work.

University Policies
Please see: http://www.usu.edu/provost/faculty-life/syllabus.cfm
Accommodations for Students with Disabilities
USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the Disability Resource Center (DRC) as early in the semester as possible (435-797-2444, drc@usu.edu). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

Weekly Schedule
This is the recommended schedule for when you should watch each recorded lecture on Canvas. Tests will open the Friday of the week listed.

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<tr>
<th>Week</th>
<th>Schedule</th>
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| 1: Aug 31-Sep 4 | Watch lectures for Ch. 1: Life  
                             And Ch. 2: Molecules of Life |
| 2: Sep 7-Sep 11 | Labor Day  
                             Watch lectures for Ch. 3: Nucleic Acids and Transcription |
| 3: Sep 14-18  | Watch lectures for Ch. 4: Translation and Protein Structure  
                             Prepare for and take Exam 1 |
| 4: Sep 21-25 | Watch lectures for Ch. 5: Organizing Principles  
                             And Ch. 6: Making Life Work |
| 5: Sep 28-Oct 2 | Watch lectures for Ch. 7: Cellular Respiration |
| 6: Oct 5- Oct 9 | Watch lectures for Ch. 8: Photosynthesis  
                             Prepare for and take Exam 2 |
| 7: Oct 12-16 | Watch lectures for Ch. 9: Cell Signaling  
                             And Ch. 10: Cell and Tissue Architecture |
| 8: Oct 19-23 | Watch lectures for Ch. 11: Cell Division  
                             And Ch. 12: DNA Replication and Manipulation  
                             Prepare for and take Exam 3 |
| 9: Oct 26-30 | Watch lectures for Ch. 13: Genomes  
                             And Ch. 14: Mutation and Genetic Variation |
| 10: Nov 2-6  | Watch lectures for Ch. 15: Mendelian Inheritance  
                             Prepare for and take Exam 4 |
| 11: Nov 9-13 | Watch lectures for Ch. 16: Inheritance of Sex Chromosomes, Linked Genes and Organelles  
                             And Ch. 17: Genetic and Environmental Basis of Complex Traits |
| 12: Nov 16-20 | Watch lectures for Ch. 18: Genetic and Epigenetic Regulation  
                             And Ch. 19: Genes and Development  
                             Prepare for and take Exam 5 |
| 13: Nov 23-27 | Take Exam 5 if not already  
                             Enjoy your Thanksgiving Holiday: Do not return to classes after this break. Courses will be fully online for the last two weeks. |
| 14: Nov 30-Dec 4 | Watch lectures for Ch. 20: Evolution  
                             And Ch. 21: Species and Speciation |
| 15: Dec 7-11 | Watch lectures for Ch. 22: Evolutionary Patterns  
                             And Ch. 23: Human Origins and Evolution |
| 16: Dec 14-18 | Prepare for and take Exam 6 |

Disclaimer: The schedule and assignments as part of this syllabus are tentative and subject to change.