

BIOL 1615: Biology I Lab

Utah State University Eastern

Fall 2017, 1 credits

Meeting Time: R 1:30-4:20pm or F 7:30-10:20, Reeves 231

Instructor: Dr. Wayne Hatch, Reeves 264

Office Hours: T 1-4pm; R 10-12pm; and by appointment

Contact: wayne.hatch@usu.edu, 613-5393

Catalog description:

Investigative laboratory course with studies focused on genetics, cell, and molecular biology. Designed to be taken concurrently with Biology 1610. Students will apply information learned in Biology 1610 lectures as they ask and answer biological questions while developing the skills and competencies needed for biological research. To receive University Studies Breadth Life Sciences (BLS) credit, students must complete BIOL 1610 and BIOL 1615, and BIOL 1620 and BIOL 1625, or BIOL 3300. The BIOL 1610/BIOL 1615 and BIOL 3300 option for BLS credit is available only to students majoring in Biological Engineering or Environmental Engineering. Prerequisites: BIOL 1610 (may be taken concurrently) Semester Typically Taught: Fall

Course Fee:

This course has an associated \$30 fee. This will be used to purchase supplies for lab including: reagents, glassware, cleaning supplies, and genetic analysis kits.

General Course Objectives

- Become competent in the practice of science

Course design:

Each class will include hands-on experiences designed to either provide real world examples of what is discussed in lecture and will be heavily focused on providing experiences in the basics of scientific research including: finding and reading research articles, developing and testing hypotheses, and collecting and reporting data.

Assessments:

Reports

There will be 12 laboratory assignments to be turned in at the beginning of each subsequent lab. These will be graded out of 10 points and further instruction will be given in the lab as to what is required for each lab report. Each lab report will vary depending on the lab activity.

Attendance and participation

Attendance and participation will be required for each lab period. If a lab is to be missed for academic purposes, please let Dr. Hatch know ahead of time. Participation in each lab will be worth 10 points.

Grading:

12 lab reports = 120pts

13 lab participations = 130pts

Total = 250pts

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-	

Expectations of Students:

I expect that as a student you will come to class ready to participate in each lab. This means accessing and reading the lab handout before attending lab.

Policies on attendance and make-up work:

If you must miss a lab, let Dr. Hatch know a day ahead of time so that accommodations can be made. Late labs reports will be docked 25% of the grade.

Canvas:

Canvas is where course content, grades, and communication will reside <http://canvas.usu.edu>
Your username is your A# and your password is your global password. For Canvas, passwords, or any other computer-related technical support contact the IT Service desk. (435)797-4357. <http://it.usu.edu>

Academic Dishonesty:

Cheating and/or plagiarism are illegal and will not be tolerated. If a student is found guilty, the student may immediately fail the course and possible expulsion from the college. Any suspicion of an academic integrity violation (AIV) may be reported by the instructor to the university. As stated in student code Section VI-1 “Whenever an instructor reasonably suspects that a student has committed an academic integrity violation, the accused student shall be notified by the instructor of the violation and its consequences through use of the academic integrity violation form (AIVF) within seven days that a violation has occurred and that a sanction is appropriate.”

USU Eastern Counseling Services

"USU Eastern is committed to providing resources for students to engage as their best selves while on campus. In this vein, students should be aware of counseling and mental health services if the need arises for therapy or counseling. Our counselors can be contacted at 435-613-5337 or students can email"

Classroom Accommodation 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. Students may contact the DRC located in room 223 of the JLSC, 435-613-5337. All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

Biology I Laboratory Schedule

Date	Laboratory exercises
Aug 31, Sep 1	Lab 1: Making observations and Asking Questions Nature of Science
Sep 7,8	Lab 2: Introduction to Scientific Papers
Sep 14,15	Lab 3: Developing Hypotheses/Predictions: Macromolecules, DNA extraction
Sep 21,22	Lab 4: Reporting data: Enzymes and making graphs/tables
Sep 28,29	Lab 5: Reporting data and Conclusions: Osmosis and Diffusion
Oct 5,6	Lab 6: Reading and Criticizing Research
Oct 12,13	Lab 7: Microscopy/ Cell Structure
Oct 19,20	No Lab – Fall Break
Oct 26,27	Lab 8: DNA Electrophoresis / MRSA Case Study
Nov 2,3	Lab 9: Mendelian Genetics / Epigenetics
Nov 9,10	Lab 10: The Research Proposal
Nov 16,17	Lab 11: Hardy Weinberg Equilibrium
Nov 23,24	No Lab – Thanksgiving Holiday
Nov 30, Dec 1	Lab 12: Phylogenetics
Dec 7,8	Final Lab Meeting: Biology Careers