BIOL 1107L - Principles of Biology I Laboratory
Course Syllabus – Fall 2016

Individuals with disabilities who need to request accommodations should contact the Disability Services Coordinator, Edgewater Hall 255, 678-466-5445, DisabilityResourceCenter@clayton.edu.

Course Description
Number and Title:
BIOL 1107L Principles of Biology I Laboratory

Credit Hours:
1.0 semester credit hours (0-3-1)

Catalog Description:
Laboratory accompanying BIOL1107, Principles of Biology I.

Co-requisites:
BIOL1107, Principles of Biology I.
Withdrawal from BIOL1107L requires withdrawal from BIOL1107 and withdrawal from BIOL1107 requires withdrawal from BIOL1107L.

Pre-requisites:
CHEM1211, Principles of Chemistry I.
CHEM1211L, Principles of Chemistry I Lab.

Notebook Computer Requirement:
Each CSU student is required to have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student's academic program. Students will sign a statement attesting to such access. For further information on CSU's Official Notebook Computer Policy, please go to http://www.clayton.edu/hub/itpchoice/notebookcomputerpolicy.

Computer Skill Prerequisites:
- Able to use the computer's operating system
- Able to access and send e-mail
- Able to use a web browser and search engine
- Able to use a word processing program and spreadsheet program for assignments as needed
- Able to install software as required for accessing course materials, including browser plug-ins such as Adobe Flash player, Adobe PDF reader, etc.
- Able to access Desire2Learn (D2L)
  - Student training videos and print materials can be found at http://www.clayton.edu/cjd/d2lstudenttraining
You can gain access to Desire2Learn by signing into the SWAN portal and selecting “D2L” on the top right side. If you experience any difficulties with Desire2Learn, please e-mail or call The HUB at TheHub@mail.clayton.edu or (678) 466-HELP.

Students who do not have the required skills should go to the HUB and/or Student Software Support Services for training and help. Your instructor is not able to provide this training. Assignments may require use of your computer and an inability to complete an assignment due to a lack of the above (or other general computer issues) will not be an acceptable excuse.

**Computer/tablet and Cell Phone Policy:**
Laptop computers and tablets will not be used during lab. You will need internet access to download and print the lab protocol and worksheet before each class meeting. The use of laptop computers during lab is at the discretion of the instructor.

Turn off all cell phones, pagers, tablets, etc. upon entering the classroom. No electronic devices may be out or in use during laboratory class or exams. Cell phone use during class is disrespectful and distracting to the instructor and other students. Any student using their cell phone during class (ringing, talking, or sending/receiving text messages) may be asked to leave the class and forfeit his or her lab grade for that day.

**Student Learning Outcomes:**
- **General education outcomes:** The following link provides the Clayton State University Core Curriculum outcomes (see Area D):
  - [http://www.clayton.edu/Portals/5/core_curriculum_outcomes_clayton.pdf](http://www.clayton.edu/Portals/5/core_curriculum_outcomes_clayton.pdf)

- **Biology outcomes:**
  - BIOL1107L supports outcomes 1, 2, 4, and 5 of the biology major:
    - Outcome 1. Knowledge of the basic principles of major fields of biology.
    - Outcome 2. Mastery of a broad range of basic lab skills applicable to biology.
    - Outcome 4. Ability to communicate orally and in writing in a clear concise manner.
    - Outcome 5. Ability to collect, evaluate, and interpret scientific data, and employ critical thinking skills to solve problems in biological science and supporting fields.

**Teacher Education Standards:**

The content of this course syllabus correlates to education standards established by national and state education governing agencies, accrediting agencies and learned society/professional education associations. Please refer to the course correlation matrices located at the following website: [http://www.clayton.edu/teachered/standardsoutcomes](http://www.clayton.edu/teachered/standardsoutcomes)
Conceptual Framework:
The mission of the Teacher Education Unit is to prepare professional educators who engage in *reflective practice* and who are *competent, caring, committed, collaborative, culturally responsive*, and prepared to teach diverse learners in an ever-changing society.

**Operation Study:** At Clayton State University, we expect and support high motivation and academic achievement. Look for Operation Study activities and programs this semester that are designed to enhance your academic success such as study sessions, study breaks, workshops, and opportunities to earn Study Bucks (for use in the University Bookstore) and other items.

**Instructor Information:**

**Dr. Jere Boudell (CRN 80677)**
Office: LDSC 135 G
Phone: (678) 466-4772
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Internet Address: [http://faculty.clayton.edu/jboudell](http://faculty.clayton.edu/jboudell)
Office hours: [http://faculty.clayton.edu/jboudell/schedule](http://faculty.clayton.edu/jboudell/schedule)

**Dr. Diane Day (80678, 80679)**
Office: LDSC 135 M
Phone: (678) 466-4794
Email: dianeday@clayton.edu
Internet address: [http://faculty.clayton.edu/dday2](http://faculty.clayton.edu/dday2)
Office hours: [http://faculty.clayton.edu/dday2](http://faculty.clayton.edu/dday2)

**Class Meetings**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Section</th>
<th>Days</th>
<th>Times</th>
<th>Building</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>80434</td>
<td>01</td>
<td>M</td>
<td>9:00 am - 11:50 am</td>
<td>NBS</td>
<td>120</td>
<td>Day</td>
</tr>
<tr>
<td>80360</td>
<td>02</td>
<td>W</td>
<td>11:00 am – 1:50 pm</td>
<td>NBS</td>
<td>120</td>
<td>Boudell</td>
</tr>
</tbody>
</table>

**Textbook Information and Lab Supplies:**

**Required text:** Custom lab manual available in the CSU bookstore.


**Lab Supplies:** Laboratory Notebook: dedicated 3-ring binder
Recommended supplies:
It is recommended that you bring colored pencils/markers/calculators to class because a number of laboratories require you to make a graph and calculate data

Evaluation:

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Lab Practical Exams @ 50 points</td>
<td>100</td>
</tr>
<tr>
<td>Lab reports, Quizzes, Pre-lab assignments, Lab notebook, &amp; other graded work*</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
</tr>
</tbody>
</table>

**Class assignments may vary between instructors, but will typically include work done out of class as well as some items completed in class. It may also include points for attendance and participation during scheduled lab activities. If points are given for attendance, then absent students lose these points automatically (with a valid excuse, those points won't count in your total). Students who are present but who do not participate in an activity will receive an automatic zero for these points as well.

**Total points will vary depending on the assignments given by the individual instructors.
Lab Report Information

Grading:
Your final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 - 100%</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89.9999%</td>
</tr>
<tr>
<td>C</td>
<td>70 – 79.9999%</td>
</tr>
<tr>
<td>D</td>
<td>60 – 69.9999%</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
</tr>
</tbody>
</table>

Mid-term Progress Report:
Laboratory courses do not have a mid-term grade. Students may choose to withdraw from the course and receive a grade of "W." Students pursuing this option must fill out an official withdrawal form, available in the Office of the Registrar, or withdraw on-line using the Swan by mid-term, which occurs on October 7, 2016. Instructions for withdrawing are provided at this link. The last day to withdraw without academic accountability is Friday, Oct. 7, 2016.

Pre-lab objectives must be completed before coming to lab.

Tentative Course Schedule*:
The course schedule is listed below. Be sure to check the schedule often for changes in the due
Please note that the schedule is tentative and subject to change. Due dates for assignments may be changed at the instructor's discretion. You are responsible for keeping track of due dates and turning in your work when it is required.

<table>
<thead>
<tr>
<th>Week Of</th>
<th>Lab Topic</th>
<th>Materials</th>
</tr>
</thead>
</table>
| Aug 15  | Safety & Introduction | Notebook  
Bring your laptop to lab |
| Aug 22  | Scientific Investigation | Scientific Investigation Protocol  
Pre-lab objectives  
Lab objectives  
Data sheets |
| Aug 29  | Modeling the Chemistry of Water | Chemistry of Water  
Pre-lab objectives  
Worksheet |
| Sep 5   | NO LABS THIS WEEK: Labor Day | |
| Sep 12  | Microscopes and Cells | Microscopes and Cells  
Pre-lab objectives  
Lab objectives |
| Sep 19  | Diffusion & Osmosis | Diffusion and Osmosis  
Pre-lab objectives  
Lab objectives  
Data sheets  
Lab report guidelines  
Lab report rubric  
Print rubric and turn in with lab report.  
Use the lab report guide to write a lab report. |
| Sept 26 | Enzymes & Protein Folding | Enzymes and Protein Folding  
Pre-lab objectives  
Lab objectives  
Data sheets  
Protein folding worksheet |
| Oct 3   | **Lab Practical I (Labs 1 – 5)**  
**FRIDAY October 7th**  
LAST DAY TO WITHDRAW AND RECEIVE A “W” | **LAB PRACTICAL 1: All labs prior to the midterm** |
| Oct 10  | NO LAB THIS WEEK/Fall Break | |
| Oct 17  | Cellular Respiration & Fermentation | Cellular Respiration & Fermentation  
Pre-lab objectives  
Lab objectives  
Data sheets |
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 24</td>
<td>Photosynthesis</td>
<td>Photosynthesis Pre-lab objectives Lab objectives Data sheets Lab hints Lab report guidelines Lab report rubric Print rubric and turn in with lab report. Use the lab report guide to write a lab report.</td>
</tr>
<tr>
<td>Oct 31</td>
<td>Mitosis and Meiosis</td>
<td>Mitosis and Meiosis Mitosis review Pre-lab objectives Lab objectives</td>
</tr>
<tr>
<td>Nov 7</td>
<td>Corn Genetics</td>
<td>Corn genetics Bring your textbook, lab manual, and a calculator to lab Pre-lab/Lab objectives Report sheet</td>
</tr>
<tr>
<td>Nov 14</td>
<td>DNA &amp; Gene Expression; Molecular Biology</td>
<td>DNA and Gene Expression Bring your textbook to lab Pre-lab DNA worksheet Gene expression worksheet Molecular biology: Pre-lab Worksheet Marker and plasmid map</td>
</tr>
<tr>
<td>Nov 21</td>
<td>NO LAB THIS WEEK/Thanksgiving</td>
<td></td>
</tr>
<tr>
<td>Nov 28</td>
<td>Lab Practical II (Labs 5 - 10)</td>
<td>LAB PRACTICAL 2 (All labs since the midterm)</td>
</tr>
</tbody>
</table>

**CLASSROOM REGULATIONS AND POLICIES:**

Students must abide by policies in the [Clayton State University Student Handbook](#), and the [Basic Undergraduate Student Responsibilities](#).

1. **Attendance is required.** Attendance will be taken at the beginning of each lab period. Students who enter the lab after attendance has been taken will be considered tardy. Entering lab late is considered by the university as disruption of the classroom environment. People who are chronically late will be turned in for disruption of class. If
you are absent from a lab, you are still responsible for the missed material for exams, quizzes, notebook, lab report, etc. You cannot receive any points for any work pertaining to the lab that was missed (quizzes, assignments, etc). Students who do not attend regularly generally do not do well in the course. **If you miss three or more laboratory classes, you will receive an institutional Withdrawal.**

2. **Students with a valid excuse may attend another lab section with permission of BOTH instructors.** This is only available to those students who have a valid, written excuse. The only absences that are excusable are for illness (requiring a doctor’s note), accident (requiring note from the police), and legal reasons (requiring a note from the judge), Clayton State athletic event (must be verified by the coach/athletic director) and work obligations outside of the ordinary (requiring a note from your boss). These notes MUST be original, signed documents that include date and time. I will not accept photocopies or unsigned documents. The following are examples of absences that are NOT excusable: travel (including leaving for break early or coming back late) or any type of appointment (doctor, dental, eye, etc. You know when your class meets, don’t make an appointment during that time).

3. **Exams start at the beginning of class.** The instructor may permit a student to begin late if the excuse is reasonable. Students who are more than 10 minutes late will not be allowed to begin the exam. **There are no make-up exams.** With a valid excuse (see #2 above) you may attend another section with the permission of both instructors. All students are required to take exam 2.

4. **Quizzes may be given at the beginning of class.** Students who are late may use whatever time is left after the quiz has begun to take the quiz. However, no extra time will be allotted to complete the quiz. **There are no make-up quizzes.**

5. **Assignments are due at the beginning of class.** No exceptions. Assignments may be turned in up to 1 week late with a 10% deduction for each day it is late. **You cannot turn in assignments from a lab you missed.** If you have a written excuse from a competent authority (doctor, judge, etc.), the missed points for the laboratory will not count against you. See #2 above for acceptable excuses. **Printing problems are not an acceptable excuse for submitting work late.**

6. **Keeping a lab notebook is required.** For each lab you are responsible for completion of the pre-lab and post-lab objectives in your notebook. Pre-lab objectives should be completed for that week's lab prior to coming to lab. Post-lab objectives should be begun during the current lab and finished at home and should be in the lab notebook by the following lab period. Lab notebooks will be checked for completion. You are responsible for printing the pre- and post-lab objectives and bringing them to lab each week. The notebooks will be excellent study guides for the practical exams.

7. **No talking while the instructor or another student is talking.** Students repeatedly violating this policy will be asked to leave the classroom for being disruptive.

8. **Computers are for note-taking, research, or other class related activities only.** Students using them for surfing the internet, checking email, playing games, etc., will be asked to turn them off. On subsequent offenses, the student may be asked to leave the classroom for being disruptive.

9. **Cell phones must be turned off and put away during the laboratory.** The only time a cell phone can be out or in your hands is if your instructor permits it. Texting, talking, or surfing the net, or any other use of your cell phone during class is a violation of the university policy of disruption of class. Repeated violators will be turned in to the Office of
Community Standards. Leaving the lab to take phone calls is also a violation of the university policy.

10. **Visitors are not permitted without the instructor’s permission.** Children are not allowed in the classroom at any time.

11. **No form of academic dishonesty will be tolerated in this course.** The most common forms are cheating and plagiarism, but any type of activity that is considered dishonest by reasonable standards will constitute academic dishonesty. The minimum penalty is a grade of zero on the work involved. The maximum penalty is expulsion from the university. Be aware that students found in violation of the university’s academic dishonesty code have lost scholarships, athletic eligibility, and/or their U.S. student visa (if an international student). All forms of academic dishonesty will be reported to the Office of Student Affairs for investigation. Judicial procedures are described at [http://adminservices.clayton.edu/judicial/](http://adminservices.clayton.edu/judicial/).

Cheating/plagiarism in **any form** will not be tolerated; all work that you turn in **must** be in your own words and **must** be your own work. You may work in groups in the lab; however, all work turned in must be your own. You **may not** copy from you partner. If your brainpower did not generate what you turn in, it is considered cheating. Falsifying data from an experiment, copying the work of another person, allowing another person to do your assignment, allowing another student to copy your work, working in a group on a graded item, copying or closely paraphrasing referenced sources or another person, using anything but your brainpower on an exam, quiz, lab practical, lab report, etc.

12. **No form of disruptive behavior will be tolerated in this class.** While a variety of behaviors can be disruptive in a classroom setting, more serious examples include consistently entering late and leaving early, belligerent, abusive, profane, and/or threatening behavior. A student who fails to respond to reasonable faculty direction regarding classroom behavior and/or is found to be repeatedly disruptive while participating in classroom activities may be dismissed from class. A student who is dismissed is entitled to due process and will be afforded such rights as soon as possible following dismissal. If found in violation, a student may be administratively withdrawn and may receive a grade of WF. A more detailed description of examples of disruptive behavior and appeal procedures is provided at: [http://www.clayton.edu/Portals/5/DisruptiveClassroomBehavior.pdf](http://www.clayton.edu/Portals/5/DisruptiveClassroomBehavior.pdf)

Students dismissed from a lesson will leave the classroom immediately or may be subject to additional penalties. Dismissed students are responsible for any course material or assignments missed. Students dismissed from a course have the right to appeal the dismissal to the department head responsible for the course. Appeals beyond the department head may also be pursued. If no appeal is made or the appeal is unsuccessful, the student will receive a grade of WF (withdrawal – failing) regardless of the current grade in the course.

Conditions attributed to physical or psychological disabilities are not considered as a legitimate excuse for disruptive behavior.

Changes or additions to this syllabus, including reading, exam schedule, grading, and course policies can be made at the discretion of the instructor at any time.