BIOL 1107L - Principles of Biology I Laboratory
Course Syllabus – Spring 2013

Individuals with disabilities who need to request accommodations should contact the Disability Services Coordinator, Student Center 214, 678-466-5445, disabilityservices@mail.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.

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 GeorgiaVIEW/Desire2Learn
  - Student training videos and print materials can be found at http://www.clayton.edu/cid/d2lstudenttraining
  - You can gain access to Desire2Learn by signing into the SWAN portal and selecting “GaVIEW” 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 and Cell Phone Policy:**
Laptop computers 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, etc. when 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 web site: [http://a-s.clayton.edu/teachered/Standards%20and%20Outcomes.htm](http://a-s.clayton.edu/teachered/Standards%20and%20Outcomes.htm)

**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. Paul Guy Melvin
Office: NBS 150
Phone: (678) 466-4789
Email: Paulmelvin@clayton.edu
Internet address: http://faculty.clayton.edu/pmelvin
Office hours: http://faculty.clayton.edu/pmelvin/currentschedule

Prof. Nikki Sawyer
Office: NBS 160
Phone: (678) 466-4787
e-mail: NikkiSawyer@clayton.edu
Internet address: http://faculty.clayton.edu/nsawyer2
Office hours: Tuesdays 9-11 am, Thursdays 8-11 am, Fridays 9-11 am, and by appointment

Class Meetings

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Section</th>
<th>Days</th>
<th>Time</th>
<th>Building</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>24382</td>
<td>01</td>
<td>M</td>
<td>9:00 AM - 11:50 AM</td>
<td>NBS</td>
<td>123</td>
<td>N. Sawyer</td>
</tr>
<tr>
<td>24398</td>
<td>02</td>
<td>M</td>
<td>12:35 PM - 3:25 PM</td>
<td>NBS</td>
<td>123</td>
<td>P. Melvin</td>
</tr>
<tr>
<td>24399</td>
<td>03</td>
<td>T</td>
<td>8:15 AM - 11:05 AM</td>
<td>NBS</td>
<td>123</td>
<td>N. Sawyer</td>
</tr>
<tr>
<td>24405</td>
<td>04</td>
<td>T</td>
<td>11:15 AM - 2:05 PM</td>
<td>NBS</td>
<td>123</td>
<td>P. Melvin</td>
</tr>
</tbody>
</table>

Textbook Information and Lab Supplies:

Required text: Custom lab manual available in the CSU bookstore.
Lab Supplies: Laboratory Notebook
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 each</td>
<td>100</td>
</tr>
<tr>
<td>2 Lab Reports @ 20 point each</td>
<td>40</td>
</tr>
<tr>
<td>Lab Quizzes</td>
<td>30</td>
</tr>
<tr>
<td>Attendance/Class Participation</td>
<td>20</td>
</tr>
<tr>
<td>Lab Notebook Checks</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
</tr>
</tbody>
</table>
Lab Report Information

Lab Assignments

Grading:
Your final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
<th>Point Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 - 100%</td>
<td>180-200</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89%</td>
<td>160-179</td>
</tr>
<tr>
<td>C</td>
<td>70 - 79%</td>
<td>140-159</td>
</tr>
<tr>
<td>D</td>
<td>60 - 69%</td>
<td>120-139</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
<td>&lt;120</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 March 1. Instructions for withdrawing are provided at this link.

The last day to withdraw without academic accountability is Friday, March 1, 2013.

Tentative Course Schedule*

<table>
<thead>
<tr>
<th>WEEK OF</th>
<th>Lab Topic</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 7</td>
<td>NO LAB THIS WEEK&lt;br&gt;&lt;br&gt;DOWNLOAD LABORATORY MATERIALS FOR THE UPCOMING LABS</td>
<td>Scientific Investigation&lt;br&gt;Pre-lab objectives&lt;br&gt;Lab objectives&lt;br&gt;Data sheets</td>
</tr>
<tr>
<td>January 14</td>
<td>Introduction &amp; Lab Safety&lt;br&gt;Scientific Investigation</td>
<td></td>
</tr>
<tr>
<td>January 21</td>
<td>NO LAB THIS WEEK/MLK HOLIDAY&lt;br&gt;&lt;br&gt;DOWNLOAD LABORATORY MATERIALS FOR THE UPCOMING LABS</td>
<td></td>
</tr>
<tr>
<td>January 28</td>
<td>Modeling the Chemistry of Water</td>
<td>Chemistry of Water&lt;br&gt;Pre-lab objectives&lt;br&gt;Worksheet</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>February 4</td>
<td>Microscopes and Cells</td>
<td></td>
</tr>
<tr>
<td>February 11</td>
<td>Diffusion &amp; Osmosis</td>
<td>Pre-lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data sheets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab report guidelines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab report rubric--Print and turn in with lab report. Use the lab report guide to write a lab report.</td>
</tr>
<tr>
<td>February 18</td>
<td>Enzymes &amp; Protein Folding</td>
<td>Pre-lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data sheets</td>
</tr>
<tr>
<td>March 4</td>
<td>SPRING BREAK – NO LABS</td>
<td></td>
</tr>
<tr>
<td>March 11</td>
<td>Cellular Respiration &amp; Fermentation</td>
<td>Pre-lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data sheets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab hints and diagrams</td>
</tr>
<tr>
<td>March 18</td>
<td>Photosynthesis</td>
<td>Pre-lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data sheets</td>
</tr>
<tr>
<td>March 25</td>
<td>Mitosis and Meiosis</td>
<td>Mitosis review</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-lab objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab objectives</td>
</tr>
</tbody>
</table>
| April 1 | Corn Genetics | Corn genetics  
Bring your textbook, lab manual, and a calculator to lab  
Pre-lab/Lab objectives  
Report sheet |
| April 8 | DNA and Gene Expression; Molecular Biology | 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 |
| April 15 | Lab Practical II | LAB PRACTICAL 2 (All labs since the midterm) |

*This schedule is tentative and may change at the discretion of the instructor.

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.

**CLASSROOM REGULATIONS AND POLICIES:**

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

**ATTENDANCE POLICIES:**

**Attendance is required.** Attendance will be taken at the beginning of each lab period and will count as part of your course grade. For every lab section you attend, you will earn 2 points, for a total of 20. At the beginning of each class, an attendance sheet is placed on the instructor’s bench for students to sign to record attendance. Students are responsible for making sure they sign the attendance sheet each class period. If you are absent from a lab, you are still responsible for the missed material for exams, quizzes, notebook, lab report, etc. You cannot get 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.

**Prompt attendance** is required for all laboratory periods. A student arriving more than 15 minutes late for lab is considered absent from lab and will earn 0 attendance points for that day. For any excuse to be "acceptable", you must provide me with an original (no photocopies) of a document from a competent authority (doctor or other healthcare provider, a subpoena, jury summons, etc.). For this purpose, a note from your parents is NOT acceptable. The excuse must specifically indicate the dates that are to be excused, must be presented upon the first class day that the student returns to school, and makeup arrangements must be
made at that time. **Furthermore, quizzes and lab practicals begin at the start of class and missing a quiz due to tardiness will be handled in the same manner as if the student were absent.**

You must bring the excuse within one week of the absence. Without a valid excuse, a grade of zero points will be assigned for the missed laboratory and quiz, if applicable. You cannot turn in assignments from a lab you missed. **Missed laboratories cannot be made up.** If a valid excuse is provided, the missed laboratory will not count in calculating the course grade. This means that other laboratory assignments will be responsible for a greater weight in determining the course final grade. If you miss lab, you are still responsible for the lab material on the lab practical.

**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), and work obligations outside of the ordinary (requiring a note from your boss). 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).

**There are NO makeups for lab practical exams.** If you have an excused absence for a date when a lab practical was given, those points will not be considered in calculating your grade (however, this means that the other graded work will be responsible for a greater weight in determining your final grade). **You are only allowed ONE excused absence from a lab practical.** If you miss more than one practical with an excused absence, you will be expected to ask for a hardship withdrawal, since the lab practicals count for a majority of the class points.

**COURSEWORK POLICIES:**

**You must come prepared for each lab.** Make sure you read the material before coming to class. Answer pre-lab objectives before coming to class (see lab notebook policy). Quizzes will be given over the reading material at the discretion of the instructor. You are expected to prepare for the current week's exercise prior to lab so that you will already be familiar with the topic at hand. This includes reading the information in the lab manual and any handouts provided by the instructor. This will enable you to work through the lab on your own, asking the instructor when you have questions.

**Students are expected to attend lab for 2 hours and 50 minutes.** Please do not schedule any appointments, events, etc. before the ending time of lab.

In most laboratories you will be working as part of a lab group. You are expected to collaborate freely and participate in the work of the group. You may discuss any aspect of the lab with other members of your lab group or of the lab section. You are encouraged to compare results with your lab partners and to discuss possible sources of error. **However, the laboratory report is INDIVIDUAL work.** You may not copy the work of any other person. You may not copy files, diagrams or text from any other person.

Lab exercises are **due at the beginning of lab on the assigned date.** Any assignment that is not turned in at the beginning of lab period is considered late. There is a 20% per school day (M-F) penalty for late lab reports. Lab reports will not be accepted more than one week after they are due. Electronic submission of assignments is only allowed if the instructor specifically permits it. If it was not permitted, electronic submissions will not be accepted and your work will be considered late, losing points until the instructor receives a printed copy of the assignment. **Printing problems are not an acceptable excuse for submitting work late.** Under NO
circumstances will assignments be accepted more than one week after they are due or after the graded work has been returned to the class, whichever is sooner.

**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 **randomly** 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.

Specific policies on practicals and quizzes will be provided on the day of the practical/quiz itself, but several rules apply to all testing situations:

1. All electronic devices including cell phones, palm pilots, pagers, calculators, MP3 players, etc. are not allowed during exams or quizzes, unless specifically permitted by the instructor. During such activities, these devices are not permitted to be in your possession **at all** (which means they cannot be clipped to your belt, in your pocket, etc.). Possession and/or use of these items during an exam or quiz will result in an **automatic** zero on the graded activity, and may result in a charge for academic misconduct.
2. If a cell phone or other electronic device makes noise (by ringing, buzzing, etc.) and disrupts the testing environment, even if it is not on your person, the instructor will penalize the responsible student(s) by taking points from their score.

**ACADEMIC INTEGRITY:**

Cheating 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. If your brainpower did not generate what you turn in, it is considered cheating. Examples of cheating include, but are not limited to: 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, using anything but your brainpower on an exam, etc. **Misconduct in any form will result in a zero on the assignment for all involved students and academic misconduct forms will be filed with the Office of Student Conduct for any violation.** Judicial procedures are described on the webpage of the Office of Student Conduct.

**E-MAIL:**

Each student must activate his/her e-mail account at Clayton State University. The class list serve will be the only method for communicating with the class by e-mail. Important announcements will be sent to the class on the class list serve. You should also check course web pages regularly for new postings. Handouts given in class and other important items will be posted on the web page for this class.

Communication from personal email accounts (e.g., Yahoo, gmail, etc.) is acceptable, as long as the following requirements are met:

1. You clearly identify yourself in the body of the email
2. You clearly identify which class you are writing to me about
3. The subject line of your email is suitably descriptive that I can tell it isn't Spam or a virus (e.g., do not send emails with a subject of "Hello", etc.)
4. You do not ask me specific questions concerning grades, as they cannot be discussed on such email accounts.

Emails that do not meet these requirements will not receive a response.
OTHER GENERAL POLICIES:

• General data from this course may be used by the instructor for research on improved methods of teaching, leading to presentation or publication. Data that would be used for this purpose would consist of anonymous data, with no identifying information from particular students (e.g., the overall average for the course, NOT grades from particular students). If you do not wish for your instructor to include your data in such studies, fill out the withdrawal of consent form and bring it to your instructor.

• Visitors, including children, are not allowed in the laboratory.

• Proper attire and footwear must be worn in the laboratory at all times. Inappropriate items include, but are not limited to: shorts or skirts above the knee and shoes that do not cover the feet (e.g., sandals). Students should not wear hanging jewelry and long hair should be tied back during lab. Students who come to lab without appropriate clothing or footwear will NOT be permitted to take part in lab and will forfeit any points for that day.

• No smoking, other use of tobacco, eating, or drinking is permitted at any time in the laboratory.

• **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 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.