BIOL 3200 – Cell and Molecular Biology
Course Syllabus – Fall 2016

Individuals with disabilities who need to request accommodations should contact the Disability Services Coordinator, Student Center 255, (678) 466-5445, disabilityservices@mail.clayton.edu.

COURSE DESCRIPTION:

COURSE NUMBER AND TITLE
BIOL 3200 – Cell and Molecular Biology

CREDIT HOURS
3.0 semester credit hours

CATALOG DESCRIPTION
This course explores the basic unit of life. Students will examine the cell from both structural and functional viewpoints. The fundamentals of cellular chemistry, life cycles, and regulations will be discussed. Seminal experiments in cell biology will be examined, and current studies in primary research journals will be addressed. Students will gain an understanding of how contemporary methods in molecular biology are being used to study cells.

COURSE PREREQUISITES AND CO-REQUISITES
Prerequisites:
BIOL 1107/L with a minimum US grade of C
BIOL 1108/L with a minimum US grade of C
CHEM 2412/L (can be taken concurrently)

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/ITP-Choice/Notebook-Computer-Policy.

COMPUTER SKILL PREREQUISITES:

- Able to use Windows™ or other computer operating system
- Able to use Microsoft Word™ or other word processing program
- Able to send and receive e-mail using Outlook™, Outlook Express™, or other e-mail program (Only use your CSU e-mail account to communicate academic information to your instructor)
• Able to attach and retrieve attached files via e-mail
• Able to use a Web browser
• Able to download files from a website to your computer
• Able to use Microsoft PowerPoint™
• Able to use D2L online course management software (Use of D2L is a course requirement)

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 will 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.

IN-CLASS USE OF STUDENT NOTEBOOK COMPUTERS:

Student notebook computers will be used during some class meetings in this course. Computers will also be required to access course materials, work on assignments outside of class, and to communicate with your instructor. In addition, instructors reserve the right to forbid computer use to particular students if those students are found using them for purposes not related to the course (e.g., web surfing, email, instant messaging, etc.). This same limitations apply to the use of other electronic devices in class (including, but not limited to cell phones, personal digital assistants, etc.). Violation of these rules may result in loss of points, so check with your instructor to determine what is acceptable.

Desire2Learn (Online Classroom):

On-line activity will take place in Desire2Learn (D2L), the virtual classroom for the course.

You can gain access to D2L by signing into the SWAN portal and selecting “D2L” on the top right side. If you experience any difficulties in Desire2Learn, please e-mail or call the HUB at TheHub@mail.clayton.edu or (678) 466-HELP. You will need to provide the date and time of your problem, your SWAN username, the name of the course that you are attempting to access, and your instructor’s name.

LEARNING OUTCOMES:

COURSE LEARNING OUTCOMES:

• To learn the concepts behind bioinformatics tools and to learn how to use tools in bioinformatics to study the phylogeny, expression, structure, and function of genes and proteins.

PROGRAM LEARNING OUTCOMES:

Biology Outcomes

• Identify and/or describe the biological core concepts: evolution; structure and function; information flow, exchange, and storage; pathways and transformations of energy and matter; and systems.
• Formulate hypotheses and collect, evaluate, and interpret scientific data to solve problems in biological science and supporting fields.
• Apply quantitative reasoning, modelling and simulations, and laboratory skills to answer questions in the biological sciences.
• Effectively communicate scientific ideas to others inside and outside of the biology discipline.
• Identify and describe the impact of biological science on the environment and society.
• Collaborate with other students inside and outside of the biology discipline.
INSTRUCTOR INFORMATION:

Dr. Nikki T. Sawyer
Office: LDSC 135J
Phone: (678) 466-4787
e-mail: NikkiSawyer@clayton.edu
Internet address: http://faculty.clayton.edu/nsawyer2
Office hours: Mondays: 10:00 am – 12:00 pm
Tuesdays and Wednesdays: 2:30 pm – 4:00 pm
Thursdays: 10:00 am – 11:00 am
Other times may be available by appointment (e-mail Dr. Sawyer)

CLASS INFO:

<table>
<thead>
<tr>
<th>Section</th>
<th>CRN</th>
<th>Days</th>
<th>Times</th>
<th>Room</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80669</td>
<td>TR</td>
<td>8:25 am – 9:40 am</td>
<td>LDSC 155</td>
<td>Sawyer</td>
</tr>
</tbody>
</table>

REQUIRED MATERIALS:

Required Text and Materials:

- WileyPLUS Learning Space access (www.WileyPLUS.com)
- There are two options in the bookstore (you only need to purchase one of these options):
  - Karp 8e paperback text plus WileyPLUS access (ISBN 9781119231516)
  - WileyPLUS access with includes the eText (can be purchased at www.wileyPLUS.com)
- Students are encouraged to use PriceLoch.com to comparison shop for textbooks

EVALUATION:

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Assignments</td>
<td>120</td>
</tr>
<tr>
<td>Exams</td>
<td>400</td>
</tr>
<tr>
<td>Group Assignments*</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
</tr>
</tbody>
</table>

* Some portions of the group assignments will be completed in class. Absence from class on those days will result in the loss of those points. **You cannot make-up points from an in-class assignment**, but if you have an **excused** absence from that class period, those points will not count in your total.
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>540 – 600</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89%</td>
<td>480 – 539</td>
</tr>
<tr>
<td>C</td>
<td>70 - 79%</td>
<td>420 – 479</td>
</tr>
<tr>
<td>D</td>
<td>60 - 69%</td>
<td>360 – 419</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
<td>&lt; 360</td>
</tr>
</tbody>
</table>

Your grade will be calculated by taking the total number of points you earned, dividing by the total number of points possible (based on the total possible value of all exams, quizzes, assignments, etc.), and multiplying by 100 to obtain the percentage.

\[
\text{Points Earned} \times \frac{100}{\text{Points Possible}} = \text{Final Course Grade}
\]

MID-TERM PROGRESS REPORT:

The mid-term grade in this course reflects approximately 30% of the entire course grade. This grade will be posted by October 4th. **The last day to withdraw from lecture is Friday, October 7th, 2016.** Based on the mid-term grade, students may choose to withdraw from the course and receive a grade of “W”. Students pursuing this option must withdraw from the course using the DUCK or filling out an official withdrawal form, available in the Office of the Registrar, by mid-term, which occurs **October 7, 2016.** Instructions for withdrawing are provided at this link. It is each student’s responsibility to keep up with their academic progress. If you have any questions as to whether or not you are making satisfactory progress, contact your instructor **BEFORE October 7, 2016.**

**The last day to withdraw without academic accountability is Friday, October 7, 2016.**
**TENTATIVE COURSE SCHEDULE**: Dr. Sawyer will also post a Detailed Course Schedule on D2L showing all assignment due dates and exact exam dates.

<table>
<thead>
<tr>
<th>Week Of</th>
<th>Topic</th>
<th>Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/15/16</td>
<td>Course Introduction</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Introduction to the Study of Cell and Molecular Biology</td>
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</tr>
<tr>
<td>8/22/16</td>
<td>Introduction to the Study of Cell and Molecular Biology</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Chemical Basis of Life</td>
<td>2</td>
</tr>
<tr>
<td>8/29/16</td>
<td>Chemical Basis of Life</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Techniques in Cell and Molecular Biology</td>
<td>18</td>
</tr>
<tr>
<td>9/6/16</td>
<td>Techniques in Cell and Molecular Biology</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Group Assignment #1</td>
<td></td>
</tr>
<tr>
<td>9/13/16</td>
<td>EXAM 1</td>
<td>1-2, 18</td>
</tr>
<tr>
<td></td>
<td>Structure and Function of the Plasma Membrane</td>
<td>4</td>
</tr>
<tr>
<td>9/19/16</td>
<td>Structure and Function of the Plasma Membrane</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Bioenergetics, Enzymes, and Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>9/26/16</td>
<td>Bioenergetics, Enzymes, and Metabolism</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Aerobic Respiration and the Mitochondrion</td>
<td>5</td>
</tr>
<tr>
<td>10/3/16</td>
<td>Aerobic Respiration and the Mitochondrion</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Group Assignment #2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Last Day to Drop w/o Academic Penalty: Friday, October 7th</td>
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</tr>
<tr>
<td>10/12/16</td>
<td>EXAM 2</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>10/17/16</td>
<td>Cell Signaling and Signal Transduction</td>
<td>15</td>
</tr>
<tr>
<td>10/24/16</td>
<td>Cell Division</td>
<td>14</td>
</tr>
<tr>
<td>10/31/16</td>
<td>Cancer</td>
<td>16</td>
</tr>
<tr>
<td>11/7/16</td>
<td>Group Assignment #3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EXAM 3</td>
<td>14, 15, 16</td>
</tr>
<tr>
<td>11/14/16</td>
<td>Cytoplasmic Membrane Systems</td>
<td>8</td>
</tr>
</tbody>
</table>
*This lecture schedule and lecture testing is tentative and may change at the discretion of the instructor. Tests may be given the week before or the week after the week listed here—or during the week predicted. Specific test dates will be announced approximately one week in advance in class. 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.

COURSE POLICIES:

General Policy:

Students must abide by policies in the Clayton State University Student Resource Handbook (part of the Academic Catalog and Student Handbook, and begins on page 6), and the Basic Undergraduate Student Responsibilities.

University Attendance Policy:

Students are expected to attend and participate in every class meeting. Instructors establish specific policies relating to absences in their courses and communicate these policies to the students through the course syllabi. Individual instructors, based upon the nature of the course, determine what effect excused and unexcused absences have in determining grades and upon students’ ability to remain enrolled in their courses. The university reserves the right to determine that excessive absences, whether justified or not, are sufficient cause for institutional withdrawals or failing grades.

Course Attendance Policy:

Attendance is required at all class meetings and will be checked at each class meeting with the student’s signature on the class roll or by using RollCall (CSU’s online attendance program). If you are absent from more than 50% of the classes this semester (excused or unexcused) you will be automatically withdrawn from the class. Come to class prepared.

Quizzes and tests will be given at the beginning of the class; if you arrive late, you may be permitted to take the quiz/exam as long as the materials have not been collected from the class. However, you will be required to turn in the assignment at the same time as the rest of the class - NO extra time will be given. Exceptions to this policy can be made only under extenuating circumstances and with a WRITTEN excuse or explanation for tardiness or absence.

In-class assignments will be completed during class time and an absence from that class period will result in a zero for that class assignment. If you have an acceptable excuse (see below), those points will not count in your grade. You are responsible for all the material that was covered during any missed class period. You will need to work with a classmate to get any notes that you missed.

Excusable Absence Policy:

For any excuse to be "acceptable", you must provide the instructor 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. Excuses will not be
accepted for routine procedures (checkups, teeth cleanings, eye exams, etc). Students should not schedule such appointments for class times.

Due to the difficulty of making up missed work, missed work will be graded as zero unless other arrangements were made with the instructor prior to the missed work.

There will be four exams, three regular exams and a final exam (comprehensive). Attendance is mandatory. If a student has an excused absence on exam day, those points will not be factored into the overall grade, meaning that the weight of the other exams will be higher. **No make-up exams will be given.** Without a valid excuse, a grade of zero points will be assigned.

You **cannot** have an excused absence from the Final Exam – if you are unable to take the Final Exam at the scheduled time, **and** you have a valid excuse, it is up to the instructor what option will be available to you. This will be based on the instructor’s schedule as well as the time when you are able to return to school after your absence. There are only two options:

1. You may be permitted to take a makeup version of the Final Exam.
2. You will need to take an Incomplete and take the Final Exam during the next semester you are enrolled at CSU. An Incomplete exam must be scheduled at the beginning of the next semester.

**NOTE:** **Excuses for graded assignments can only be applied if you were NOT present to take the assignment.** If you take the assignment, you cannot ask to not count that assignment in your grade after the fact. In such situations, you will receive the score you earned on the assignment. If you know of an extenuating circumstance, it is in your best interest to discuss it with your instructor ASAP.

**Assignment Policies:**

**Assignments** are due at the time and date provided by your instructor. Online assignments through WileyPLUS should be completed ahead of time in case of computer or internet problems. Having a computer or internet problem is not a valid excuse for missing an assignment, so complete your assignments in enough time to allow to unforeseen problems.

**Printing problems or other general computer issues are not an acceptable excuse for submitting work late and will result in a loss of points.**

**Exam Policies:**

**Exams and Quizzes** start at the beginning of class. Specific policies on exams will be provided on the day of the exam, but several rules apply to all testing situations:

1. All electronic devices including cell phones, palm pilots, pagers, MP3 players, etc. are not allowed during exams or quizzes, unless specifically permitted by the instructor. Calculators as described above may be used. During exams/quizzes, 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.

The **Final Exam** is comprehensive.

All examinations are closed book. NO student-produced study sheets, note cards, notes from class, electronic information, etc. may be used on exams. All bookbags, books, notebooks, papers, etc. will be placed along the walls on the sides of the room during examinations. During exams you may have only pen/pencil(s), eraser, and a calculator at your desk.
Academic Dishonesty:

Any type of activity that is considered dishonest by reasonable standards may constitute academic misconduct. The most common forms of academic misconduct are cheating and plagiarism. All instances of academic dishonesty will result in a grade of zero for the work involved. All instances of academic dishonesty will be reported to the Office of Community Standards. Judicial procedures are described in the Student Resource Handbook (beginning on page 19, in the section titled “Procedures for Adjudicating Alleged Academic Conduct Infractions”).

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 non-group graded item, copying or closely paraphrasing referenced sources, using anything but your brainpower on an exam, quiz, lab practical, 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 as described in the paragraph above.

Disruption of the Learning Environment:

Behavior which disrupts the teaching-learning process during class activities will not be tolerated. 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 behavior 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 this link (and in the Academic Catalog and Student Handbook, beginning on page 14).

Some common examples of disruptive behaviors which should be avoided are:

- Refusal to comply with faculty direction
- Monopolizing classroom discussions
- Talking when the instructor or others are speaking
- Failing to respect the rights of other students to express their viewpoints
- Constant questions or interruptions that interfere with the instructor’s presentation
- Creating excessive noise
- Use of electronic devices (pagers, iPods, MP3 players, or cell phones) in the classroom without the instructor’s approval
- Overt inattentiveness (e.g., sleeping or reading the paper in class)
- Inordinate or inappropriate demands for time or attention
- Routinely entering the class late or leaving early without instructor permission.
- Leaving and re-entering the class during lecture

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

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.

E-Mail Policy:

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 email. Important announcements will be sent to the class on the class list serve. You should also check D2L regularly for new postings. Handouts given in class and other important items will be posted on the course page for this class. Grades cannot be discussed via email due to privacy issues.
Communication from **personal email accounts** (e.g., Yahoo, gmail, etc.) is no longer acceptable due to privacy issues. **E-mails sent from a personal email account will not receive a response.**

**Other Policies:**

- Students must **read and abide by all course policies** as stated in this syllabus and on the first day of class.
- Changes or additions to this syllabus, including readings, exam dates, grading, and course policies can be made at the discretion of the instructor at any time. If such changes are made, they will be posted on the announcements section of the instructor’s web page, D2L, and/or announced in class.
- Visitors, including children, are not allowed in the classroom.
- No smoking or other use of tobacco is permitted at any time in the classroom.
- Snacks and drinks are allowed, within reason. If you make a mess, you are responsible for cleaning it up. Do not bring in foods that make a lot of noise (this includes bags that rattle noisily).
- **Electronic devices:** Turn off all cell phones, pagers, etc. when entering the classroom. **Cell phone use is NOT ALLOWED during lecture classes.** 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.
- 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.
- **Grades will not** be communicated by phone or e-mail. Graded material can only be picked up by the individual to whom it belongs.
- Issues associated with grades on assignments (disputes over points for a question, questions about grading keys, etc.) must be brought to the instructor’s attention in a timely manner. This means that such concerns must be brought to your instructor within **one week** of the assignment being returned to the class. Items that are not brought to the instructor in this time period will **NOT** be addressed.

**OPERATION STUDY:**

**Operation Study:** At Clayton State University, we expect and support high motivation and academic achievement. To foster a change in the perception of studying, to improve study habits, and hence to promote student success, several Operation Study activities and programs will be offered throughout the semester. Be on the lookout for study sessions, study breaks, workshops, and other opportunities to earn Study Buck Gift Cards (for use in the University Bookstore) and other items. [Use this link to find out more details.](#)

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.

**REMINDER:** The last day to withdraw without academic accountability is Friday, October 7, 2016.

_Last updated: 8/10/2016_