# Principles of Cell & Molecular Biology

**BIO130**

**Syllabus**

Section 002, MW 1:00-2:15 pm  
Ed & Gwen Cole STEM Bldg, Room 103

## Course Description

An introductory cell biology course. Topics include the structure of the cell and cell components, both eukaryotic and prokaryotic; the processes of DNA replication and gene expression, including protein processing and routing; photosynthesis, respiration and chemotrophy as means of energy production; and the cell cycle and its regulation.

**Prerequisites:**  
Successful completion of **CHE 133** and **CHE 133L** recommended prior to enrolling in this course.

**Credit(s): 3**

## Student Learning Outcomes

- Distinguish between prokaryotic and eukaryotic cells
- Identify major cell parts/components and describe their role
- Distinguish between macromolecules in structure & function
- List/diagram major inputs/outputs of photosynthesis & cellular respiration and explain how these processes are related
- Explain generation methods and importance of genetic diversity
- Interpret the information contained in DNA

## Instructor

Dr. Lindsay M. Porter  
lindsay.porter@sfasu.edu  
936.468.2232  
Miller Science Building  
Room 200  
Office Hours:  
Wed: 4:00 p - 5:30 p  
Fri: 10:00 a - 10:45 a  
Fri: 1:30 p - 2:45 p  
Fri: 4:00 p - 5:00 p  
Or by appointment

## Course Materials

*Recommended*  
*World of the cell*  
9th edition  
Jeff Hardin and Gregory Bertoni

**REQUIRED**  
Composition Notebook

Course activities
- Exams (4) including the final exam, all comprehensive in nature
- Activities
- Two research papers

Assessment Weighting
- Exam 1 10%
- Exam 2 15%
- Exam 3 15%
- Final Exam 40%
- Activities 10%
- Two Papers ea. 0.5%

Grading Policy
Final grades are calculated as a final percentage according to the information outlined in ‘Assessment Weighting.’

Grading Scale
- A = 90-100%
- B = 80-89.9%
- C = 70-79.9%
- D = 60-69.9%
- F = 0-59.9%

Final grades are final and are not ‘rounded up.’ Extra credit opportunities are not guaranteed but may be offered. However, no extra credit opportunities will be given to individual students or to any/all students after the final exam.

*If a student meets the qualifications, final letter grades may be adjusted to match letter grade earned on comprehensive final exam.

Attendance Policy
Students are expected to attend all classes and other course-related activities on a regular and punctual basis.

Course Evaluations
In accordance with the College of Sciences and Mathematics, and adopted by the Department of Biology the completion of an end-of-semester online student evaluation is required by all students enrolled in this course. Instructions and location of the course evaluations can be found on MySFA.

Classroom Incivility
All students are expected to conduct themselves in the classroom in a way that is not distracting to the instructor or to other students. I reserve the right to ask any student creating a distraction to leave the room.
Academic Integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

Definition of Academic Dishonesty

Withheld Grades

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Late assignments/papers: For assessments that count toward your course grade, the following late penalties will apply (hours/minutes as HH/MM):
- 00:01-23:59 past due = 11% deduction
- 24:00-47:59 past due = 21% deduction
- 48:00-71:59 past due = 31% deduction

Assessments three or more days (≥72 hours) late will not be accepted.

Other Important Notes

Exam conduct: Unless otherwise stated on exam day by the instructor, exams are ‘closed-book’ and no resources are allowed. Students looking at their phones, Apple watches, papers not handed out to all students as part of the exam, other students’ papers, or anything else that is not an authorized source for the exam will be assumed to be cheating, the student’s exam will be collected, no credit for any portion of the exam will be given, and the exam will be recorded.

Missed exams: If an exam is missed for any reason, the weighting of the missed exam will automatically be added to the final exam. Makeup exams are not offered.

Example: if a student misses Exam I, the student’s final exam weighting will change to 50% of the final grade instead of 40%.

Students with Disabilities

To obtain disability related accommodations alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.
### ***TENTATIVE/PROPOSED*** Course Schedule

The order and timing of the below topics is **subject to change** according to the pace of student learning, unplanned course interruptions, or other circumstances at the discretion of the instructor. It is possible, due to unforeseen circumstances, that material listed below is not covered, or that material not listed below is covered.

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 15(^{st})</td>
<td>Introduction to cells, cell types</td>
</tr>
<tr>
<td>2</td>
<td>Jan 22(^{nd})</td>
<td>Organelles</td>
</tr>
<tr>
<td>3</td>
<td>Jan 27(^{nd}), Jan 29(^{th})</td>
<td>Organelles, Macromolecules</td>
</tr>
<tr>
<td>4</td>
<td>Feb 3(^{rd}), Feb 5(^{th})</td>
<td>Macromolecules cont./Biochemistry, Exam I</td>
</tr>
<tr>
<td>5</td>
<td>Feb 10(^{th}), Feb 12(^{th})</td>
<td>Endomembrane and Cytoskeletal systems</td>
</tr>
<tr>
<td>6</td>
<td>Feb 17(^{th}), Feb 20(^{th})</td>
<td>Membranes, Membrane transport</td>
</tr>
<tr>
<td>7</td>
<td>Feb 24(^{th}), Feb 26(^{th})</td>
<td>Enzymes, Bioenergetics</td>
</tr>
<tr>
<td>8</td>
<td>Mar 2(^{nd}), Mar 4(^{th})</td>
<td>Exam II*</td>
</tr>
<tr>
<td>9</td>
<td>Mar 9(^{th}), Mar 11(^{th})</td>
<td>Spring Break</td>
</tr>
<tr>
<td>10</td>
<td>Mar 16(^{th}), Mar 18(^{th})</td>
<td>Cellular respiration</td>
</tr>
<tr>
<td>11</td>
<td>Mar 23(^{rd}), Mar 25(^{th})</td>
<td>Photosynthesis</td>
</tr>
<tr>
<td>12</td>
<td>Mar 30(^{th}), Apr 1(^{st})</td>
<td>DNA structure &amp; storage</td>
</tr>
<tr>
<td>13</td>
<td>Apr 6(^{th}), Apr 8(^{th})</td>
<td>DNA replication, &amp; repair</td>
</tr>
<tr>
<td>14</td>
<td>Apr 13(^{th}), Apr 15(^{th})</td>
<td>Gene expression, Exam III*</td>
</tr>
<tr>
<td>15</td>
<td>Apr 20(^{th}), Apr 22(^{nd})</td>
<td>Regulation of gene expression</td>
</tr>
<tr>
<td>16</td>
<td>Apr 27(^{th}), Apr 29(^{th})</td>
<td>Mutations, Inheritance</td>
</tr>
<tr>
<td>17</td>
<td>May 6(^{th})**</td>
<td>Final Exam: 1:30-4:00 PM**</td>
</tr>
</tbody>
</table>

*The actual date of exams will be according to the pace of student learning, coverage of material, or any other circumstances at the discretion of the instructor.

**The actual date of the final exam is the date listed in the University’s official Final Exam Schedule (which sometimes changes with short notice), found at the following link: [http://www.sfasu.edu/registrar/194.asp](http://www.sfasu.edu/registrar/194.asp)