Concepts of Biology  
BIO 121.005  
Fall 2017

Instructor: Dr. Josephine Taylor  
Department: Biology  
Email: jltaylor@sfasu.edu  
Phone: 468-2268; Please provide a local telephone number when requesting a return call.  
Office: S106  
Office Hours: 1:00 – 4:00 MW, 2:30 – 3:30 T, 2:30 – 4:00 R or by appointment  
Class meeting time and place: 1:00 – 2:15 TR, S233  
Text and Materials:  
(1) Campbell Essential Biology with Physiology, 5th edition, Simon, Reece & Dickey  
(2) Subscription to Top Hat for in-class responses (https://tophat.com/)  
Join Code: 167289  
SI Group: Leader Rachel Ballback; meets 4:00 – 4:50 MW in AARC Room E; rballback@yahoo.com

Course Description: A concepts-oriented course for the non-science major. Study of the origin of life, the cell, growth and reproduction, genetics and evolution.

Number of Credit Hours: 3

Program Learning Outcomes:  
There are no specific program learning outcomes for this major addressed in this course. It is a general education core curriculum course and/or a service course.

Texas Core Curriculum Objectives:  
Texas State Core Curriculum Objectives (COs) addressed by this course are:  
CO 1. Critical Thinking Skills: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.  
CO 2. Communication Skills: to include effective development, interpretation and expression of ideas through written, oral and visual communication.  
CO 3. Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.  
CO 4. Teamwork: to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Student Learning Outcomes:  
Students who complete Concepts of Biology will be able to:  
1. Explain the scientific method and critically evaluate scientific information (CO 1, 4).  
2. Identify the chemical basis for life and the characteristics that distinguish living things from inanimate matter (CO 1).  
3. Illustrate how genetic information is passed from parents to offspring, how this genetic information is expressed by cells, and how humans are utilizing this information for the benefit of society (CO 1, 3, 4).  
4. Classify the diversity of life forms from the species to kingdom level (CO 1).  
5. Analyze biological interactions that occur from the sub-cellular to the ecosystem level of organization (CO 1, 2, 3, 4).  
6. Discuss the role of evolution in the history of life on Earth (CO 1).
**Course Requirements:**

Concepts of Biology Lab (BIO 121L, 1 credit hour) is a co-requisite with BIO 121 Lecture. The lecture grade comprises 2/3 of the course grade, with the lab contributing 1/3.

Four 100 point major exams will be given in lecture. The fourth test is the final exam. Dates of exams are shown on the course calendar. Lecture exams will be objective in nature, consisting of matching, true/false, fill-in-the-blank, multiple choice, and diagram labeling questions that will be answered using a computer test form. Information from lecture notes, text chapters, and in-class discussion will be included on exams.

A series of questions will be asked during lecture each day using Top Hat (https://tophat.com/; Join Code: 167289). By correctly answering these questions you may earn a maximum of 100 points (i.e. 20% of the lecture grade). Responses may be submitted via a web browser, mobile device, or SMS/text messaging. Prepare by reviewing your notes, generating study aids, reading the text pages, attending the SI group, and asking questions of Dr. Taylor about any concepts you do not understand fully.

Participation in the on-line student evaluations for both BIO 121 lecture and BIO 121L is a mandatory course requirement. Failure to participate will result in a 1% reduction in lecture and laboratory grades. Instructions for meeting this requirement will be given towards the end of the semester

**Course Calendar:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Text pages</th>
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<tbody>
<tr>
<td>8-29</td>
<td>Tues course policies, intro to biology</td>
<td>4-9</td>
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<tr>
<td>8-31</td>
<td>Thur themes in biology, basic chemistry</td>
<td>10-18, 24-27</td>
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<tr>
<td>9-5</td>
<td>Tues water, pH, organic chemistry, carbohydrates</td>
<td>28-32, 38-42</td>
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<td>9-7</td>
<td>Thur lipids, proteins</td>
<td>43-48</td>
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<tr>
<td>9-12</td>
<td>Tues nucleic acids, cells</td>
<td>49-50, 56-61</td>
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<tr>
<td>9-14</td>
<td>Thur cellular organelles</td>
<td>62-67</td>
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<tr>
<td>9-19</td>
<td>Tues cellular organelles</td>
<td>68-70</td>
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<tr>
<td>9-21</td>
<td>Thur Lecture Exam I – covers all material since beginning of class</td>
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<tr>
<td>9-26</td>
<td>Tues membrane function, cell reproduction</td>
<td>83-86, 122-125</td>
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<tr>
<td>9-28</td>
<td>Thur mitosis, cancer</td>
<td>126-129</td>
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<td>10-3</td>
<td>Tues meiosis</td>
<td>130-140</td>
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<td>10-5</td>
<td>Thur Mendelian genetics</td>
<td>146-149, 153-157</td>
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<tr>
<td>10-10</td>
<td>Tues exceptions to Mendelian inheritance</td>
<td>158-164</td>
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<tr>
<td>10-12</td>
<td>Thur DNA, transcription, genetic code</td>
<td>172-181</td>
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<tr>
<td>10-17</td>
<td>Tues translation, mutations, viruses</td>
<td>182-191</td>
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<tr>
<td>10-19</td>
<td>Thur Lecture Exam II – covers all material since Exam I</td>
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<tr>
<td>10-24</td>
<td>Tues modern genetic technologies</td>
<td>198, 205-208, 218-225</td>
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<td>10-25</td>
<td>Wed Last Day to Drop With W</td>
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<tr>
<td>10-26</td>
<td>Thur the flowering plant body</td>
<td>606-615, 629-631</td>
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<td>10-31</td>
<td>Tues energy concepts</td>
<td>76-82, 92-93</td>
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<td>11-2</td>
<td>Thur cellular respiration</td>
<td>94-95, 100-103</td>
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<td>11-7</td>
<td>Tues photosynthesis</td>
<td>108-115</td>
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<tr>
<td>11-9</td>
<td>Thur Lecture Exam III – covers all material since Exam II</td>
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<tr>
<td>11-14</td>
<td>Tues classification, prokaryotic life</td>
<td>244, 271, 299-306</td>
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<tr>
<td>11-16</td>
<td>Thur protists, plants, fungi</td>
<td>307-310, 316-319, 328-332</td>
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<tr>
<td>11-28</td>
<td>Tues animals</td>
<td>338, 340-360</td>
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Grading Policy:
Your lecture average will be calculated as follows:

points earned on 4 exams & in-class questions
500 lecture points available X 100%

After receiving grades from the lab, your course average will be calculated as follows:

Lecture avg + Lecture avg + Lab avg
3
Course grades will be assigned as follows:
Course average of 90+% = A, 80 - 89% = B, 70 - 79% = C, 60 - 69% = D, Below 60% = F
You will receive the same letter grade for lecture (3 credit hours) and lab (1 credit hour).
There are no extra credit assignments in this course.

Attendance Policy:
The instructor will monitor attendance by means of an assigned seat (choose seats when you come to class on 8/31). Students must attend the entire lecture and answer all questions for the day to earn points for that session.
There are no makeup opportunities for in-class points, regardless of the reason for the absence.

Only students with an excused absence will be allowed to make up an exam. Makeup exams will be of a different format than the original test, consisting primarily of completion and short answer questions. Excused absences will be granted for: students participating in university sponsored events, serious illness, or a family emergency. A list of students to be absent from campus to attend various events is published and distributed to the faculty. Otherwise, you will need to bring written confirmation of illness or emergency from a doctor or family member to be granted an excused absence.
The office of the Dean of Student Affairs (dosa@sfasu.edu) can assist you in notifying your instructors should an emergency arise. University policy states that students with acceptable excuses will be permitted to make up work for absences to a maximum of 3 weeks of a semester (p. 46, General Bulletin). Students with unexcused absences will receive a 0 for missed exams.

Academic Integrity (A-9.1)
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.

Definition of Academic Dishonesty
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
**Withheld Grades Semester Grades Policy (A-54)**

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.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**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/](http://www.sfasu.edu/disabilityservices/).

**Acceptable Student Behavior**

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.