Welcome to Concepts of Biology!

Instructor: Dr. J. Van Kley; Office, Rm.115; Phone (936) 468-2068; jvankley@sfasu.edu

Office hours: T, 1:00-3:30; TR, 1:00-3:30; or by appointment

Textbook: Campbell Essential Biology with Physiology (4th edition)

Course Description:
We humans are biological organisms and we interact with other organisms on a daily basis. Moreover, the ecological future of the earth may depend on decisions made by humans from our generation. For these reasons, a basic knowledge of life-processes and an awareness of the biological world is a vital part of education regardless of what profession one is preparing for. This course introduces you the central concepts of modern biology: the cell theory, the central dogma, evolution, and the concept of ecosystems. Along the way you will explore many areas of biology including cell and molecular biology, genetics, botany, zoology, physiology, and ecology.

Grading policy:
There will be four major tests, and one cumulative final each worth 1/5 of the lecture grade. Additionally, I reserve the right to "pop" quizzes at any time. Quizzes will cover assigned readings or material recently discussed in lectures. Quiz scores along with points awarded for participation and other exercises will count as a bonus worth up to 6% of the next test grade. The lecture grade will constitute 2/3 and the lab grade 1/3 of the total course grade. After calculating your total percentage (2/3 x percentage of points from lecture + 1/3 x lab percentage), grades will be determined as follows:

<table>
<thead>
<tr>
<th>Total percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>&gt; 90%</td>
<td>A</td>
</tr>
<tr>
<td>89% - 80%</td>
<td>B</td>
</tr>
<tr>
<td>79% = 70</td>
<td>C</td>
</tr>
<tr>
<td>&lt;60%</td>
<td>D</td>
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There will be no extra credit assignments in this course. Make-up exams will be allowed only for students with excused absences. Only students participating in University-sponsored events, those with a serious illness, or those with family emergencies will be granted an excused absence. You must provide written verification from a family member, dean or doctor to be excused. Please inform me beforehand if you know you must miss a test. I am much more flexible when I know of an absence beforehand. Students with unexcused absences will receive a ZERO for any missed tests.

A student cannot properly prepare for a profession by cheating. The minimum penalty for cheating is a ZERO for the test or quiz in question (see University policy A-9.10).

Attendance, etc:
Students should come to class because they want to learn and ask questions. Poor attendance usually results in poor performance on tests. You will be asked to fill out a seating chart. I will use the chart to take attendance at each class period. I will consider attendance for students with borderline grades: For example, a student with excellent attendance and a score of 79 may receive a "B" rather than a "C". University and Departmental policy states that instructors may fail students who miss more than 3 weeks of class for ANY reason. Accordingly, students whom the laboratory instructor reports absent from more than 2 laboratory sessions will fail the entire course. Additionally I reserve the right to fail any student with seven or more absences for the lecture section.

Student evaluations help us improve courses; participation in the anonymous on-line course evaluation at the end of the term is required. Students who do not participate will receive a 1% deduction from their final score.

Telephones:
Telephones & pagers are extremely disruptive and must be turned off, or better yet, not taken to class. Text messaging may interfere with the room’s projection system and distracts those around you. Students whose phones ring repeatedly or who repeatedly text will be asked to leave and will be counted as absent for that day. Phones must be packed away and off on test days. If I see a phone during a test I may assume that it is being used for cheating.

Lecture notes & syllabus:
Copies of the lecture notes and this syllabus are available on the D2L Brightspace page for this course. Notes may be revised over the semester and I will also use the D2L page for announcements & other materials. Check for updates!

Supplemental Instruction (SI) and Learning Teams:
There are both SI (Tuesdays at 6:00pm) and Learning Teams (Thursdays at 6:00 & 7:00 pm) at The AARC for this course! Victoria Davis will lead the SI and the teams for our course. Additional information and rooms will be announced at our second class meeting.
## BIOLOGY 121 (005) CONCEPTS OF BIOLOGY: Fall 2019 Course Schedule

**Dr. J. Van Kley (jvankley@sfasu.edu)**  
*Tuesday & Thursday 3:30-4:45, Room 233, Miller Science Building*  
**Textbook:** *Campbell Essential Biology with Physiology (IV ed.)*

### Week (T)  Lecture Topic & Text Reading:

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<tr>
<th>Week</th>
<th>Lecture Topic &amp; Text Reading</th>
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| Aug 27 | Introduction  
What Living Cells are Made of: The Molecules of Life (Ch. 2, 3) |
| Sep 03 | Tour of the Living Cell (Ch. 4, 5)  
Multi-cellular organisms: An example from the Plants (Ch. 28) |
| Sep 10 | Cell Reproduction: Mitosis (Ch. 8)  
Meiosis & Sexual Reproduction (Ch. 8)  
Patterns of Inheritance (Ch. 9) |
| Sep 17 | The Chromosomal basis of Inheritance & Human Genetics (Ch. 9)  
The Structure & Function of DNA (Ch. 10) |
| Sep 24 | Film: 'The Hidden Kingdom'  
**Test 1.** |
| Oct 01 | The 'Central Dogma': Flow of genetic information From DNA to RNA to Proteins (Ch. 10)  
Controls over Genes (Ch11) |
| Oct 08 | DNA Technology: Studying & Manipulating Genomes (Ch 12)  
Cell Respiration: Energy from Food (Ch. 6) |
| Oct 15 | Film: 'Doctors in the Death Zone'  
**Test 2.** |
| Oct 22 | Photosynthesis: Sunlight to Make Food (Ch. 6)  
How the Theory of Evolution Explains the Diversity of Life-forms  
Classification & Diversity (Selections from Ch. 13-14) |
| Oct 29 | Microbial Life & 'Protists' (Ch 15)  
Plant Evolution & Diversity (Ch. 16) |
| Nov 05 | Film: 'Sexual Encounters of a Floral Kind'  
**Test 3.** |
| Nov 12 | Fungi (Ch 16)  
Animal Evolution & Diversity (Ch 17) |
| Nov 19 | Communities and Ecosystems (Ch. 20)  
The Biosphere: Land and Water (Ch. 18) |
| Nov 26 | **Thanksgiving Holidays** |
| Dec 03 | The Ecological Regions of Texas  
Film: 'Blue Planet: the Deep’ |
| Final | Tuesday 12/10/19, 1:30-4:00 pm.  
**Two-part Final:** a) Test 4, b) Cumulative final examination |

*Week-begin dates shown above are Tuesdays, the second lecture is held 2 days later.*
Miscellaneous:

Core Curriculum Assessment:
University policy requires selected BIO 121 sections to participate in Core Curriculum Assessment. If we are required to, further details regarding the assessment assignment will follow.

Program Learning Outcomes for Biology 121:
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 for Biology 121:
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 for Biology 121:
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).

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

Students caught cheating in this course will, at a minimum, be given a ZERO for the test/quiz in question. I will also formally report all cheaters to the administration.

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.