

**Syllabus
BIOL 1170
Survey of Life Science Lab
Spring 2013**

Instructor: Ms. Selinda Martinez

E-mail: samartinez@tamiu.edu

Office Location: LBVC 184

Office Hours:

Tuesday: 4:00 p.m- 6:00 p.m

Wednesday: 9:30 a.m.- 12:30 p.m.

Friday: 9:30-11:30

Class Time: Monday 12:30 p.m.-3:20 p.m.

Location: LBVC 176

I. Course Description: One semester hour.

Laboratory course to accompany BIOL 1370. Must be taken concurrently with BIOL 1370.

Required for elementary education certification. Not for students majoring or minoring in science.

Fulfills the laboratory science core curriculum requirement.

II. Student Learning Objectives: Upon the successful completion of this course students will be able to:

1. Use critical thinking empirical skills to design and implement a scientific experiment to test a specific biological hypothesis.
2. Use statistics to analyze a biological data set.
3. Gain and apply laboratory and safety skills.
4. Be able to communicate the results of a scientific investigation both verbally and through written reports.

Core-Curriculum Learning Outcomes:

1. Critical Thinking: includes creative thinking, innovation, inquiry and analysis, evaluation, and synthesis of information. (SLOs: 1, 3)
2. Communication Skills: Students will demonstrate their ability to communicate effectively by using visual communication. (SLOs: 4)
3. Empirical and Quantitative Skills: includes the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. (SLOs: 2)

III. Textbook:

McDonald, Cathryn A., and Roberts, Janice W. 2008. Principles of Biology: Laboratory Investigations. Hunter Textbooks Inc.

IV. Course Policies:

1.Lab Reports: The lab reports **must** be completed and turned in at the beginning of the next class period. No late work will be accepted! If you are absent you will not be able to make up any

assignments unless the absence is excused.

Lab reports should contain:

Title page: Name, course number, date of experiment, experiment number, experiment title, professor name.

Objective

Materials

Procedure

Data

Conclusion

2. Laboratory notebook

The objective of the laboratory notebook is to assist the student in developing the written communication skills needed to develop scientific recognition and recording in a laboratory environment. Additional guidelines will be provided to assist the student in developing these writing skills

You are responsible for keeping a detailed and complete laboratory notebook of the work you do in lab. You are also responsible for bringing your laboratory notebook to each lab period and will be checked at the end of the period.

Your lab notebook should contain:

Dates on every entry

Objective/Purpose of the experiment

Materials used in lab

Procedure

All Data collected in lab

3. Lab Presentation: Students will be required to do a 15 min presentation on any topic discussed in lecture or class. This is individual work and **cannot** be made up. If you fail to present, it will drop your final score by one letter grade.

4. Quizzes: There will be quizzes given weekly prior to the lab and will be handed out promptly at the start of class. The quiz will be over the investigation that will be carried out that day; therefore, it is important to read the investigations before coming to class. There will be **NO make-ups** quizzes!

5. Final Exam: A practicum will be given at the completion of the course covering all the investigations done in the lab.

6. Attendance: Attendance is mandatory. Students may be excused from class only for illness (self), death in the immediate family, or official university business. Documentation must be present in order for the absence to be excused. If **no** documentation is provided, the absence will be **unexcused**. The third unexcused absence from class will result in the lowering of the student's grade by one letter grade. Students are responsible for any material missed due to absence in lab and letting the instructor know when he/she will be absent.

7. Special Assistance: If a student has any special needs and/or assistance, it is the responsibility of the student to bring it to the attention of the instructor.

8. Electronics: No electronics will be permitted in the laboratory. Cell phones must be turned off and put away at the beginning of the class.

9. Plagiarism: According to the student hand book, "*Should a faculty member discover that a student has committed plagiarism, the student will receive a grade of "F" in that course, and the matter will then be referred to the Executive Director of Student Life for possible disciplinary action*". More info on this can be found on the TAMU website.

If there are any questions concerning this course, grades, or policies please do not hesitate to ask me. If you are unable to meet with me during class please feel free to contact me through either e-mail or phone. You may also set up an appointment to meet with or can come by my office during office hours.

Safety rules

The safety rules and policies are for your (and everyone else's) safety. **FAILURE TO FOLLOW THE SAFETY RULES WILL RESULT IN EXPULSION FROM THE LABORATORY AND A GRADE OF ZERO FOR ALL COMPONENTS OF THE DAY'S WORK.** Safety will be thoroughly discussed at the first lab meeting. Additionally, a copy of the safety rules is provided in your laboratory manual.

Grading Criteria

| | |
|----------------------|------|
| <i>Quizzes</i> | 15% |
| <i>Lab Reports</i> | 15% |
| <i>Lab Notebook</i> | 15% |
| <i>Presentations</i> | 25% |
| <i>Final Exam</i> | 30% |
| <i>Total</i> | 100% |

A 90-100 Excellent; **B** 80-89 Good; **C** 70-79 Average; **D** 60-69 Passing*; **F** < 60 Failing

Important Dates

January 22: First Class Day
February 6: 12th class Day
March 11- 16: Spring Break (no-classes)
March 13: Midterm grades Due
March 29-30: Easter (no classes)
April 19: Last day to drop a course
May 7: Last class Day

V. Tentative Lab Schedule:

| | | |
|----|-------------------------|----------------------------------------------------------------------------------------------------------|
| 1. | Week 1 Jan 22-25 | Introduction, Lab Safety Investigation I: Measurements, Experiments, and the Scientific Method |
| 2. | Week 2 Jan 28- Feb 1 | Investigation II: The Microscope |
| 3. | Week 3 Feb 4-8 | Investigation III: Chemical Composition of Cell |
| 4. | Week 4 Feb 11-15 | Investigation IV: Cell Organization, Structure, and Function |

| | | |
|-----|----------------------------|-----------------------------------------------------------------------------|
| 5. | Week 5 Feb 18-22 | Investigation V: Effects of Environmental Factors on Enzyme Activity |
| 6. | Week 6 Feb 25- March 1 | Investigation VI: Photosynthesis-Parts and Products |
| 7. | Week 7 March 4-8 | Investigation VIII: Metabolism and Cellular Respiration |
| 8. | Week 8 March 11-15 | No Classes- Spring Break |
| 9. | Week 9 March 18-22 | Investigation IX: Nucleic Acid Structure and Function |
| 10. | Week 10 March 25-29 | Investigation X: Mitosis |
| 11. | Week 11 April 1 - 5 | Investigation XI: Meiosis and Gamete Formation |
| 12. | Week 12 April 8- 12 | Investigation XII: Genetics |
| 13. | Week 13 April 15-19 | Presentations |
| 14. | Week 14 April 22-26 | Presentations |
| 15. | Week 15 April 29- May 3 | Lab Final |

***Syllabus subject to change.**

Policies of the College of Arts and Sciences

(Required on all COAS Syllabi)

Classroom Behavior

The College of Arts and Sciences encourages classroom discussion and academic debate as an essential intellectual activity. It is essential that students learn to express and defend their beliefs, but it is also essential that they learn to listen and respond respectfully to others whose beliefs they may not share. The College will always tolerate diverse, unorthodox, and unpopular points of view, but it will not tolerate condescending or insulting remarks. When students verbally abuse or ridicule and intimidate others whose views they do not agree with, they subvert the free exchange of ideas that should characterize a university classroom. If their actions are deemed by the professor to be disruptive, they will be subject to appropriate disciplinary action, which may include being involuntarily withdrawn from the class.

Plagiarism and Cheating

Plagiarism is the presentation of someone else's work as your own. **1)** When you borrow someone else's facts, ideas, or opinions and put them entirely in your own words, you must acknowledge that these thoughts are not your own by immediately citing the source in your paper. Failure to do this is plagiarism. **2)** When you also borrow someone else's words (short phrases, clauses, or sentences), you must enclose the copied words in quotation marks as well as citing the source. Failure to do this is plagiarism. **3)** When you present someone else's paper or exam (stolen, borrowed, or bought) as your own, you have committed a clearly intentional form of intellectual theft and have put your academic future in jeopardy. This is the worst form of plagiarism.

Here is another explanation from the 2010, sixth edition of the *Manual of The American Psychological Association* (APA):

Plagiarism: Researchers do not claim the words and ideas of another as their own; they give credit where credit is due. Quotations marks should be used to indicate the exact words of another. *Each* time you paraphrase another author (i.e., summarize a passage or rearrange the order of a sentence and change some of the words), you need to credit the source in the text. The key element of this principle is that authors do not present the work of another as if it were their own words. This can extend to ideas as well as written words. If authors model a study after one done by someone else, the originating author should be given credit. If the rationale for a study was suggested in the Discussion section of someone else's article, the person should be given credit. Given the free exchange of ideas, which is very important for the health of intellectual

discourse, authors may not know where an idea for a study originated. If authors do know, however, they should acknowledge the source; this includes personal communications. (pp. 15-16)

Consult the Writing Center or a recommended guide to documentation and research such as the *Manual of the APA* or the *MLA Handbook for Writers of Research Papers* for guidance on proper documentation. If you still have doubts concerning proper documentation, seek advice from your instructor prior to submitting a final draft.

Penalties for Plagiarism: Should a faculty member discover that a student has committed plagiarism; the student should receive a grade of 'F' in that course and the matter will be referred to the Honor Council for possible disciplinary action. The faculty member, however, may elect to give freshmen and sophomore students a "zero" for the assignment and to allow them to revise the assignment up to a grade of "F" (50%) if they believe that the student plagiarized out of ignorance or carelessness and not out of an attempt to deceive in order to earn an unmerited grade. This option should not be available to juniors, seniors, or graduate students, who cannot reasonably claim ignorance of documentation rules as an excuse.

Caution: Be very careful what you upload to turn in or send to your professor for evaluation. Whatever you upload for evaluation will be considered your final, approved draft. If it is plagiarized, you will be held responsible. The excuse that "it was only a draft" will not be accepted.

Caution: Also, do not share your electronic files with others. If you do, you are responsible for the possible consequences. If another student takes your file of a paper and changes the name to his or her name and submits it and you also submit the paper, we will hold both of you responsible for plagiarism. It is impossible for us to know with certainty who wrote the paper and who stole it. And, of course, we cannot know if there was collusion between you and the other student in the matter.

Penalties for Cheating: Should a faculty member discover a student cheating on an exam or quiz or other class project, the student should receive a "zero" for the assignment and not be allowed to make the assignment up. The incident should be reported to the chair of the department and to the Honor Council. If the cheating is extensive, however, or if the assignment constitutes a major grade for the course (e.g., a final exam), or if the student has cheated in the past, the student should receive an "F" in the course, and the matter should be referred to the Honor Council. Under no circumstances should a student who deserves an "F" in the course be allowed to withdraw from the course with a "W."

Student Right of Appeal: Faculty will notify students immediately via the student's TAMIU e-mail account that they have submitted plagiarized work. Students have the right to appeal a faculty member's charge of academic dishonesty by notifying the TAMIU Honor Council of their intent to appeal as long as the notification of appeal comes within 5 business days of the faculty member's e-mail message to the student. The *Student Handbook* provides details

UConnect, TAMIU E-Mail, and Dusty Alert

Personal Announcements sent to students through TAMIU's UConnect Portal and TAMIU E-mail are the official means of communicating course and university business with students and faculty – not the U.S. Mail and not other e-mail addresses. Students and faculty must check UConnect and their TAMIU e-mail accounts regularly, if not daily. Not having seen an important TAMIU email or UConnect message from a faculty member, chair, or dean is not accepted as an excuse for failure to take important action. Students, faculty, and staff are encouraged to sign-up for *Dusty Alert* (see www.tamtu.edu). *Dusty Alert* is an instant cell phone text messaging system allowing the university to communicate immediately with you if there is an on-campus emergency, something of immediate danger to you, or a campus closing.

Copyright Restrictions

The Copyright Act of 1976 grants to copyright owners the exclusive right to reproduce their works and distribute copies of their work. Works that receive copyright protection include published works such as a textbook. Copying a textbook without permission from the owner of the copyright may constitute copyright infringement. Civil and criminal penalties may be assessed for copyright infringement. Civil penalties include damages up to \$100,000; criminal penalties include a fine up to \$250,000 and imprisonment.

Students with Disabilities

Texas A&M International University seeks to provide reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal education opportunity. It is the student's responsibility to register with the Director of Student Counseling and to contact the faculty member in a timely fashion to arrange for suitable accommodations.

Incompletes

Students who are unable to complete a course should withdraw from the course before the final date for withdrawal and receive a "W."

To qualify for an "incomplete" and thus have the opportunity to complete the course at a later date, a student must meet the following criteria:

1. The student must have completed 90% of the course work assigned before the final date for withdrawing from a course with a "W", and the student must be passing the course;
2. The student cannot complete the course because an accident, an illness, or a traumatic personal or family event occurred after the final date for withdrawal from a course;
3. The student must sign an "Incomplete Grade Contract" and secure signatures of approval from the professor and the college dean.
4. The student must agree to complete the missing course work before the end of the next long semester; failure to meet this deadline will cause the "I" to automatically be converted to a "F"; extensions to this deadline may be granted by the dean of the college.

This is the general policy regarding the circumstances under which an "incomplete" may be granted, but under exceptional circumstances, a student may receive an incomplete who does not meet all of the criteria above if the faculty member, department chair, and dean recommend it.

Student Responsibility for Dropping a Course

It is the responsibility of the STUDENT to drop the course before the final date for withdrawal from a course. Faculty members, in fact, may not drop a student from a course without getting the approval of their department chair and dean.

Independent Study Course

Independent Study (IS) courses are offered only under exceptional circumstances. Required courses intended to build academic skills may not be taken as IS (e.g., clinical supervision and internships). No student will take more than one IS course per semester. Moreover, IS courses are limited to seniors and graduate students. Summer IS course must continue through both summer sessions.

Grade Changes & Appeals

Faculty are authorized to change final grades only when they have committed a computational error or an error in recording a grade, and they must receive the approval of their department chairs and the dean to change the grade. As part of that approval, they must attach a detailed explanation of the reason for the mistake. Only in rare cases would another reason be entertained as legitimate for a grade change. A student who is unhappy with his or her grade on an assignment must discuss the situation with the faculty member teaching the course. If students believe that they have been graded unfairly, they have the right to appeal the grade using a grade appeal process in the *Student Handbook* and the *Faculty Handbook*.

Final Examination

Final Examination must be comprehensive and must contain a written component. The written component should comprise at least 20% of the final exam grade. Exceptions to this policy must receive the approval of the department chair and the dean at the beginning of the semester.