BIO 475 Special Problems
Spring 2019

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Course Description:
Independent investigations by students guided through individual conferences with the professor willing to work with them.

Text and Materials: none

Pre-Requisites: Successfully completed 18 hours of Biology & Permission of Instructor

Student Learning Outcomes:
1. Execute the scientific method and critically evaluate data.
2. Work collaboratively in a laboratory setting.
3. Clearly articulate scientific information in a written format.

Program Learning Outcomes:
1. PLO – 3: clearly articulate scientific information in the written form

Course Requirements:
1. Lab participation: Minimum of 3 hours per week per credit hour, and an overall minimum of 40 hours per semester. Review of recent literature pertaining to the assigned project. Research summary due 12/7/12

2. Research Summary: The research summary is due no later than December 7, 2012 at 5:00 p.m. This document should summarize the assigned literature and fully describe the methods and theories that you learned as a result of your experience in the lab throughout the semester and should also include how this knowledge will apply to your career in the future.

Grading:
Grades will be based on the percent completion of the assigned project and research summary.
90 – 100 % project completion = A
80 – 89 % project completion = B
70 – 79 % project completion = C
60 – 69 % project completion = D
Less than 60% project completion = F
Failure to submit the research summary will result in the deduction of one letter grade.

Project Description: The effects of elevated Co2 on resistance to southern root-know nematode and tobacco mosaic virus in tomato.

As atmospheric levels of Co2 increase, diverse effects upon plant pathogens have been noticed, including range expansion and a longer infective season. This project will examine whether or not increasing CO2 can enable root-knot nematodes and / or tobacco mosaic virus to overcome established resistance in the tomato plant.
Time Outline:
Cultivation & inoculation of plants: 10 - 12 hours
Collection & fixation of nematode infected root material: 18 - 20 hours
Collection & fixation of TMV infected material: 15 - 18 hours
Cytological preparation, nematode infected plant roots: 15 – 18 hours
ELISA analysis, TMV infected plant leaves: 10 – 12 hours
Research summary: 7 – 10 hours
Total: 75 – 90 hours

These are estimates of the minimum hours required to complete the project. It is possible that more time could be required for each of the objectives.

Academic Integrity:
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 the 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](http://www.sfasu.edu/policies/academic_integrity.asp)

ANY act of academic dishonesty will result in receiving a grade of F for the course and will be reported to the student’s dean.

Withheld Grades Semester Grades Policy:
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 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 and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, 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.

Student Counseling Center:
Rusk Building 3rd Floor
(936) 468-2401
Email: counseling@sfasu.edu
The Student Counseling Center is available free of charge to students and is staffed with professional therapists to meet a variety of needs. All interactions with the Student Counseling Center are guaranteed confidential. Licensed Counselors are available from 8:00a.m. to 5:00p.m. Monday-Friday. The department is closed on certain holidays, Spring Break and Winter Break when the university is closed. If you are in need of assistance after hours or on the weekend please call: University Police: (936)468-2608 or MHMR Crisis Line: (800)392-8343. If the situation is life threatening please dial 911.