BIO475: Protein Purification and Assay Methods Laboratory

2016 Spring
Instructor: Dr. Bea Clack
Department: Biology
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Office: S113 Lab: S110, S219B, S205
Office hours: TBA depending on hours enrolled and student schedule
Text: No text is required. Various laboratory protocols will be available through reference material such as laboratory manuals, former student theses and lab notebooks.

Course Description:
This course is designed to teach students hands-on experience with various laboratory techniques used to study proteins, in particular recombinant proteins. During the semester, the student will learn how to grow bacterial hosts that harbor expression plasmids containing recombinant proteins. The student will learn how to analyze the expression of recombinant proteins and how to purify recombinant proteins.
PLO 3 team work and PLO 4 Scientific Method

Number of Credit Hours:
Variable (1-3 hours).

Course Requirements:
1. Students will work with other students and the instructor in the laboratory
2. Students will be required to spend a minimum of 3 hours in the laboratory doing experiments for every 1 hour of credit.
3. Students must record all tasks performed in the laboratory and all experimental planning in a notebook.
4. Students will meet with the instructor and/or other students to discuss and present results on a regular basis to be determined by instructor.
5. Students need to process data in a timely fashion, typically upon completion of each experiment.
6. Students must prepare a final report due during dead week of work performed for this project.

Grading:
Grades will be based on effort, willingness to work in the laboratory, ability to work with others and the percent of project completed within the semester. Grades will be determined using the rubrics for the PLO’s above.
4 = A 3 = B 2= C 1= D 0= F
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.

Attendance Policy:
(1) Attendance will be taken at the beginning and end of lab and recitation. (2) If you arrive after roll has been taken or leave early you will be counted late. (3) You will not be permitted to take the test if you arrive late on a test day. (4) An unexcused absence will result in a 4 point deduction in your participation grade. (5) An excused absence will result in a 1 point deduction to your participation grade for each offence. (6) Arriving late will result in a 2 point deduction to your participation grade for each offence.

Making Up Assignments:
You must have an excused absence to make up any practical or quiz. Excused absences include death in the family, family emergency, sickness, or school related function.
• Sickness - If you are sick you must notify me through email within 24 hours of your lab or recitation, as well as, provide a doctor’s note upon return. If you do not contact me within 24 hours of your lab you will not be allowed to make up the quiz or practical.
• Family emergency or death - If there is a family emergency or death in the family you will need to contact the Office of Student Rights and Responsibilities ((room) 315 Rusk Building, (telephone) 936-468-2703) and request an absence notification be sent to your instructors. The Office of Student Rights and Responsibilities will notify all your instructors of your absence.
• School function - If you will be absent due to a school related function you need to notify me at least 24 hours in advance and provide a signed note from the facility member in charge of the function.

Financial Responsibilities:
You will be working with expensive lab materials, and you are responsible for any damage. Also, know that all lab materials are to remain in the lab under the supervision of the lab instructors. If you damage or break any lab materials you will receive a failing grade in lab until the equipment is paid for. If any lab materials are taken from the lab you will receive a failing grade and be required to pay for the missing equipment.

Course Evaluations:
A course evaluation the week before the final is available on MySFA. Your participation in this survey allows me to ensure student’s lab experiences are optimal. Your opinion, both positive and negative, is highly valued.

Withdrawal Policy:
It is the student’s responsibility to withdraw from the course if necessary. The last day to withdraw from a course without receiving a WF or WP is Oct. 23rd, 2013.

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, room 325, telephone (936)468-3004, (936)468-1004 as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodations and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations.

Class Disruptions:
Class disruptions will not be tolerated because they detract from other students’ learning. As adults, students should be able to sit through a lecture, without disturbing others. Lab is a learning environment, and you should benefit from it as much as you can. To minimize disruptions and to make the lab time beneficial for all of you, two points will be deducted from the disruptive students’ participation grade following each incident. The following are examples of class disruptions:
1. cell phone usage; TURN THEM OFF (texting, calling, answering, ANY USE)
2. coming in late
3. leaving early
4. leaving a dirty work area; please clean up your messes

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.

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.
Education
Faculty members are responsible for providing information about academic integrity and education for maintaining academic honesty during their regular coursework. Course syllabi provide information about penalties and the appeal process.

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 or 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 the 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.