Developmental Biology (BIO 475.023)
Spring Semester 2016
Miller Science Building, Room 203
MW 1 – 3pm

Instructor: Dr. Kevin Langford
Department: Biology
Office: Miller Science Building, Room 201
Phone: 468-2315

Email: klangford@sfasu.edu

Office hours:
MWF – 9-11am
M-R – 8-9am

Course Description:
One semester hour. Independent study in cell biology.

Required Textbook:
None

Program Learning Outcomes:

Each of the student learning outcomes listed below address the Biology Department Program Learning Outcome #1: Demonstrate a good knowledge base in biological concepts and be able to integrate knowledge with critical thinking skills to become problem solvers. Knowledge base will include: levels of complexity (molecular/cellular through population/communities/ecosystems); biological principles and processes.

Course Objectives:

- Provide student with an understanding of and the utilization of the scientific method.
- Provide students with an understanding of and experience with the techniques of embryonic staging, microdissection, and tissue extraction for exosomes.
- Provide students with an understanding of biochemical characterization of the protein and nucleic acid components of exosomes.

Student Learning Outcomes (Course Competencies):
Student understanding will be evaluated with comprehensive exams (i.e., short answer, and essay questions) surveying in detail the material to be mastered. Students who successfully complete this experience will be able to:
• Correctly stage a chicken embryo.
• Carefully remove and microdissect the embryonic heart.
• List the main steps for tissue extraction.
• List the steps involved in exosome isolation.
• Describe the technique of gel electrophoresis.
• Describe how to isolate protein from exosomes.
• Describe the process of photographically documenting scientific data
• Understand the use of the scanning electron microscopy for documenting isolated exosomes.

**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 worlds or ideas of an author into one’s paper without giving the author due credit.

Please read the complete policy at [www.sfasu.edu/policies/academic_integrity.asp](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 received 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.
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 www.sfasu.edu/disabilityservices/

Acceptable Student Behavior (D-34.1):

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.