

# FLORIDA ATLANTIC UNIVERSITY™

## Undergraduate Programs—COURSE CHANGE REQUEST<sup>1</sup>

UUPC APPROVAL \_\_\_\_\_  
 UFS APPROVAL \_\_\_\_\_  
 SCNS SUBMITTAL \_\_\_\_\_  
 CONFIRMED \_\_\_\_\_  
 BANNER POSTED \_\_\_\_\_  
 CATALOG \_\_\_\_\_

DEPARTMENT: BIOLOGICAL SCIENCE COLLEGE: COLLEGE OF SCIENCE

COURSE PREFIX AND NUMBER: ZOO 4690 L CURRENT COURSE TITLE: COMPARATIVE VERTEBRATE MORPHOGENESIS LAB

CHANGE(S) ARE TO BE EFFECTIVE (LIST TERM): FALL 2013 \_\_\_\_\_ TERMINATE COURSE (LIST FINAL ACTIVE TERM):

<p><b>CHANGE TITLE TO:</b></p> <p><b>CHANGE PREFIX FROM:</b> _____ <b>TO:</b> _____</p> <p><b>CHANGE COURSE NO. FROM:</b> _____ <b>TO:</b> _____</p> <p><b>CHANGE CREDITS<sup>2</sup> FROM:</b> _____ <b>TO:</b> _____</p> <p><b>CHANGE GRADING FROM:</b> _____ <b>TO:</b> _____</p> <p><b>CHANGE WAC/GORDON RULE STATUS<sup>3</sup></b>                  ADD* _____ REMOVE _____</p> <p><b>CHANGE GENERAL EDUCATION REQUIREMENTS<sup>4</sup></b>                  ADD* _____ REMOVE _____</p> <p><small>*WAC and General Education criteria must be clearly indicated in attached syllabus. For WAC Guidelines: <a href="http://www.fau.edu/WAC">www.fau.edu/WAC</a>. Please attach General Education Course Approval Request: <a href="http://www.fau.edu/deanugstudies/GeneralEdCourseApprovalRequests.php">www.fau.edu/deanugstudies/GeneralEdCourseApprovalRequests.php</a></small></p>	<p><b>CHANGE DESCRIPTION TO:</b></p> <p><b>CHANGE PREREQUISITES/MINIMUM GRADES TO*:</b></p> <p><u>EXISTING</u>                  BSC 1010, BSC 1010L, BSC 1011, BSC 1011L</p> <p><u>NEW PRE/REQ.</u>                  BSC 1010, BSC 1010L, BSC 1011, BSC 1011L, CHM 2045, CHM 2045L, CHM 2046, CHM 2046L</p> <p><u>MINIMUM PASSING GRADE C-</u></p> <p><b>EXISTING COREQUISITES:</b></p> <p><b>CHANGE COREQUISITES TO*:</b></p> <p><b>CHANGE REGISTRATION CONTROLS TO:</b></p>
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Attach syllabus for ANY changes to current course information.

Should the requested change(s) cause this course to overlap any other FAU courses, please list them here. Please consult and list departments that might be affected by the change(s) and attach comments.<sup>5</sup>

Faculty contact, email and complete phone number:  
 David Binninger; binninge@fau.edu; 561.297-3323

**Approved by:**

Department Chair: David Binninger

College Curriculum Chair: J. E. [Signature]

College Dean: [Signature]

UUPC Chair: [Signature]

Undergraduate Studies Dean: [Signature]

UFS President: \_\_\_\_\_

Provost: \_\_\_\_\_

**Date:**  
 Feb. 27, 2013

2/21/13

3/20/13

3/22/13

3/27/13

1. Syllabus must be attached; syllabus checklist recommended; see guidelines and checklist: [www.fau.edu/academic/registrar/UUPCinfo](http://www.fau.edu/academic/registrar/UUPCinfo)
2. Review Provost Memorandum: **Definition of a Credit Hour** [www.fau.edu/provost/files/Definition\\_Credit\\_Hour\\_Memo\\_2012.pdf](http://www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf)
3. WAC approval (attach if necessary)
4. Gen. Ed. approval (attach if necessary)
5. Consent from affected departments (attach if necessary)

**ZOO 4690L-001**

**CRN 13512 Section 1**

**1 cr**

**Fall 2013**

Department of Biological Sciences  
Charles E. Schmidt College of Science  
Florida Atlantic University

## **Comparative Vertebrate Morphogenesis Lab Course Syllabus**

**Instructor:** Dr. Kumi-Diaka

**Lab Day/Time/Location:** Mondays, 11:30am – 3:20pm in ES 314

**T.A.:** Joshua Holbrook (Jholbro8@fau.edu)

**Office hours:** Thursdays 10:00am – 12:00pm in DW431

### Course Prerequisite :

BSC 1010, BSC1010L, BSC 1011, BSC 1011L, CHM 2045, CHM 2045L,  
CHM 2046, CHM 2046L, with a minimum of a C-

Course Co-requisite: ZOO 4690

### Objectives:

To expose students to the concepts of developmental (embryology) and histoanatomy, with regard to the topography, structures and functions/physiology of the organism (the vertebrate animal). Course material will also cover the gross anatomy of the organ systems -skeletal and muscular system; respiratory system; cardiovascular system; digestive system; urogenital system; nervous and sensory systems; and integumentary systems, in line with lectures.

### Course Outline:

#### 1. EMBRYOLOGY:

- a) Stages of development: fertilization processes - using sea urchins.
- b) Starfish - stages of development; fertilization; cleavage → morula → blastula; gastrulation → formation of germ layers
- c) Ovary - microscopic structure (formation of follicles, corpus luteum, etc)
- d) Testes - microscopic anatomy (seminiferous tubules, Leydig cells, germ cells, etc)
- d) Developmental stages (embryo - fetus; organ development) of: CHICK, FROG and HUMAN using: i) Whole mount; ii) cross sections; iii) sagittal sections

2. HISTOLOGY : microscopic examination of selected cell, tissues and organs:- epithelial cells; connective tissues; muscles; skin; CNS; etc.

#### 3. DISSECTIONS:

1. Fish - dogfish; perch
2. Frog
3. Turtle
4. Bird - pigeon
5. Piglets

#### 4. LIFE SPECIMENS

##### 1. Chick eggs

- Incubation/fertilization of chick eggs,
- Harvesting and culturing of life tissues/cells/organs

##### 1. Sea Urchins

- Harvesting and studying of sperm cells and oocytes
- Fertilization, using the harvested eggs and sperm cells.

#### Text Books and Lab Manuals:

Laboratory manuals on vertebrate development, gross anatomy (atlas) and vertebrate dissections.

Lab books will be in the book store at beginning of the semester.

TAs will also post additional information on BlackBoard.

#### Course Policies and Procedures:

- 1. Course Evaluation:** The course grade will be determined from student performance on two practical examinations, each examination worth 100 points and four announced lab quizzes at 25 points/quizz. Additionally, students will be awarded up to 5 performance points (skill checks) each lab for attendance, lab reports and participation. Grades will be based as a percentage of the possible 350 points/student. **No extra credit assignments will be given or accepted.**

Assessment	Points
Quizzes (4 x 25)	100
Participation (9 x 5)	45
Lab Practicals (100 x 2)	200
<b>TOTAL</b>	<b>345</b>

a. **Grading Scale:** A= $\geq$  90%; B = 80-89%; C= 70-79%; D= 60- 69; F= $<$ 60%.

b. **Conditions for make-ups:** i) Verifiable excuses – letter from a doctor/police, etc ii) **15% penalty for all make-ups**

- 2. Attendance Policy:** In laboratory courses, there is only one opportunity to present a given exercise and your participation is very important in order to understand the concepts presented. Course credit will not be given if you miss more than two laboratories. If you miss your assigned lab section due to an emergency, you may attend another section. The TA has the right to refuse your admission if the lab is already overcrowded. Students will not be penalized for absences due to participation in University-approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. These students will be allowed to make up missed work without any reduction in the student's final course grade. Reasonable accommodation will also be made for students participating in a religious observance.
- 3. Incomplete Grade:** As per university policy, an incomplete grade will only be given a student who fulfills all of the following criteria:
  - a. Misses the final examination due to an emergency b.
  - Has a grade of C or better

c. Submits evidence of the emergency and signs an incomplete agreement.

- 4. Laboratory Procedure:** Rules of safety are to be followed at all times. Laboratory supplies will be at each station and in the front of the laboratory when you arrive. No open toed shoes allowed in teaching labs. At the conclusion of each session, clean your station and return the materials to their original location.
- 5. Academic Honesty:** Cheating and plagiarism are ethical misconduct. Read the Student Rights and Responsibilities Handbook for a detailed definition of cheating and plagiarism. **Total academic honesty is expected or else the student will receive an “F” in the course.** . Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at [http://www.fau.edu/ctl/4.001 Code of Academic Integrity.pdf](http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf)

### CVM Spring 2013 Tentative Schedule

DATE	TOPIC	Side Note
1/7 <b>Lab 1</b>	<b>Intro, Syllabus</b> Histology: Ovaries and Testis	
1/14 <b>Lab 2</b>	Histology: Ovaries and Testis cont. Fertilization, Cleavage, Starfish Development slides	
1/21	<b>NO LABS!!! Martin Luther King Jr. Holiday</b>	
1/28 <b>Lab 3</b>	Histology: Chick Development (0-72 hours) <b>Sea Urchins!</b>	<b>Quiz 1</b>
2/4 <b>Lab 4</b>	Chick Development (0-72 hours) cont.	
2/11 <b>Lab 5</b>	<b>Chick Eggs!</b> Histology: Epithelium and CT	<b>Quiz 2</b>
2/18 <b>Lab 6</b>	Histology: Epithelium and CT cont.	
2/25	<b>Midterm Practical</b> <b>Lab 1- Lab 6 Material</b>	
3/4	<b>No Labs!!! Spring Break!!!</b>	
3/11 <b>Lab 7</b>	Organ Dissections: Heart, Brain, Kidney and Eye	
3/18 <b>Lab 8</b>	Models: Nephron, Ear, Male and Female Reproductive System	<b>Quiz 3</b>

3/25 <b>Lab 9</b>	Dissections: Dogfish, Frog, Pigeon	
4/1 <b>Lab 10</b>	Dissections: Pig, Turtle	<b>Quiz 4</b>
4/8	<b>Final Exam Review</b>	
4/15	<b>Final Exam Practical Lab 7-10 Material</b>	

**\*\*\* The TA and professor reserve the right to change the schedule and exam dates.**