2600 South Neal Street, Commerce, TX 75249-3011
Department of Biological and Environmental Science
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Course Number: BSC 497 – 02E, 3SH; CRN: 82314
Course Title: Comparative Vertebrate Physiology

Fall 2014

Instructor

Dr. Izhar Khan; Izhar.Khan@tamuc.edu

	Day	Time	Room
Lecture:	MWF	11:00 am – 11:50 pm	AGIT #233

Final Exam: Wed, Dec 10, 2014; 10:30 AM - 12:30 PM

Office Hours, Location, Phone & E-mail:
Monday – Wednesday: 4:00 – 5:00 pm
or by appointment

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UNIVERSITY STATEMENTS

Academic Integrity

By accepting this syllabus, you pledge to uphold the principles of Academic Integrity expressed by the Texas A&M University-Commerce Community. You agree to observe these principles yourself and to defend them against abuse by others. The first instance of cheating will result in an automatic zero on the exam and/or assignment. A second instance will result in a zero in the course. Cheating constitutes copying information from another student or non-allowable material as well as plagiarism. Plagiarism is a criminal activity. You must cite all sources of information. Copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles, will result in a score of zero for your essay and can result in further disciplinary action.

Conduct Policy

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Student's Guide Handbook, Policies and Procedures, Conduct)

Special Needs and Accommodations

Please advise the instructor of any special problems or needs at the beginning of the semester. The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library, Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Access to Student Work

Copies of your work in this course including copies of any submitted papers and your portfolios may be kept on file for institutional research, assessment and accreditation purposes. All work used for these purposes will be submitted anonymously.

University Policy on Weather Closings

Snow closings are generally announced on area television and radio stations. Unless otherwise advised by radio announcement or by official bulletins on the number listed above, students are expected to report for class as near normal time as possible on days when weather conditions are adverse. Decisions as to snow closing or delayed opening are not generally made before 5:00 AM of the working day. Students are expected to attend class if the University is not officially closed.

Textbook: *Animal Physiology,* 3rd Edition by Hill, R., Wyse, G. and Anderson, M., Sinauer Associates, Inc. 2012 (Recommended).
ISBN: 978-0-87893-559-8 (Casebound); 978-0-87893-898-8 (Looseleaf)

BROAD PURPOSE OF THE COURSE

This course is designed for majors with a well-rounded background in biology. Therefore, this course provides students with an understanding of basic physiological principles and the functional organization of living systems. Emphasis will be placed on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The laboratory portion of the course will demonstrate physiological principles and acquaint the student with physiological techniques.

Students completing this course will be able to:

1. Compare and contrast the functioning of the major organ systems in various vertebrates.
2. Delineate how differences in their physiology allow vertebrates to adapt to their environment and how this relates to evolutionary development.
3. Use the scientific method in the study of physiology.
4. Explain how a Reformed worldview informs our understanding of the concepts discussed.

Student Learning Outcomes: Will be outlined for each topic covered.

TEACHING METHOD

Formal lectures will be supplemented with appropriate audiovisual materials, at home problems, laboratory exercises and discussions. PowerPoint of all lectures will be available for you in the Doc Sharing portion of eCollege or sent as e-mail attachment to the students in case of any issues with eCollege. I will post announcements on the home page of the course for reminders of important due dates in addition to announcing them in the class. Progress in the class can be monitored using the Gradebook.

There will be four exams covering approximately four chapters each Some questions for quizzes and exams from a given chapter may be derived from the same Test Pool and repeated.

Attendance and Absences: You are expected to attend ALL scheduled lectures and take the exams as scheduled. You will be held responsible for all information covered in lecture.

Assignments and Quizzes: At home questions will be assigned beginning in the second week of the course. Quizzes will be approximately every other week and will be administered in the class (10 questions; 15 min). If you

complete the at home questions in the week they are assigned you will receive full credit regardless of the number of correct responses. If they are done in the subsequent week it will be treated as a quiz. This will hopefully push you to keep up with the material. Both will be completed through eCollege or provided in the class. Be sure to check eCollege announcements for continual updates.

Exams: Consist of multiple choice questions (70%) and short answer questions (30%). The multiple choice questions are drawn from the same test pool as the assignments and quiz pools so be sure to complete those first. The term exams will be taken in class.

Makeup Policy: The student is responsible for requesting a makeup when they are unable to attend the regularly scheduled examination and must schedule the makeup within 2 days of the absence. Makeup exams will be scheduled only in the event of an EXCUSED absence (as defined in the Student's Guidebook). If the test is not made-up, the student will receive a zero for that exam.

GRADING SCALE

The final course letter grade will be assigned based upon the following break-down:

90 - 100% = A
80 - 89% = B
70 - 79% = C
60 - 69% = D
00 - 59% = F

GRADING POLICY

4 Lecture Exams – 100 points each = 400 points
Quizzes and assignments = 100 points
Research Paper Discussion/Presentation = 15 points (extra credit which I encourage)

SCHEDULE*

Week 1: Aug 25-29	Meet and Greet; Discuss Syllabus and Schedule Introduction (Ch 1) Digestive System (Ch 6)
Week 2: Sep **1**-5	**Labor Day Break** Digestive System (Ch 6) Digestive System (Ch 6)
Week 3: Sep 8-12	Whole Animal Metabolism (Ch 7) Whole Animal Metabolism (Ch 7) Aerobic/Anaerobic Metabolism (Ch 8) **Quiz #1 (Fri, Sep 12th; Ch 1, 6 & 7)**
Week 4: Sep 15-19	Energetics of Aerobic Activity (Ch 9) Energetics of Aerobic Activity (Ch 9) **Exam #1 (Fri, Sep 19th; Ch 1 & 6-9)**
Week 5: Sep 22-26	Temperature Regulation: Introduction (Ch 10) Temp. Regulation: Poikilothermy (Ch 10) Temp. Regulation: Homeothermy (Ch 10, 11)
Week 6: Sep 29-Oct 3	Neuron: Introduction, Resting Potential (Ch 12) Neuron: Action Potential, propagation (Ch 12) Neuron: Synapse (Ch 13) **Quiz #2 (Fri, Oct 3rd; Ch 10, 11 & 12)**
Week 7: Oct 6-10	Sensory Systems (Ch 14) Sensory Systems (Ch 14) Sensory Systems (Ch 14)
Week 8: Oct 13-17	Nervous System (Chap 15) Nervous System, Endocrine System (Ch 15, 16) **Exam #2 (Fri, Oct. 17th; Ch 10-14)**
Week 9: Oct 20-24	Endocrine System (Ch 16) Endocrine System (Ch 16)

	Reproduction (Ch 17)
Week 10: Oct 27-31	Reproduction (Ch 17) Reproduction (Ch 17) Muscle (Ch 19-21) **Quiz #3 (Fri, Oct. 31st; Ch 15 & 16)**
Week 11: Nov 3-7	Muscle (Ch 19-21) Muscle (Ch 19-21) Respiration: Introduction, Comparative Physiology (Ch 22, 23)
Week 12: Nov 10-14	Respiration: Comparative Physiology (Ch 23) Respiration: Gas Transport (Ch 24) **Exam #3 (Fri, Nov. 14th; Ch 15-17, 19-21)**
Week 13: Nov 17-21	Circulation (Ch 25) Circulation (Ch 25) Circulation (Ch 25, 26?)
Week 14: Nov 24-28	Water and Salt Balance (Ch 27, 28) **Quiz #4 (Mon, Nov. 24th; Ch 23-25)** Water and Salt Balance (Ch 28) **Thanksgiving Break**
Week 15: Dec 1-5	Water and Salt Balance (Ch 29) **Quiz #5 (Thu, Dec 5th; Review Quiz)**
Week 16: Dec 10	**Exam # 4 (Wed, Ch 22-29)**

***ALL DATES AND ASSIGNMENTS ARE TENTATIVE AND SUBJECT TO CHANGE**