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DEPARTMENT OF NATURAL SCIENCES

VERTEBRATE ANATOMY AND PHYSIOLOGY I

SCB 208

COURSE INFORMATION

3 credits, 4 hours: 2 lecture and 2 lab

Course Coordinator: Dr. Boris Zakharov

M-221 F

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Section 210 A/B

Instructor:

**Course Description.**

The major goal of this course is build a robust basic knowledge of vertebrate Anatomy and Physiology; form strong understanding of lawful relationship between body structure and function.

This course is a laboratory-based. It stresses major concepts of vertebrate anatomy and physiology in order familiarize students with the form, structure, and function of the vertebrate body, especially domestic animals. Scientific method of thinking and the experimental approach will be stressed. The topics studied in this course include a survey of all vertebrate species, and then an in depth evaluation of the anatomy and physiology of domestic mammals and birds. In this course the anatomy and physiology of the integumentary, skeletal, muscular, and endocrine systems will be covered. A special role of homeostatic mechanisms on maintain of animal body structure and healthy functioning will be demonstrated.

**Policy on Academic Integrity.**

VERTEBRATE ANATOMY AND PHYSIOLOGY I (SCB-208) will be conducted in compliance with La Guardia Community College’s Academic Integrity Policy regarding cheating on examinations and quizzes.

If a student is suspected of academic misconduct or dishonesty (such as cheating, bribery, unauthorized photography, or plagiarism) the instructor will complete the academic integrity complaint form. The following steps will then subsequently occur:

 The faculty member meets with the student charged with the violation; shows him/her the completed Complaint Form, which indicates the faculty member’s sanction (either an “F” on the paper, quiz or exam involved: or an “F” in the course). The instructor asks the student to check one of the three options printed on the form. The student may select “I do not challenge the accusation and accept the sanctions” or “I challenge the accusation and wish for the matter to be referred to the Chief Administrator for further review” or “I do not wish to make any statement at this time and I am aware that the sanction will be upheld without further review for appeal after fifteen days of receipt of this notice”.

 Form, with the evidence attached, is then signed by the student and by the faculty member and sent to the Chairperson of the department. The student should be advised that signing of the document is not considered an admission of guilt but only an understanding of the allegations and the possible sanctions filed against them.

 Copy of the form is given to the student and the faculty member retains a copy for his/her files.

 The Chairperson determines whether the matter has been resolved or not; checks the appropriate line on the complaint form; signs the form; files a copy, together with copies of the supporting evidence in the department’s files; and sends a copy with the supporting evidence to the Academic Integrity Officer (AIO) in C-317.

 In case if the alleged violation is discovered after the class has met for the final time in the semester, the instructor notifies the student by e-mail and certified postal mail, requesting a meeting. If the student does not respond, that is so noted on the complaint form and the form with supporting documentation is sent to the department Chairperson, who also attempts to contact the student. If the student does not respond, the form and documents, including documentation of the attempts to contact the student are sent to the AIO.

 If the student checks, “I do not wish to make any statement at this time,” or if the student refuses to sign the form at all, or if the student refuses to meet with the professor, the complaint form and attached documents are filed in the department and are sent to the AIO, who calls the who calls the student to a meeting and then determines an appropriate course of action, as described above. In cases in which the student fails to appear at the required meeting within one week of notification, the faculty sanction shall apply without benefit of student appeal.

 The AIO functions in these processes as the representative of the Vice President of the Division of Student Affairs. The AIO promptly notifies the Chairperson of receipt of the complaint form, of the determination made by either the Academic Standing Committee or the Student-Faculty Disciplinary Committee and of the inclusion of the student’s name in the decision’s data base of students who admit violations or who are determined to be guilty of violations. The AIO will review the data base to identify repeat offenders and to impose appropriate disciplinary sanctions.

 In case when the faculty sanction allows the student to complete work necessary for passing the course, the student is allowed to do so. When the faculty sanction is failure for the course and the student requests a hearing or chooses not to make a statement, the student remains in the course until the matter is resolved. If the matter is not resolved by the end of the term, the professor gives the student a grade that incorporates the proposed sanction, with the possibility of revision when the matter is resolved.

**COURSE CONDUCT**

Course will be conducted online via Black Board, Zoom, and other online platforms. We will meet regularly on Wednesdays in Black Board Collaborative for synchronous lecture and lab sessions. Students also are invited for personal meeting with instructor at his office hours in Black Board Ultra.

Asynchronous study includes Power Points of all course lectures and lab sessions that you can find in your Black Board. Students also will have videos of all lectures made on the base of a textbook. Students may watch these videos on instructor’s Google Drive or ePortfolio. Links to Google drive and ePortfolio are downloaded on the lecture section of course Black Board. Video files may be watched as on computers, tablets, as cell phones. To help master material of the course, students may find a package for active learning that includes online: a) flashcards, b) set of questions (multiple choice, fill blank space, true or false, match terms, etc.), c) list of anatomic and physiologic terms prepared for every textbook chapters in collaboration with Cognella Publishing on their website.

Lab session also will be conducted online via Black Board Collaborative. Anatomic structures will be presented via Power Point slides. PP slides have inbuilt links to You Tube video on cat skeletal system and to veterinary professional website for personal student training. In Black Board there are self-test on domestic animals bones and muscles. These self-tests designed to help students to master skeletal and muscular systems of mink, cat, dog, and horse. They consist of questions with anatomic structure images and answers, so students may train themselves online on their computers or cell phones. Students may find videos on domestic animals’ skeletons and muscles in instructor’s ePortfolio and Google Drive. Links to these resources is on the lab section of student Black Board.

In the Black Board you also will find Study Guides to Midterm and Final Lecture Exams, Lab Quizzes, and Term Banks of bones and muscles students have to know for Lab Midterm and Final Practical Exams.

DO NOT ARRIVE LATE!!

It is rude to your classmates and disruptive to the class for students to arrive late. Lateness will affect your course grade.

The student is strongly encouraged to keep up with the lecture and laboratory material, as there is a large volume of information to assimilate. You are urged to seek assistance if and as soon as you feel that you are having difficulty, rather than waiting until examination dates are imminent. The professor’s office hours you can find in class schedule; other appointments can be made if needed.

Every lecture session (except the first one) will be open by a short 10 min. 12 questions quiz. Questions of the quiz will cover material of previous lecture. Thus, second lecture class will begin with Quiz 1 that covers material of the Lecture 1; Lecture 3 will opens with quiz 2 that covers material of Lecture 2, etc.

In Black Board there will be open Discussion Forum, where students can discuss difficult or most interesting topics of the course. Additionally, there will be provided an opportunity to get extra points that will be added to student quiz total score. Two Independent studies will require to make student own independent research, connect findings with learned in class materials, and apply it to a real veterinary situation. Every Independent study case will give additional 5 points.

**Grading Procedures and Criteria for VERTEBRATE ANATOMY AND PHYSIOLOGY I**

The final grade in SCB-208 is determined by the sum of the lecture and laboratory, written assignments. The lecture composes 60% and the laboratory 40% of the final grade, with the written assignments (counted as a part of the Lecture grade) 10% respectively.

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| **Lecture Exams 60% of the Final Grade** | **Laboratory Exams 40% of the Final Grade** |
| 10 Lecture Quizzes 10% | 2 Written Exams 20% |
| 2 Lecture Exams 40% | 2 Practical Exams 30% |

\*Practical exams are based on the identification of laboratory materials displayed at stations. Written exams may include short answers, fill-ins, diagrams and essays.

**Final Grades**

92.5-100 = A 76.5-79.4 = C+ 59.5-62.4 = D-

89.5-92.4 = A- 72.5-76.4 = C 0-59.4 = F

86.5-89.4 = B+ 69.5-72.4 = C-

82.5-86.4 = B 66.5-69.4 = D+

79.5-82.4 = B- 62.5-66.4 = D

**SCB-208 Information Sheet**

**Attendance is a requirement** for this class. Instructors are required to keep official records of attendance. The maximum number of unexcused absences is limited to 15% of the total number of class hours. Absences are counted from the first day of class even if they are a result of late registration or change of program.

Classes will meet in accordance to the Academic Calendar which may be obtained from the College’s web site. Schedule of classes is posted on the Black Board.

Refer to the College Handbook for the rights and responsibilities of students found on the college’s web site.

The Grading Policy for these courses are noted above. Repeat, “R”, grades are not given in this course and Incompletes, “IN”, are issued only under very restricted circumstances. In order to receive an Incomplete, a student must be passing the course and be able to document why he/she is unable to complete the course work during the semester. Both the student and the instructor must complete and sign an Incomplete Form and list the exams that must be completed before a grade is issued. Students have six months to complete the missing exams; otherwise the incomplete is automatically converted to an F grade. An Incomplete does not provide a student with an opportunity to retake exams. All prior grades are retained and added into the calculation of the final grade. Note that the process for an incomplete must be initiated by the student.

**LECTURE OUTLINE**

**Lecture Text (required):**

Vertebrate Anatomy and Physiology for Veterinarian Technician Students. Boris Zakharov. Cognella Publishing. ISBN: 978-1-5165-3944-4.

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| Week/Session | **Topic** | **Assigned Reading** |
| 1 | Introduction to Anatomy and Physiology. Survey of Vertebrates. | Text book: **Ch. 1**: 1-32 |
| 2 | Chemistry of life. Quiz 1 (on Lecture 1) | Text book: **Ch. 2**: 33-78 |
| 3 | Cell structure and function  Quiz 2 (on Lecture 2) | Text book: **Ch. 3**: 79-123 |
| 4 | Tissues. Integumentary System.  Quiz 3 (on Lecture 3) | Text book: **Ch. 4**: 125-172  **Ch. 5**: 173-206 |
| 5 | Bones, cartilage, and Skeletal System.  Quiz 4 (on Lecture 4) | Text book: **Ch. 6**: 207-270 |
| 6 | Joints and Movement. Quiz 5 (on Lecture 5) | Text book: **Ch. 7**: 271-293 |
| 7 | Midterm Exam (weeks 1-5).  Muscular System. Skeletal Muscles. | Text book: **Ch. 8**: 295-315 |
| 8 | Skeletal Muscles (continued).  Quiz 6 (on Lecture 6) | Text book: **Ch. 9**: 317-356 |
| 9 | Cardiac and Smooth muscles.  Quiz 7 (on Lecture 7) | Text book: **Ch. 9**: 357-368 |
| 10 | Introduction to endocrine system. Hormones.  Quiz 8 (on Lecture 8) | Text book: **Ch. 14**: 515-532 |
| 11 | Endocrine System (continued).  Quiz 9 (on Lecture 10) | Text book: **Ch. 14**: 532-548 |
| 12 | Endocrine System (continued). Review.  Quiz 10 (on Lecture 11) | Text book: **Ch. 14**: 549-570 |
| 13 | Final Exam (weeks 6-12) |  |

**Note:** Beginning from the session 2, there will be a short (10-12 questions) Quiz at the beginning of every session. Every Quiz will cover the topics of the previous Lecture. Every question costs 1 point. Thus, at the end of the semester the total sum of all questions from all quizzes will be about 100 points. That will be your final grade for the Lecture Quizzes. Because these Quizzes will be implemented at the beginning of every session, please do not come late to the class. Otherwise, you may lost the quiz and, as a result, your quizzes points. The Midterm and Final Exams are not cumulative. The Midterm Exam questions will cover topics of sessions 1-5, and Final Exam questions will cover topics of sessions 6-12.

**LABORATORY OUTLINE**

**Laboratory Text (required):**

A Dissection Guide and Atlas to the Mink. David G. Smith, Michael P. Schenk. Morton Publishing Company, 2000 (Revised Edition). ISBN: 0-89582-450-7; ISBN 13: 9780895824509

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| **Week** | **Lab Topic** | **Manual Pages** |
| 1 | Microscope. Tissues and Integumentary System. | Textbook: **Ch. 4**: 125-169; **Ch.** **5**: 173-204  Lab 1 Power Point |
| 2 | Introduction to the skeleton. Cranium. | Textbook: **Ch. 6**: 234-246  Lab-book: **Ch. 2**: 7-12. |
| 3 | Cranium and vertebral column. | Textbook **Ch. 6**: 246-249  Lab-book: **Ch. 2**: 12-15 |
| 4 | Bones of pectoral girdle, and forelimbs. | Textbook **Ch. 6**: 249-254  Lab-book: **Ch. 2**: 16-18 |
| 5 | Bones of the pelvis and hind limbs. Review.  **Lab Written Exam #1 (based on Sessions 2-3)** | Textbook: **Ch. 6**: 255-258  Lab-book: **Ch. 2**: 19-20 |
| 6 | Bones Review | Textbook **Ch. 6**: 234-258  Lab-book: **Ch. 2**: 7-20 |
| 7 | **LAB MIDTERM PRACTICAL EXAM (based on Weeks 1-5)**  Muscular System of Mink | Lab-book: **Ch. 3**: 21-24 |
| 8 | Muscular System of Mink (continued) | Lab-book: **Ch. 3**: 24-32 |
| 9 | Muscular System of Mink (continued) | Lab-book: **Ch. 3**: 32-44 |
| 10 | **Lab Written Exam #2 (based on Weeks 5-8)**  Muscular System of Bird and Rat. | Handout materials. |
| 11 | Review of Muscular System. | Lab-book: **Ch. 3**: 21-44 |
| 12 | **LAB FINAL PRACTICAL EXAM (based on Weeks 6-11)** |  |

**University Resources**

Disabilities Act:

If you have a physical, psychological or learning disability which may interfere with your ability to complete assignments, then please contact Disabled Student Services (DSS), Room M-102 / 718-482-5279. They will review your concerns and determine with you, what accommodations are necessary and appropriate. All documentation of and information regarding disabilities is confidential. **You must register with the Disabilities Office to receive special accommodations**.

The Writing Center:

The Writing Center, Room B-200, offers tutoring in writing skills and assistance on individual papers, both for this class and others. The Center is open Monday-Friday from 9:15am-9:00pm.

The Counseling Center:

The Counseling Center offers a variety of services designed to enhance students’ academic, career and personal development. Among the services offered are:

1. Education planning
2. Career Counseling
3. Personal Counseling (i.e., family issues, anxiety, depression, etc.)
4. Academic Advisement

Services are free to LAGCC students, and the Counseling Center is located in B-100 and can be reached at 718-482-5250.

College regulations regarding cheating will be strictly enforced. The policy on academic integrity is available at the following address:

http://library.laguardia.edu/files/pdf/academicintegritypolicy.pdf