EXSC 340-01: Exercise Physiology Lab
Spring 2017

Instructor: Amber Manor, MS, SCCC, CSCS
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Course Description: This course will reinforce principles and theories covered in EXCS 340 Lecture and provide a hands-on opportunity to apply principles and theories related to exercise physiology.

Course Objectives: The major objective of this course is to assist the student in gaining an understanding and appreciation of the physiological and metabolic adaptations accompanying physical work

Course meeting place: Physical Education Center, Lab 115

Course meeting time: Wednesday 8am-11am

Textbooks: Adams, Exercise Physiology Laboratory Manual

Prerequisites: EXSC 201 or PEHD 201, BIOL 201

Grade: Lab accounts for 25% of your overall EXSC 340 grade:
Lab Quizzes – 10 quizzes throughout the semester, given prior to lab class.
Lab Report Assignments - 10 lab reports each worth 50 points.

Lab Attendance and Participation: You are required to attend every lab class, while wearing appropriate clothing (i.e. exercise clothing with athletic shoes). Showing up for lab without appropriate clothing or not participating in that day’s activities will result in you losing 50% of the total points for that lab’s respective write up. Students should also arrive to lab prepared by reading ahead the appropriate lab chapter in the lab manual as well as the lab documents. Students should know the specific lab protocols prior to arriving for that day’s lab. Students will not be allowed to participate in the wet lab (Lab 3) until that can successfully complete the blood borne pathogen quiz. Missing a lab class, without setting up prior arrangements with your lab’s instructor, will result in you receiving a zero on that lab’s respective write-up. See your instructor prior to the start of this course if you participate in an activity that may cause a problem with attendance (e.g. representing the College in varsity sports, conference presentation) or participation (documented medical condition which limits physical activity) so proper arrangements can be made. If for personal or medical reasons any classes are missed, the instructor should be informed of the reason BEFORE the lab is missed. **Your full participation in all labs is expected as optimal learning occurs through participation (medical conditions will be accommodated with proper notification).** Medical or any other types of appointments are not an acceptable reason to miss class since you have the ability to reschedule your appointment following this notice.

Lab Report Assignments: Following certain labs each student will be given a set of questions to answer and submit the following week. Each answer must be typed, doubled spaced, and will require the use of appropriate references to support your answer following National Library of medicine (NLM)
It is acceptable to use your class and lab text books as your references but as with any reference, you must include a citation (number of specific reference) within the body of your answer, as well as the bibliographic information of the source (authors, title, date of publication, book or journal, volume or edition, and page numbers) at the very end of your assignment. To receive maximal points (A-level work) additional references are required beyond class text books. Be sure to number all references after listing them in alphabetic order by first author’s last name and follow the National Library of Medicine (NLM) reference format style. A grading rubric will be posted on the Google Drive. Reports will be due at the **beginning** of the specified lab class. **Late lab assignments will not be accepted.** Examples of all assignments and grading rubrics are posted on the Google Drive.

**Lab Extras:** All data from each lab will need to be posted to the Google Drive by 5pm Wednesday. If there is any data missing from individual labs or group labs there will be 10 points deducted on the Post Lab Discussion Report for that individual or group.

**Tentative Lab Schedule**

**Lab 1**- Units of Measure, Collection of Data, Resting and Exercise Heart Rate

**Lab 2**- Risk Assessment and Stratification, PAR-Q, Health Status Questionnaire, Blood Borne Pathogen Training, Resting and Exercise Blood Pressure
   Lab 1 report due

**Lab 3**- Body Composition – Body Mass Index, Skinfold, Bio-Electrical Impedance, Girth, Hydrostatic Weighing
   *Blood Borne Pathogen Quiz*
   Lab 2 report due

**Lab 4**- Aerobic Field Testing – Rockport Walk Test, Cooper 1.5mile Run Test, Forestry Step Test
   Lab 3 report due

**Lab 5**- Submaximal Lab Testing – Treadmill and Astrand Cycle Ergometer Test

**Lab 6**- VO₂ max and Heart Rate Max Testing – Treadmill protocol
   Lab 4 and 5 report due

**Lab 7**- Lactate and Ventilatory Threshold Testing – Treadmill protocol
   Lab 6 report due

**Lab 8**- Aerobic Practical
   Lab 7 report due

**Lab 9**- Anaerobic Field Testing – 40yard sprint, Vertical jump, 30sec Step test
   Practical Assignment Due

**Lab 10**- Anaerobic Lab Testing – Wingate Cycle Ergometer Test

**Lab 11**- Strength Testing - Direct and Indirect Rep Max Tests for Bench and Leg Press
   Lab 9 and 10 report due

**Lab 12**- Anaerobic Practical
   Lab 11 report due
Final Practical report due one week after practical lab date

Student Learning Objectives:
As a result of participating in EXSC 340 Lab, students will demonstrate proper technique to take resting and exercise heart rate and blood pressure.

As a result of participating in EXSC 340 Lab, students will demonstrate proper administration of sub maximal and maximal aerobic capacity fitness assessments.

As a result of participating in EXSC 340 Lab, students will demonstrate proper administration of field and lab assessments of maximal anaerobic power.

Disability Statement:
Any student eligible for and needing accommodation because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged.