College of Charleston

EXSC 340: Exercise Physiology and Lab
Spring 2013

Instructor: Dr. Tim Scheett
Office: Silcox Rm 214
Office hours: Open door policy
OR email to schedule an individual appointment
Phone: (843) 953-6538 (office)
Email: ScheettT@cofc.edu

Course meeting: Lecture: Tuesday and Thursday, 10:50 – 12:05 PM (Johnson 206)
Labs: Monday 6-9pm; Tuesday 6-9pm, Wednesday 10-1pm,
Thursday 2-5pm or Friday 10-1pm (Room 115 Silcox Center)

Prerequisite courses: BIOL 201 Human Physiology
EXSC 201 Introduction to Physical Education or
EXSC 201 Introduction to Exercise Science

Course Description: 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 Texts:

Student Learning Outcomes:
Upon successful completion of the course, the student will be able to:
1. Demonstrate knowledge of cardiovascular, muscle, pulmonary, and endocrine physiology.
2. Explain and apply energy transfer for various work, exercise and athletic events.
3. Describe the physiological adaptations to acute and chronic exercise.
4. Describe the physiological response to exercise in hot and cold environments.
5. Demonstrate the technical skills required to administer physiological tests.
6. Demonstrate knowledge of the importance of acquiring physiological data.
7. Assess and evaluate various fitness components using various tests and observations.
8. Demonstrate the capacity to collect, analyze, and interpret physiological test data.
9. Explain the physiological background and principles for test protocol.
10. Demonstrate the ability to administer various components of a fitness assessment (i.e., anthropometric, skinfold, underwater weighing, girth, height, weight, blood pressure, heart rate, oxygen consumption strength, endurance, power in humans).
11. Demonstrate the ability to use a computer and appropriate software applications to complete assignments and projects.
Grade Distribution: 800 points total - There will be four exams during the semester worth 300 points (75 points each) in addition to a cumulative final exam (100 points). Format of these exams will be T/F, matching, and/or multiple choice. Exam dates will be discussed in class at least 2 days prior to the exam. The final exam will be administered on Tuesday, April 30th at 8:00 AM.

There will be numerous quizzes worth approximately 200 points given throughout the semester at the professor's discretion and may be both in class and/or on OAKS. The quizzes will cover lecture material presented from the previous quiz as well as that days lecture materials. They will also cover any readings assigned to the class during this time period. These quizzes will be timed and there will be no make-ups given for the quizzes. Format of these quizzes will be T/F, short answer, fill in the blank, matching, and/or multiple choice.

The lab portion of the class will be worth 25% of the class grade. There will be laboratory assignments and questions assigned throughout the semester. Each assignment will be graded based on standard objective grading criteria that will be posted on OAKS.

All due dates will be announced and assignments are due at the beginning of lab. Late assignments will not be accepted.

Grade Scale:

Course letter grades will be determined on the basis of overall performance. Earned points will be divided by 800 total points and the following will be used to determine final grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>90 – 100</td>
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<tr>
<td>A-</td>
<td>88 – 89</td>
</tr>
<tr>
<td>B</td>
<td>80 – 84</td>
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<tr>
<td>B-</td>
<td>78 – 79</td>
</tr>
<tr>
<td>C</td>
<td>70 – 74</td>
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<tr>
<td>C-</td>
<td>68 – 69</td>
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<td>D</td>
<td>64 – 65</td>
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<td>D-</td>
<td>62 – 63</td>
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<tr>
<td>F</td>
<td>Below 62</td>
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Attendance:

While it is recognized that certain unforeseen events may prevent you from attending a certain class, due to the lecture and discussion nature of this class it is vital that you attend and participate. If you miss more than 25% of the classes, you will be assigned a grade of WA. If extreme circumstances necessitate an absence, you will be held responsible for the class material covered during your absence. Excused absences will be considered for the following: serious illness, hospitalization, death of a family member or close friend, attendance at an event representing the College of Charleston, etc. A doctor or dentist appointment, court date, work, wedding, etc will not be considered an excused absence. Appropriate documentation must be provided from the Undergraduate Dean’s Office for an absence to be considered excused. If a student has more than four unexcused absences that student may be removed from the class roster. In addition, promptness is required and expected as being tardy will count as an unexcused absence.

I do understand that unforeseen circumstances may prevent you from attending a class during which a quiz or exam is given. If you arrange ahead of time, I will make other arrangements (this may include an essay exam). Also, be warned that I may ask for verifiable proof of your stated reason for your absence. There are NO make-up quizzes given!! Remember – I was a student not that long ago.

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Lab Attendance and Participation: You are required to attend every lab period, while wearing appropriate clothing (i.e. exercise clothing with athletic shoes). Showing up for lab without appropriate clothing will count the same as if you did not attend lab. 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. varsity sports) so proper arrangements can be made. If for personal or medical reasons several classes are missed, the instructor should be informed of the reason. Your full participation in all labs is expected and required (medical conditions will be accepted 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.

Multi-media:

The use of any multi-media device during class is strictly prohibited!! It is recommended that you bring a stand alone calculator to regular class meetings as well as exams. If your cell phone rings you will be asked to leave class. If you have a dire family emergency where you are expecting a call during class – you will be expected to take the seat next to the door and quietly exit the class if your phone vibrates. No electronic devices will be allowed to be used, other than a calculator, for any exam. The possession of any multi-media device during an examination will automatically result in a zero on that exam.

Final grades will not be given out or posted at the end of the semester. You will have to wait until you can access your grades via Cougar Trail or when the University sends out the official grade records.

Honor System: Review the current Student Handbook: A Guide to Civil and Honorable Conduct, especially the section pertaining to the classroom code of conduct.

You are expected to do your own work in this course. If you are caught cheating or plagiarizing another individual’s work you will be reported to the appropriate University office and you will receive an “F” for a grade in the course. You need to do any and all writing on your own and in your own words. Simply re-arranging a paragraph or changing one or two words of another individual’s work is still considered plagiarism. The 1, 2, or 10 points you cheat for are not worth risking your ENTIRE academic career. DO NOT put me in a situation where I have to act accordingly.

General Notes:

- The large volume of material presented in this class will necessitate frequent and consistent study. What you do the first week is as important as what you do the last week. Don’t put off studying for quizzes and exams until the last minute. Quite simply – 1-2 hours of studying EVERYDAY will prepare you to do well on the quizzes and thus the subsequent exams will not be as difficult to prepare for. Exams and quizzes will be demanding and difficult; you must be thoroughly familiar with the information to the point of being able to interpret and apply it. This is an upper level class and I fully expect each of you to think about the basic information you already know, interpret it and apply it to various situations.

- It is strongly recommended that you read “ahead” of the lectures. The pace of the lecture presentations is approximately 1 unit (1-3 chapters) every 2-3 weeks, however, some are quicker than others. On a regular basis I will try to make you aware of where we are at in
the course so that you can prepare accordingly. I strongly recommend that you read the
text BEFORE and again AFTER the lectures on that material.

- If you miss a class when handouts are provided it is your responsibility to get a copy of the
  handouts from another student. You are also responsible for obtaining the missed notes
  from another student. DO NOT COME TO THE PROFESSOR AND ASK FOR HANDOUTS
  AND/OR NOTES FOR THE LECTURE(S) YOU MISSED.

- If there is a student in this class who has a documented disability and has been
  approved to receive accommodations through SNAP Services, please feel free to
  come and discuss this with me during my office hours.
  - Any student eligible for and needing academic adjustments or accommodations because
    of a disability is requested to speak with the professor in a timely manner so that your
    needs can be addressed.
  - The College will make reasonable accommodations for persons with documented
    disabilities. Students should apply for services at the Center for Disability Services
    located on the first floor of the Lightsey Center, Suite 104. Students approved for
    accommodations should notify their professors as quickly as possible.
  - This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans
    with Disabilities Act that stipulates no student shall be denied access to an education
    “solely by reason of a handicap.” Disabilities covered by law include, but are not limited
    to, learning disabilities and hearing, sight or mobility impairments. If you have a
    documented disability that may have some impact on your work in this class and for
    which you may require accommodations, please see an administrator at the Center of
    Disability Services, (843) 953-1431 or me so that such accommodation may be
    arranged.

Class Schedule: This schedule is tentative and most likely will change. The rate at
which we progress depends on how well the class is grasping and understanding the
concepts. Exams will be announced at least 2 days in advance.

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<thead>
<tr>
<th>Lectures</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1-3</td>
<td>Introduction and Control of Internal Environment</td>
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<tr>
<td>4-5</td>
<td>Exercise and the Environment</td>
</tr>
<tr>
<td>6-8</td>
<td>Exercise Endocrinology/Training Adaptations</td>
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<td>Exam 1</td>
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<tr>
<td>9-10</td>
<td>Bioenergetics</td>
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<td>11-15</td>
<td>Exercise Metabolism/Training Adaptations</td>
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<td>Exam 2</td>
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<tr>
<td>16-17</td>
<td>Neuromuscular Function</td>
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<td>18-21</td>
<td>Skeletal Muscle/Training Adaptations</td>
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<td>Exam 3</td>
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<tr>
<td>22-23</td>
<td>Cardiovascular Function</td>
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<tr>
<td>24-28</td>
<td>Cardiovascular Function/Training Adaptations</td>
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<td>Exam 4</td>
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Cumulative Final Exam