About this Course

This 4 hr. course is built upon the fundamentals you learned from your previous Exercise Physiology course. It is designed to allow students to openly research and discuss the most pressing matters facing the field of Exercise Science.

Through facilitated discussions, research presentations and critical examination of the literature, students will be able to gain a deeper understanding of the mechanisms of the body’s response to exercise and to better inform reasoning for research and recreational/clinical programming.

The course is broken up into 4 Modules (M1, M2, etc.) that have specialty areas where you may already have some topical knowledge in. The following sections will detail what you can expect to learn about in this course.

M1: Physical performance
M2: Energy balance & exercise/diet
M3: Genetic and metabolic expressions
M4: Health effects of exercise on aging related conditions

Learning Objectives

- To increase you knowledge base and demonstrate your understanding of:
  1. Established responses to endurance and resistance training and the mechanisms behind these changes.
  2. Recent findings and stance of energy balance factors/predictors for weight gain/regain or weight loss pertaining to diet and exercise types and dose.
  3. Underlying genetic factors and the expression on metabolic processes in the body that signal the cascades for healthy physiological response to exercise.
  4. The detriments of CVD and brain health due to aging and the effects of different modalities of exercise response.
  5. Scientific presentation skills and confidence on how to source information and answer questions from an audience.
NEWS!

Niacin turbocharges the growth hormone response to anaerobic exercise: A delayed effect

We know that growth hormone secretion may rise 300 percent with exercise, without niacin. According to this study, this effect may be "turbocharged" up to a 600 percent rise with niacin within 300 min (5 h) of taking it, and possibly 1,500 percent soon after 300 min passed since taking niacin.

Class Organization

This is a face to face class and it is your responsibility to learn the material and show up. You will need to collect another student's notes if you are absent.

Even without a dedicated textbook, there will be assigned readings that you are expected to review prior to the beginning of the class.

This class is an active learning class where everyone will be expected to contribute to the core learning material. I will be presenting half the content and student groups will be delivering the other half with their own topics related to the course objectives. This way a foundation of learning is given and your own interests within reason will also be covered.

We will quickly break out into groups at the beginning of the semester. You will need to gain an understanding of online collaboration tools quickly so as to limit any problems with meeting outside of class.

Please silence and stow your cell phones. Do not check them during class. Laptop computers are allowed for notetaking but be nice to your classmates and do not distract them.

How to ask questions

I will of course be available to answer your questions in class, but I will also be creating a Discussion Board in OAKS where you can ask general questions. Other students may have the same questions, so please check there for those discussions or the FAQ section that will be on the site under Discussions.

There will also be an OAKS student lounge area for questions about anything course related (find study partners, share technology used for presentations, etc.) I will chime in too!

Late Policy & Attendance

Attendance:

You are allowed 3 absences then each additional absence is 2 points off the final grade. Two tardies equal 1 absence.

Excused absences do not count towards the 3. (doctor's, conference trip, presenting, interview, CoFC athletics, death in family as per CoFC policy)

Late Policy:

Not showing up for an exam is an automatic 0 for the grade if unexcused. Please make preparations ahead of time to take a test if you will be out. I reserve the right to give a makeup exam (that may be harder).

For assignments, each 24 hours late reduces the grade by 10%.
Grading and Assignments

**Oral Presentations (400 points):** Students will work in groups of three to prepare and present an oral presentation to the rest of the class for each of the 4 modules covered. Each group must choose a different approved topic for their presentations. The presentation should last 20-30 min (rubric can be found on OAKS) followed by a 5-10 min Q&A period. The talks are to be based on 2+ peer-reviewed research manuscripts (chosen from a list provided by the instructor) and must be tailored towards teaching your professional peers new information. The presentations will include a section outlining and discussing the physiology and underlying biological mechanisms of the topic, and in-depth analysis of the issue/study at hand, practical application of the information and future research directions in this area. A fact sheet should be given to the other groups that will be the basis of several exam questions. ALL students are expected to read the article(s) which will be presented and thus be able to engage in the Q&A period.

**Exams (400 points):** Four written examinations will be given at the end of the 4 units covered during the semester. Knowledge will be assessed using multiple choice, matching, fill in the blank and short answer questions taken from class and reading material. You will be notified at least one week in advance if there is a change in an exam date.

**Active Participation and Discussion (100):** During class, you will need to read the assigned readings so you can engage in classroom debates and discussions. You may be called upon to answer a question or start a discussion about the readings. Also we will have an active and debate-driven atmosphere where others will respond to the readings and the student presentations. This includes in-class and online discussions. Each group will ask at least one question per student presentation for full credit.

**Breakdown:**
- Oral Presentations: 400
- Exams: 400
- Participation: 100
- Total: 900

**TIP:**
Wondering what your grade is so far: Check OAKS under Grades and it will be there

**Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Day</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Aug 26</td>
<td>Wed</td>
<td>Course Intro</td>
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<tr>
<td>2</td>
<td>Aug 31</td>
<td>Mon</td>
<td>M1 – Endurance Train</td>
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<td>3</td>
<td>Sep 2</td>
<td>Wed</td>
<td>M1 – Resistance Train</td>
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<td>4</td>
<td>Sep 7</td>
<td>Mon</td>
<td>M1 – Hormone Response</td>
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<td>5</td>
<td>Sep 9</td>
<td>Wed</td>
<td>Student presentations</td>
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<td>6</td>
<td>Sep 14</td>
<td>Mon</td>
<td>Student presentations</td>
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<td>7</td>
<td>Sep 16</td>
<td>Wed</td>
<td>Student presentations</td>
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<tr>
<td>8</td>
<td>Sep 21</td>
<td>Mon</td>
<td>Exam 1</td>
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<tr>
<td>9</td>
<td>Sep 23</td>
<td>Wed</td>
<td>M2 – Energy Balance</td>
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<tr>
<td>10</td>
<td>Sep 28</td>
<td>Mon</td>
<td>M2 – Weight loss</td>
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<td>11</td>
<td>Oct 5</td>
<td>Wed</td>
<td>M2 – Appetite Regulation</td>
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<td>12</td>
<td>Oct 7</td>
<td>Mon</td>
<td>Student presentations</td>
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<td>13</td>
<td>Oct 12</td>
<td>Mon</td>
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<td>14</td>
<td>Oct 14</td>
<td>Wed</td>
<td>Exam 2</td>
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<td>15</td>
<td>Oct 19</td>
<td>Mon</td>
<td>No Class – Fall Break</td>
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<tr>
<td>16</td>
<td>Oct 21</td>
<td>Wed</td>
<td>M3 – Genetic disorders</td>
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<td>17</td>
<td>Oct 26</td>
<td>Mon</td>
<td>M3 – metabolic expression</td>
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<td>18</td>
<td>Oct 28</td>
<td>Wed</td>
<td>M3 – Glu-4/insulin pathways</td>
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<td>19</td>
<td>Nov 2</td>
<td>Mon</td>
<td>Student presentations</td>
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<td>20</td>
<td>Nov 4</td>
<td>Wed</td>
<td>Student presentations</td>
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<tr>
<td>21</td>
<td>Nov 9</td>
<td>Mon</td>
<td>Student presentations</td>
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<td>22</td>
<td>Nov 11</td>
<td>Wed</td>
<td>Exam 3</td>
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<td>23</td>
<td>Nov 16</td>
<td>Mon</td>
<td>M4 – gene expression</td>
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<td>24</td>
<td>Nov 18</td>
<td>Mon</td>
<td>M4 – brain &amp; cognition</td>
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<td>25</td>
<td>Nov 23</td>
<td>Mon</td>
<td>M4 – CVD inflammation</td>
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<td>26</td>
<td>Nov 25</td>
<td>Wed</td>
<td>No Class</td>
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<td>27</td>
<td>Dec 2</td>
<td>Wed</td>
<td>Student presentations Evaluations</td>
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<td>28</td>
<td>Dec 7</td>
<td>Mon</td>
<td>Student presentations</td>
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<td>29</td>
<td>Dec 14</td>
<td>Mon</td>
<td>Exam 4 12:30pm</td>
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M1,M2,M3,M4 = modules inclusive of each exam

**Evaluation Scale:**
Course grades will be determined on the basis of overall points earned.

- 93% to 100% = A
- 90% to 92% = A-
- 88% to 89% = B+
- 84% to 87% = B
- 80% to 83% = B-
- 78% to 79% = C+
- 74% to 77% = C
- 70% to 73% = C-
- 68% to 69% = D+
- 64% to 67% = D
- 60% to 63% = D-
- <60% = F

**Submitting assignments:** Please use WORD for documents and EXCEL for spreadsheets, and POWERPOINT for presentations. If you have a different format please convert to a PDF. I can’t comment on PDF and can’t open .pages files. All submissions will have a Dropbox folder on OAKS.
Students with Special Needs

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 after class or during my office hours during the first week of class. 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. It is your responsibility to have your documentation to me 1 week prior to any test to allow proper time for preparation.

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.

Please see the following website: http://disabilityservices.cofc.edu/

Civil and Honorable Conduct

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved. Incidents where the instructor determines the student’s actions are related more to a misunderstanding will handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student’s file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student’s transcript for two years after which the student may petition for the X to be expunged. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration—working together without permission—is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others’ exams, fabricating data, and giving unauthorized assistance. Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the Student Handbook: http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php

A few last things...

...put in the work, and you will get a lot out of the course!

Be mindful of your fellow students when on laptops...stay on task.

Cellphones should be silenced and in your bag or pockets during class. I will let you know if we use them briefly.

Oaks is your resource for everything, communication and calendar. If in doubt, check our site. Resources and readings will be found there. And....