Meeting Time: MWF 10:00-10:50 a.m.
Meeting Location: Silcox Center 116
Instructor: Michelle McLeod, PhD, ATC, SCAT, PES
Office: 314 Silcox Physical Education and Health Center
Office Hours: MW 11:00 a.m. – 1:00 p.m. (subject to change) or by appointment
Office Phone: 843-953-3047
Email: mcleodmm@cofc.edu
Course Website: Hosted by OAKS
Prerequisites: EXSC 330, 340; MATH 104 or equivalent; or permission of the instructor
Required Text:
II. Supplemental readings on OAKS

Course Description: The class will focus on research design, data collection and interpretation of research reports in health and exercise science, including common physiological, biomechanical, anatomical, and health-related variables. Emphasis is placed on the development of a research question and proposal, and the appropriate procedures to further the body of knowledge in the area of health and exercise science.

Course Objectives: Upon successful completion of the course you should be able to:
1. Define common research designs used in exercise science, health, athletic training, and medicine
2. Determine various positive and negative characteristics of specific research designs
3. Assess and optimize validity and reliability of variables used in athletic training, health and exercise science
4. Develop a focused research question and appropriate experimental hypotheses for a specific sub-discipline of interest
5. Perform a thorough literature search using contemporary search engines
6. Assess the financial cost and level of invasiveness for various research methods
7. Make appropriate ethical decisions in research, including the use of special populations as research participants while involved in physical exertion
8. Understand statistical procedures
   a. Descriptive statistics
   b. Inferential statistics
9. Understand common statistical software packages
10. Interpret statistical evidence and discuss the pertinent implications
11. Write a research proposal using a common style specified by a peer-reviewed journal in his or her sub-discipline

Student Learning Outcomes:
1. As a result of this course, students will be able to utilize contemporary search engines to perform a thorough literature search as evidenced by earning a B or higher on the Research Proposal Reference List.
2. As a result of this course, students will be able to develop and defend a focused research question and experimental design as evidenced by earning a B or higher on the Research Proposal.

3. As a result of this course, students will be able to differentiate between common research designs used in exercise science, health, athletic training and medicine as evidenced by earning a B or higher on the Research Design Infographic.

**Professional Behavior:** You are expected to conduct yourself as a professional and to demonstrate respect for the course instructor and peers with behavior that is conducive to a positive learning environment. You are expected to be on time and present for each class session. Cell phones must be turned off prior to the beginning of class and stored away unless being utilized during class to complete an assignment as directed by the instructor. All assignments are to be completed and turned in on time. Late assignments will result in a reduced grade as determined by the instructor’s discretion (10% deduction for each day the assignment is late, including late submissions the day of) and failure to turn in an assignment by the end of the term will result in a zero for that assignment.

**Attendance:** Class attendance is an individual student responsibility and will be recorded on a limited basis. Students are expected to be present and on time to every class, and to complete all assignments as outlined. Excused absences will be permitted for personal emergencies (personal and family related illness or death, documented with a note from a health care provider), religious observances, participation in University-sponsored activities (athletics or artistic performances), or government-required activities (military service or jury duty). It is the student’s responsibility to communicate to the instructor in advance about missing class via e-mail, telephone or in person. Missed work must be made up and it is the student’s responsibility to arrange a make-up time. Missed exams and quizzes can only be made up if there is documentation for an illness or conflict. Make-up quizzes and exams must be scheduled in advance; otherwise the student will receive a zero. If you are late to class on an exam day, you will be required to turn in your exam when the time limit has been reached. Repeated tardiness and/or absences may result in a lowered grade.

**Honor Code and Academic Integrity:** It is expected you will conduct yourself within the guidelines of the honor system. (See 2015-2016 Student Handbook) All academic work should be done with the high level of honesty and integrity that this institution demands. The student handbook is a guide to your responsibilities and rights as a student. If you are not familiar with the document, please take the time to review the information contained within the handbook.

Incidents where your actions are determined by the instructor to be related more to a misunderstanding rather than a misjudgment will be handled as a Class 3 Honor Code Violation. An intervention designed to help prevent you from repeating the error will be given to you. The intervention, submitted by form and signed both by the instructor and yourself, will be forwarded to the Dean of Students and placed in the your student 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 as a Class 1 or Class 2 Honor Code Violation. If the Honor Board finds you responsible for academic dishonesty you will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on your transcript for two years.
after which you may petition for the X to be expunged. You may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

You 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, or using unauthorized resources during quizzes or exams), copying from others' exams, plagiarism, 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.

**Disability Statement:** 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. If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please set up an appointment to discuss accommodations with me.

**Evaluation Criteria:**

<table>
<thead>
<tr>
<th>Class Preparation Assignments (10 x 10 pts)</th>
<th>100 pts</th>
<th>Research Proposal</th>
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</thead>
<tbody>
<tr>
<td>Exams (3 x 100 pts)</td>
<td>300 pts</td>
<td>Reference List</td>
</tr>
<tr>
<td>Final Examination (Comprehensive)</td>
<td>125 pts</td>
<td>Abstracts (5 x 3 pts)</td>
</tr>
<tr>
<td>Journal Article Critique</td>
<td>50 pts</td>
<td>Introduction</td>
</tr>
<tr>
<td>Research Design Infographic</td>
<td></td>
<td>Materials &amp; Methods</td>
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<tr>
<td>Final Product &amp; Presentation to Class</td>
<td>25 pts</td>
<td>Presentation of Proposal</td>
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<tr>
<td>Quizzes (5 x 10)</td>
<td>50 pts</td>
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<tr>
<td><strong>Total Points</strong></td>
<td><strong>725 pts</strong></td>
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**Final Course Grade:** Totaling the number of points earned and dividing it by the total number of available points (835) will calculate/determine the final grade. The final grade for this course will be assigned based solely upon the percentage of points earned. No other factor will be considered. The grade will be assigned according to the following table:

- A      >90%
- A-     89 – 88%
- B+     87 – 85%
- B      84 – 80%
- B-     79 – 78%
- C+     77 – 75%
- C      74 – 70%
- C-     69 – 68%
- D+     67 – 66%
- D      65 – 64%
- D-     63 – 62%
- F      <62%

**NOTE:** The last day to withdraw with a grade of “W” for the semester is **Friday, March 18th, 2016.**
Details of Evaluation Criteria:

**Class Preparation Assessments**
Ten (10) Class Preparation Assessments will consist of questions covering material presented in this course will be given over the course of the semester. Assessments may be instructed to be completed prior to the start of class via the course OAKS page, or may be completed during the course meeting time as indicated.

**Examinations**
Four written examinations will be given over the course of the semester. The format of the examinations will vary with the content that is being tested. NOTE: Due to the projected class schedule examination dates are subject to change. Any changes in examination date will be provided one week in advance.

**Journal Article Critique**
An important component of being an informed consumer of research reports and developing a strong research proposal includes the ability to evaluate the quality of a published research paper. For this assignment you will choose a published research article from a list of topics provided by the instructor in an area of discipline in which you are interested. Upon reading the article, you will be asked write a summary of the paper addressing several questions related to the quality of the paper. Specific details regarding this assignment will be provided in a rubric posted on the course OAKS page.

**Research Design Infographic**
You will be tasked with creating an infographic illustrating one of the various forms of research design discussed in class. Details regarding this assignment will be provided in a rubric posted on the course OAKS page. In addition to creating the presenting your infographic to the class, you will evaluate the infographics of your peers. The average score of each of your evaluators will be recorded for this portion of the overall assignment score.

**Research Proposal**
All students are strongly encouraged to engage in research at the College of Charleston. This assignment will help you develop the skills to draft a research proposal and prepare you to engage in research activities. Required components for research will include: introduction, materials and methods, and references. By the end of the fall 2015 semester, researchers must have completed CITI training. Development of your research proposal will include: 1) references, 2) abstracts, 3) introduction and significance, 4) materials and methods and 5) a presentation of your proposal. Specific details regarding the research proposal including formatting and grading will be provided in a rubric posted on the course OAKS page.