COLLEGE OF CHARLESTON
EXSC 444-01: SCIENTIFIC WRITING AND DATA ANALYSIS (3 CREDITS)
Fall 2017

Meeting Time: There is no assigned meeting time for this online course
Meeting Location: All course content will be delivered via OAKS; there is no assigned meeting location for this course
Instructor: Michelle McLeod, PhD, ATC, SCAT
Office: 310 Silcox Physical Education and Health Center
Office Hours: Mondays 11:00 a.m. - 12:00 p.m. via Google Hangout or by appointment
Office Phone: 843-953-3047
Email: mcleodmm@cofc.edu
Course Website: Hosted by OAKS
Prerequisites: Senior standing or permission of the instructor
Required Text:
I. Lindsay, David. Scientific Writing = Thinking in Words. CSIRO Publishing, Collingwood, Victoria, Australia, 2011. Available on your laptop or kindle device from Amazon.
II. Supplemental readings located on OAKS
Required Technology:
I. Computer with Internet access, sound card, microphone or external speakers/headphones
II. OAKS
III. Google Drive – use with your g.cofc.edu ID
IV. VoiceThread – I recommend linking with your g.cofc.edu account for ease of identifying your work

Course Description: A study of the general principles of scientific writing and research related to better understanding of the literature in exercise science. The class will be focused on writing effectively and efficiently. Students will write abstracts, research proposals, and selected parts of a manuscript, including the writing of a clear and effective: introduction, materials and methods, results, discussion, conclusions. Students will also be introduced to a variety of writing techniques, techniques for overcoming barriers to writing, and will have considerable practice writing, rewriting, responding to instructor feedback and edits, gain practice with peer editing, and will complete a simple data collection process (data will be compiled from all classmates). Students will be introduced to reference management software, techniques for proper referencing, and plagiarism prevention.

Course Objectives: Upon successful completion of the course, the student should be able to:
1. Recognize commonly used research designs in exercise science, health, and medicine and understand the difference between original research and review articles.
2. Be able to identify keys points, strengths and weaknesses in a research article.
3. Write an effective abstract suitable for submission to a professional conference, such as American College of Sports Medicine.
4. Understand the cogent aspects of the introduction in exercise science and write and submit an introduction following instructions.
5. Understand the mechanics of and write an effective materials and methods section
6. Become involved in a simple data collection process that will help them gain an appreciation for research design and methodology (and provide data for writing a results section).
7. Present the results of a research project in table and graphic form.
8. Use available literature to write an effective critical review to support the results of a research project.
9. Write the conclusion/summary with salient points.
10. Effectively write and format the referencing style for journals typically used in exercise science.
11. Document a substantial improvement in writing skills over the course of a semester being required to rewrite assignments in response to instructor and peer edits.
12. Be an effective “editor” for writing completed by a student peer.
13. Learn to communicate research effectively in poster or oral presentation format.

**Student Learning Outcomes:**

1. Recognize commonly used research designs in exercise science, health, and medicine and understand the difference between original research and review articles as evidenced by earning a grade of B or higher on course quizzes.
2. Be able to identify keys points, strengths and weaknesses in a research article as evidenced by earning a grade of B or higher on a written research article critique.
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.

Network Etiquette – “Netiquette.” Because of the online nature of this course with little to no face-to-face interaction, please remember to be mindful of your online behavior. The following standards will be expected in this course:

- Use appropriate language, grammar, and punctuation. Discussion boards are not the equivalent of text messages.
- No “SHOUTING!” Refrain from the use of acronyms that are not common to the class.
- Please be mindful of other’s posts. Pause and reflect before posting a response of extreme emotion and opinion.
- When starting a new discussion post, make sure you use clear subject lines.
- Keep your content relevant to the course content. I will be glad to hear new relationships may be formed as a result of interacting in this group, but please keep posts professional.
- Be Positive!

**Communication** – Clear communication is a necessity in the online course format. If you have general questions specific to the course that other students might also have, check the General Course Questions discussion board and/or start a new discussion thread. If you know the answer to a question a peer has posted, you do not need to wait for me to respond; take initiative and post with an answer! I will be checking the discussion boards will respond within 24 hours, Monday-Friday. I will likely not post responses to discussion boards or e-mails if they are sent after 5 p.m. the evening before an exam or a due date. Please plan your schedules accordingly. Also, don’t forget to check the syllabus.
Technical Issues – If you have problems related to the course, please check the Technical Issues discussion board (accessing Google Drive, sharing/submitting files, etc.). If you have problems accessing OAKS, please contact the Student Computing Support Desk at 843.953.5457 or e-mail studentcomputingsupport@cofc.edu. Check for computing downloads and tutorials at blogs.co.fc/scs/.

Student Specific Questions – If you have a question specific to yourself (i.e. grade, etc.) you may contact me via e-mail or my office phone. E-mail is your best option. When using e-mail, my expectation is that you have taken the time to properly compose an e-mail message. If you have questions about what this looks like, look here and here.

Course Schedule, Assignment Due Dates and Exams – 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). In the unlikely event that there is a change to an assignment due date or to an exam date, you will be given no less than one week’s notice. However, it is your responsibility to keep up with due dates in this course. Any announcements or changes to the course schedule or syllabus will be posted in the Course News feed in OAKS. I highly recommend that you subscribe to receiving notifications when an announcement is posted. You can do this on the Course News page. Please see details instructions found on the course OAKS page in the “Links to Tutorials/Instructions” Module. All assignments will be due at 11:59 p.m. EST of each Tuesday. New course content modules will open on Wednesdays at 12:01 a.m. EST unless otherwise noted on the course schedule. Assignment, quiz content and other materials may not become available until lecture materials have been accessed and viewed. These restrictions will be specified within each content module on OAKS.

Attendance - Class attendance (i.e. logging into the online course content) is an individual student responsibility and will be monitored on a limited basis. Students are expected to actively participate in course discussions as instructed, and to complete all assignments as outlined. Missed work must be made up and it is the student’s responsibility to arrange a make-up time. Missed exams can only be made up if there is documentation for an illness or conflict. Make-up exams must be scheduled in advance; otherwise the student will receive a zero.

You should expect to sign into the course a minimum of 3 times per week, spending approximately one-hour viewing lecture materials or assigned readings, and spending approximately an additional 6 hours per week on assignments including discussion board posts, class preparation assignments, writing, studying, etc.

***This is an online course! Not having Internet accessibility is NOT a valid excuse for late or missing work, or for missed quizzes and exams.***

Honor Code and Academic Integrity – It is expected you will conduct yourself within the guidelines of the honor system. This includes the online course format (See 2017-2018 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:

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<tr>
<th>This is Me - Introductory Synopsis</th>
<th>25 pts</th>
<th>Partner Research Proposal Project</th>
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<tbody>
<tr>
<td>This is Me - Response</td>
<td>25 pts</td>
<td>Reference List</td>
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<tr>
<td>Quizzes</td>
<td>100 pts</td>
<td>Abstracts (For 5 References)</td>
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<td>Writing an Abstract I</td>
<td>50 pts</td>
<td>Introduction</td>
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<tr>
<td>Writing an Abstract II</td>
<td>50 pts</td>
<td>Purpose/Rationale</td>
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<td>Interpreting Data Analyses - Writing and Discussing Results</td>
<td>50 pts</td>
<td>Methodology</td>
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<td>Illustrating Results in a Meaningful Way</td>
<td>25 points</td>
<td>Anticipated Results 50 pts</td>
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<td>Peer Review Feedback</td>
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<td>Final Proposal Submission</td>
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<td><strong>Total Points</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 (735) 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%
- **B-** 79 – 78%
- **D+** 67 – 66%
- **A-** 89 – 88%
- **C+** 77 – 75%
- **D** 65 – 64%
- **B+** 87 – 85%
- **C** 74 – 70%
- **D-** 63 – 62%
- **B** 84 – 80%
- **C-** 69 – 68%
- **F** <62%

**NOTE:** The last day to withdraw with a grade of “W” for the semester is Thursday, October 26, 2017.

Details of Evaluation Criteria

Discussion Board Participation
Active participation in this course is an important component of this course and increasing your understanding of course material. Being able to effectively communicate and demonstrate your understanding of course material is essential. You are encouraged to contribute thoughtful, original feedback--that is, don't simply duplicate what someone else has already posted. You may also have a different perspective or opinion on what someone may have already posted in the discussion board. This is expected! Please remember to be respectful in your posts. As a general rule, if what you write isn’t something that you would share with your classmates in a face-to-face setting, don’t write it.

This is Me - Introductory Synopsis and Response
This is an opportunity for you to introduce yourself to me and to your peers. You are to write a one-page, double spaced synopsis about yourself. Tell us: where you are from, your interest, hobbies, special talents, future plans and anything else you might want to add (keep it to ONE page). This IS a writing class; therefore, in writing this synopsis you should use correct grammar and sentence structure. *Special instructions* Write the first paragraph in the first person (e.g. “I am from Perry, Iowa…”). Write the
remainder of the document in the third person (“Dr. McLeod has two brothers, one is a Black Hawk helicopter pilot and the other is in flight school to also become a Black Hawk helicopter pilot.”).

Response Assignment: The purpose of this assignment is for you to practice gathering information, putting it into your own words and presenting it in a creative manner. You will be required to read through the “This is Me” posts and find two students in the course who share similar interest and comment on their “This is Me” post. Additionally, students will be assigned to one of these students (I will do this) and use their post to create a new, fun, and interesting way to introduce their assigned partner to the class.

Quizzes
There will be ten (10) quizzes throughout the duration of the course. Quizzes will become available after you have accessed and viewed the course lectures and other course activities as specified within the content modules. All quizzes will count towards the total possible points for the course. No quizzes will be dropped.

Writing an Abstract I
You will be provided with information from a research article with the abstract, authors’ names, and other identifying information removed. You will use this information from the research article to draft an abstract for the article. The abstract should include a clear summary of the article in such a manner that the reader can understand the purpose, basic methodology, key findings, summary, and conclusion. There will be a strict word limit of 250 words.

Writing an Abstract II
You will be provided a poster presentation that has all of the information presented on the poster, with the exception of an abstract. You will read the poster thoroughly and compose an abstract for the poster, as you did in the assignment “Writing an Abstract I.” However, for this assignment, the length of the abstract will be limited to 150 words.

Interpreting Data Analyses
You will be provided with a hypothetical data set related to your research proposal topic and results from a statistical analysis on the data set. Using this information, you will compose a concise results section and follow up with a draft of a discussion of the interpretation of the results related to the articles that you have found in preparation for your research proposal. That is, are the results consistent with or contradictory to previously published research? Why do you think the results turned out the way that they did? Does this make sense? Can you propose any alternative explanation for the results? This section will be separate from your research proposal project, as you will not be carrying out and actual data collection, and the proposal will be written for a hypothetical project that has not yet taken place.

Research Proposal Project
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. Development of your research proposal will include: 1) references, 2) abstracts, 3) introduction and significance, 4) materials and methods and 5) anticipated results. Specific details regarding the
research proposal including formatting and grading will be provided in a rubric posted on the Google Drive Folder linked in the course OAKS page.

Peer Review Feedback
During the course of the semester as you are working on you initial drafts of your research proposal, it is valuable to get a new set of eyes on your work to ensure your writing is clear, methods make sense, and can be easily understood by researchers with varying backgrounds. Additionally, being a good “editor” can even help improve your own writing. Following the submission of your Methodology section, your blinded work will be distributed to a different group in the class who will provide specific feedback to the authors in an effort to improve the overall quality of the paper. Once the initial feedback from the reviewing group has been received (also blinded) the authors of the methodology will have an opportunity to accept or reject the suggestions/comments. Greater detail will be provided in a Google Drive Folder linked in the course OAKS page as we approach this assignment in the course.