**KINE 4760-D01**



**Introduction to Exercise Science Research**

***Auburn University, fall 2021 (3 credits)***

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| **Course Professor:** |
| Dr. Kristina Neely  Assistant Professor, School of Kinesiology |
| **Course Meeting:** |
| T/Th 9:30-10:45 AM on Zoom |
| **Zoom Office Hours:** |
| T/Th 11-12 PM and by appointment |

**SYLLABUS**

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| **Course description** |

This course introduces research design, statistical reasoning, and interpretation of the health sciences literature. Topics include protection of human subjects, the research question, research methods and issues of measurement, models of experimental and non-experimental designs, and an overview of statistics. The topics provide a basis for understanding and interpreting the literature for use in evidence-based practice.

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| **Course goals** |

The overarching goal of this course is for you to become an educated consumer of scientific research.

Upon completion of this course, you will be able to:

* Define, describe, and discuss types of research
* Discriminate between high- and low-quality articles in the healthcare literature
* Interpret the literature for application
* Detect the various sources of bias in scientific articles and materials
* Describe the clinical research process
* Identify the principle components of ethical research
* Write a focused research question
* Perform a literature search using online databases
* Identify the different types of data scales
* Decide what statistical procedure is most appropriate for analysis based on data
* Demonstrate the ability to discuss articles using research terminology
* Create an original critique of a published randomized controlled trial
* Describe why it is important to properly cite sources used in the creation of scholarly or professional writing
* Identify major elements of references in order to create citations

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| **Technology** |

This course is taught synchronously using **Zoom**and **Canvas**. This means we meet together as a class for a class session using Zoom. All content will be delivered through Canvas. Contact IT services immediately if you are experiencing issues with Zoom or Canvas because it will hinder your success in this course.

Some assignments will be completed in small groups. It is recommended that students use Zoom through the Auburn portal for group meetings because every student has access to this software. I recommend against other APPs such as FaceTime or Duo because not everyone is able to add these to their devices.

We will utilize APPs such as **Padlet** and **Eli Review**. Instructions will be provided when appropriate.

All students are expected to contribute to their own learning as active and well-prepared participants. Weekly modules will provide various opportunities for reading, reflection, applied experiences, collaboration, and writing.  You should plan on spending the same amount of preparation and “in class” time on this course as you would if you were taking the course face-to-face.

The learning activities for each week are carefully sequenced and offered in small chunks so you can accomplish reasonable amounts throughout the semester. You should log on to the course website regularly to work through course materials and participate in course discussions.

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| **Office hours** |

Office hours are on Zoom and are Tuesdays and Thursdays 11-12 PM. Office hours fluctuate with assignments. For example, I will hold more office hours after a big assignment in order to provide you with individual feedback.

If you prefer an appointment, I am happy to meet with you between the hours of 8 AM and 5 PM, Monday through Friday. Please send me an email proposing at least two day/times that work for you. Grades will not be discussed by email and require a Zoom meeting.

The best way to contact me is via Canvas email. I aim to respond to all email within 48 hours; however, this is not always possible. If your concern is urgent and I do not respond within 3 business days, please forward me your original email with a friendly reminder.

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| **Required texts** |

**Title: Introduction to Research and Medical Literature for Health Professionals**

Authors: J. Glenn Forister, J. Dennis Blessing

Edition: 5th Ed.

Publisher: Jones & Bartlett Learning

**Title: The Publication Manual of the American Psychological Association**

Authors: American Psychological Association.

Edition: 6th Ed.

Publisher: American Psychological Association.

\*Note: This text is available at RBD library circulation desk (for in-house use) and the majority of the information is available at the link below. Therefore, it is not necessary that you purchase a copy of this resource.

<https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html>

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| **COVID-19 Related Policies** |

Your health and safety, and the health and safety of your peers, are my top priorities. If you are experiencing any symptoms of COVID-19, or if you discover that you have been in close contact with others who have symptoms or who have tested positive, you must follow the instructions on the [Auburn COVID-19 resource center](https://auburn.edu/covid-resource-center/). My hope is that if you are feeling ill or if you have been exposed to someone with the virus, you will stay home to protect others.

**COVID-19 Reporting**: Students, faculty and staff are expected to [self-report](https://auburn.edu/covid-resource-center/reporting/) a positive COVID-19 test.

**In the event of illness:**

1. Keep up with coursework as much as possible.
2. Participate in class activities and submit assignments remotely as much as possible.
3. **Notify me if you require a modification to the deadline of an assignment or exam.**
4. Finally, if remaining in a class and fulfilling the necessary requirements becomes impossible due to illness or other COVID-related issues, please let me know as soon as possible so we can discuss your options.
5. These are difficult times, and academic and personal stress is a natural result. Everyone is encouraged to take care of themselves and their peers. If you need additional support, there are several resources on campus to assist you: COVID Response Team ([ahealthieru.edu (Links to an external site.)](http://www.ahealthieru.edu/)); Student Counseling and Psychological Services ([http://wp.auburn.edu/scs/ (Links to an external site.)](http://wp.auburn.edu/scs/)); AU Medical Clinic ([https://cws.auburn.edu/aumc/).](https://cws.auburn.edu/aumc/)
6. If you or someone you know are experiencing food, housing or financial insecurity, please visit the Auburn Cares Office ([http://aucares.auburn.edu/ (Links to an external site.)](http://aucares.auburn.edu/))

Students with questions about COVID-related illnesses should reach out to the COVID Resource Center at (334) 844-6000 or at [ahealthieru@auburn.edu](mailto:ahealthieru@auburn.edu).

**Instructor contingency plan**

In the event that I become ill and unable to teach, Ms. Mariane Bacelar or Dr. Heidi Kluess will carry out the course plan in my absence.

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| **Proviso** |

Dr. Neely may make changes to the syllabus if necessary. All changes will be announced in class and will be posted in writing on Canvas.

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| **Evaluation** |

Policy on late work:

**It is very important that students submit work on time, or they will find it very difficult to catch up.**

All work in the course (e.g., assignments, discussions, exams, quizzes, etc.) will be due by 11:59 pm CT on the date noted on the class calendar. Any assignment that is submitted after the due date will be subject to a 10% point deduction per day late.

**Students should reach out to their instructor immediately to discuss any concerns**. In situations where you are experiencing technical difficulties submitting your assignment near the deadline, please consult the Canvas help desk resources. Please work to avoid encountering technical difficulties near the assignment due dates by completing your work ahead of deadlines.

As per university policies,**there are 3 valid excuses for missing a deadline or class:** 1). illness documented by a physician. 2) evidence of personal or family emergency. 3) official university excuses. Documentation is required in each of these instances.

Policy on extra-credit:

**There are at least two are opportunities for extra credit in this course. Students may earn no more than 2 course points via extra-credit. The opportunities are detailed on Canvas and will be discussed in class.**

If an additional extra-credit opportunity arises, it will be available to all students in the course. Any requests for extra credit or special exceptions to grading policies are an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.

Points in this course are derived from quizzes and assignments. Quizzes always represent independent work.  Assignments are detailed on Canvas and may allow for small group work.

Achievement in this course will be assessed through completion of the following activities:

 45% Coursework/Major Assignments

 40% Module Quizzes

 10% Final Project (i.e., Take-home final exam)

  5% Class Attendance

This course is graded.  The grading scale is as follows:

A  (4.0)      90 – 100%

B  (3.00)    80 – 89.99%

C  (2.00)    70 – 79.99%

D  (1.00)    60 – 69.99%

F  (0.00)    less than 60%

**\*Grades will be rounded up at semester end using standard rounding rules\***

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| **Course Policies** |

By remaining enrolled in this course, you agree to abide by all course policies.

All policies set forth in the Student Policy Handbook apply to this course.

(<http://www.auburn.edu/student_info/student_policies/>).

**Academic Honesty**

All portions of the Auburn University Student Academic Honesty code (Title XII) found in the Student Policy eHandbook at <http://www.auburn.edu/student_info/student_policies/> apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

**Classroom Behavior (applies to Zoom)**

The Auburn University Classroom Behavior Policy is strictly followed in the course; please refer to the Student Policy eHandbook at [http://www.auburn.edu/student\_info/student\_policies/](http://www.auburn.edu/student_info/student_policies/ (Links%20to%20an%20external%20site)) for details of this policy

**Excused Absences**

Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student’s immediate family, death of a member of the student’s immediate family, trips for student organizations sponsored by an academic unit, trips for University classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance and religious holidays. Students who wish to have an excused absence from this class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences is required.

**Emergency Contingency**

If normal class activities are disrupted due to illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.

**Plagiarism**

All quizzes, assignments, and any other written work must reflect the individual efforts of each student. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee. There is a great deal of writing in this class and I expect strict adherence to appropriate citations and correct paraphrasing (verb and the sentence structure must be changed). Plagiarism detection programs will demonstrate where paraphrasing and summarizing needs improvement on the project drafts. The final version of your proposal should be problem free. There is no quoting in scientific writing. You must paraphrase or summarize.

There is a great deal of writing in this class. Anticipate strict adherence to appropriate citations and correct paraphrasing (verb and the sentence structure must be changed).  Plagscan may be used to detect problems with paraphrasing and summarizing. You may receive a report with recommendations about how to improve. Please heed those recommendations. Repeated incidences of poor adherence to appropriate citing and paraphrasing will result in a charge of academic dishonesty. All work must be original.  Working with other groups (in any section of this course, past or present) is not acceptable and is academic dishonesty.

**Copyright Statement**

Copyright laws protect all course materials students receive or to which students have online access. Students may use course materials and make copies for their own use as needed, but unauthorized distribution and/or uploading of materials without the instructor’s express permission is strictly prohibited. Students who engage in the unauthorized distribution of copyrighted materials may be held in violation of the University’s Code of Conduct and/or liable under Federal and State laws.

**Confidentiality**

The federal Family Educational Rights and Privacy Act (FERPA) of 1974 identifies the rights of students and their families with respect to student educational records kept by institutions.

**Students with Disabilities**

Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours to discuss your accommodations. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

**Best Work**

Students are expected to show evidence of thorough reading of assigned materials. Please take pride in your work and be motivated to do your best work in this class: if you are, you will gain the maximum benefit from the course.

**Professionalism**

As faculty, staff, and students interact in educational settings, they are expected to demonstrate professional behaviors as defined in the College of Education’s conceptual framework. These professional commitments or dispositions are as follows: 1) engage in responsible and ethical practices, 2) contribute to collaborative learning communities, 3) demonstrate a commitment to diversity, and 4) model and nurture intellectual vitality.

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| **Course schedule** |

The content schedule on the following page provides a road map for this course. More details are provided on Canvas. The schedule may be amended at the discretion of the instructor.

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| **Week** | **Date** | **Day** | **Topic** | **Book Chapter** |
| **1** | 8/17 | Tue | Intro to course, review of syllabus | 1 |
| 8/19 | Thu | Module 1: Introduction to Research | 1 |
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| **2** | 8/24 | Tue | Module 1: Introduction to Research | 1 |
| 8/26 | Thu | Module 1: Introduction to Research | 1 |
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| **3** | 8/31 | Tue | Module 2: Research Ethics | 2 |
| 9/2 | Thu | Module 2: Research Ethics | 2 |
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| **4** | 9/7 | Tue | Module 3: The Research Problem | 3 |
| 9/9 | Thu | Module 3: The Research Problem | 3 |
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| **5** | 9/14 | Tue | Module 4: Review of the Literature, reference list, & annotations | 4 |
| 9/16 | Thu | Module 4: Review of the Literature, reference list, & annotations | 4 |
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| **6** | 9/21 | Tue | Module 4: Review of the Literature, reference list, & annotations | 15 |
| 9/23 | Thu | Module 4: Review of the Literature, reference list, & annotations | n/a |
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| **7** | 9/28 | Tue | Module 4: Review of the Literature, reference list, & annotations | 4 & 15 |
| 9/30 | Thu | Module 4: Summarizing & synthesizing (Miller Writing Center) | 4 & 15 |
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| **8** | 10/5 | Tue | Module 4: Review of the Literature, peer review, & feedback | 4 & 15 |
| 10/7 | Thu | Fall break (no class) |  |
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| **9** | 10/12 | Tue | Module 5: Systematic Review | 5 |
| 10/14 | Thu | Module 6: The Research Process | 6 |
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| **10** | 10/19 | Tue | Module 6: The Research Process | 6 |
| 10/21 | Thu | Module 6: The Research Process | 6 |
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| **11** | 10/26 | Tue | Module 7: Data Analysis & Statistics in Healthcare | 11 |
| 10/28 | Thu | Module 7: Data Analysis & Statistics in Healthcare | 11 |
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| **12** | 11/2 | Tue | Module 7: Data Analysis & Statistics in Healthcare | 12 |
| 11/4 | Thu | Module 7: Data Analysis & Statistics in Healthcare | 12 |
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| **13** | 11/9 | Tue | Module 8: The Results & Discussion Sections | 13 & 14 |
| 11/11 | Thu | Module 8: The Results & Discussion Sections | 13 & 14 |
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| **14** | 11/16 | Tue | Module 9: Writing and Publishing in the Health Sciences | 16 |
| 11/18 | Thu | Module 9: Writing and Publishing in the Health Sciences | 16 |
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| **15** | 11/30 | Tue | Module 10: Interpreting the Literature | 17 |
| 12/2 | Thu | Module 10: Interpreting the Literature | 17 |