# APPH 6225 Syllabus

Biostatistics APPH 6225, 3 Credits

Fall Semester, 2026

## Instructor Information

**Instructor: Teresa Snow, PhD**

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## General Course Information

### Description

APPH 6225 Biostatistics covers introductory statistical principles and methods. Key topics include experimental design, sampling, power estimation, and hypothesis testing using ANOVA and regression.

### Course Learning Outcomes

*Upon successful completion of this course, you should be able to*

> *(1) Analyze real-world problems by choosing and applying statistical methods that best fit the research questions and hypotheses.*
>
> *(2) Select and use appropriate data visualization techniques to assess statistical assumptions and clearly summarize and communicate data.*
>
> *(3) Use of statistical software to analyze a variety of data sets by testing assumptions, main effects, interactions, etc.*
>
> *(4) To clearly and accurately interpret and report the results of statistical analyses in a manner that is consistent with the style used in peer-reviewed research journals.*

Required Course Materials

Weir, JP & Vincent, WJ *Statistics in Kinesiology (5th Edition).* Human Kinetics.



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**Grading Policy:**

Thei course will use an ungrading approach to learning. For info on ungrading, see https://learninginnovation.duke.edu/blog/2022/09/what-is-ungrading/

To earn an A, students must complete the following:

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| • *Pre-Course Assessment* | *Completion* |
| • *Mid Term Exam* | *Score 85 or higher** |
| • *Final* | *Score 85 or higher** |
| • *Practice Problem Sets* | *Satisfactory* |
| • *Complete Two Article Critiques on Important Statistical Concepts related to Course* | *Satisfactory* |
| • *Portfolio* | *Satisfactory* |
| • *Post Course Assessment and Peer Evaluation* | *Completion* |
| • *Attendance (see attendance policy)* | *Satisfactory* |

*One revision allowed.

Grades:

A= Demonstrates proficiency through successful completion of all course components as outlined above.

B= Completion of all components as outlined above, with one component rated below satisfactory or one exam not meeting the 85% threshold after the allowed revision.

C=Completion of all components as outlined above, with two components rated below satisfactory or multiple assessments not meeting the required threshold.

D= Partial completion of required course components, with significant deficiencies in demonstrating competency or meeting course expectations.

F= Failure to complete multiple required components or demonstrate minimum competency across course requirements.

**Description of Graded Components**

The pre-post course assessments allow students to assess their learning in the course.



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*Exams* will be take-home and include multiple choice, essay and data analysis/interpretation questions.

*Practice problem sets* can be completed individually or in teams but each student must submit their own summary/interpretation.

*Article critiques* will be used to critically evaluate how statistics are used in real research studies in their field of study.

*The portfolio* documents students' individual learning progress and achievement of personal and course-aligned learning goals.

## Course Policies

**Attendance and/or Participation**

Showing up prepared and ready to engage in the work of the course is assumed as part of your responsibility in this course to maximize learning. You will be expected to participate in ongoing discussions of course topics and to interact with other students and your instructor regularly. You should use this opportunity to learn as deeply as you can, including finding your own connections and relevance based on your field of study and career goals.

The MINIMUM attendance requirement for an A or B in this class is missing no more than 6 total classes, **excused/unexcused combined**.

**Academic Integrity**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

**Core IMPACTS**

Core IMPACTS is the University System of Georgia's General Education curriculum. If you are teaching a course that counts towards Core IMPACTS, you should include a syllabus statement about the Core area and associated career competencies. This resource developed by the Center for Excellence in Teaching and Learning and Online Education at



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Georgia State University includes template syllabus statements for each of the Core IMPACTS areas that you may adapt for your course.

**Accommodations for Students with Disabilities**

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

**Use of Generative AI**

Artificial Intelligence (AI) can be a useful for learning statistical concepts, research procedures and data analysis (for more info, see https://pmc.ncbi.nlm.nih.gov/articles/PMC11656929/)

In this course, you may explore and thoughtfully integrate AI into your work. In certain coursework (homework assignments, learning code, data analysis), you may use AI tools to clarify statistical concepts, generate or debug code, and/or evaluate the accuracy of your work. However, AI-generated content must not be submitted as your own original work. In addition, it may not be used on exams since the purpose is to assess your learning progress in this course.

Any use of AI must be fully documented. Specify the type of AI used and a description of how it was used (including specific prompts or queries). I also encourage you to reflect on its contribution to your understanding or efficiency each time you use it. Was it helpful overall? In what ways was it most helpful and in what ways was it least helpful? What concerns do you have about the responses? This will allow you to streamline your productivity when using AI.

It is well documented that AI tools can in some cases produce inaccurate, misleading, or biased outputs. It is your responsibility to critically evaluate all AI-generated content. You must also carefully consider privacy and Internal Review Board (IRB) concerns if you are using protected subject data.

**Extensions/Late Assignments**

*Timely submission of assignments is expected to support meaningful feedback and opportunities for revision. Assignments submitted after the deadline may be accepted at the instructor's discretion; however, late submissions may not be eligible for revision or resubmission.*



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## Campus Resources for Students

**Graduate Student Academic and Professional Success Resources:**

A list of resources for graduate students is given on the Office of Graduate and Postdoctoral Education website. Specific information for current graduate students includes

- Academic Resources such as the Communications Center, Language Institute, Library, Catalog, Registrar, resources for conducting research, Advocacy and Conflict Resolution resources, and how to manage unexpected situations that may impact your academic performance;
- Student Resources such as Campus Services, Child Care/Family programs, Health & Wellness, Career Services, and the Student Resource Guide; and
- *Professional Development such as the programming from the Career Center and other professional development resources and events"*



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