

PH 383- Biostatistics for Health Sciences

Western Kentucky University – Course Syllabus Fall 2024

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Course Meeting Online

Office Hours By appointment only

Course Information:

- A. Meeting Time and Place: Online Course
- B. Required Textbook: Essentials of Biostatistics for Public Health (With Online Access), Fourth Edition by Lisa M. Sullivan
ISBN-13: 9781284231977
- C. Link to textbook: <https://www.amazon.com/Essentials-Biostatistics-Public-Health-Sullivan/dp/1284231976>
- D. Additional readings as assigned
- E. Course Description: (3 credit hours) -Biostatistics in the Health Sciences: is an introduction to statistical methods, scientific structure of study design, hypothesis formation and verification and study classification. It includes descriptive statistics, data presentation, data sources, questionnaire construction, interviewing techniques and use of computer technology.

F. **Course Goals:** The overall goals of this course include:

1. To introduce the core concepts, methods, theories, and applications of biostatistics as they relate to data collection, management, and analysis of real-world problems.
2. To develop practical skills and exposure to communication, critical thinking, problem solving, health advocacy and promotion, independent work ethic, and ethical decision making.
3. To create a safe, active, and inclusive learning environment where students can develop their skills and interests as adult learners.

G. **Course Learning Objectives:** Upon completion of the course, students will be able to:

1. Formulate a basic understanding of biostatistics as it relates to health sciences and public health practice
2. Compare and contrast measurement scales, measurement properties, and types of variables
3. Differentiate between samples, populations, statistics, and parameters
4. Evaluate data collection methods according to research study design
5. Summarize and visualize data using descriptive statistics
6. Apply principles of probability to biostatistical practice
7. Analyze and interpret data using inferential statistics according to parametric statistical procedures
8. Quantify the strength and direction of relationships among variables using measures of association
9. Differentiate between parametric and nonparametric procedures
10. Interpret statistical outcomes in peer-reviewed academic literature

H. Communication Policy

In an online course, it is expected that there will be regular and substantive interaction between the faculty member and the student. The instructor will frequently and regularly initiate communication with students and it is expected that students reciprocate this communication. Students are also expected to actively participate in course discussions and collaborate with other students to achieve course learning outcomes. If a student is unable to complete an assignment by its deadline, **it is expected that the student will inform the instructor to make other arrangements. Failure to communicate such issues may result in a 0 for the assignment.**

I. Evaluation:

Students will be evaluated on following:

Participation: 10 points

Exam 1: 50 points

Exam 2: 50 points

Final TBA: 50 points

Course Assignments: 10 points per assignment

J. Chapter Exams

Exams will be based on the lectures and assigned readings, please pay attention to the material highlighted in the notes as I will draw from them for each exam. Each student will be given an unlimited amount of time at completing each exam. The exams will be open book and open notes and due by Sunday at midnight. If multiple students miss the same question on an exam, it will be thrown out or each student will be provided with points for the question.

K. Extra Credit

Extra Credit is often, not provided in college courses; however, I will provide each student with multiple opportunities to gain extra credit throughout the semester. My goal for this course is for every student to earn a passing grade and learn as much as possible about the field of public health.

L. Course Grades for PH 383 Students

Final grades will be equivalent to the following:

Grade	Percentage
A	93-100
A-	90-92
B+	87-89
B+	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	60-66
F	59 & below

I. Extensions

Extensions may be granted in the case of exceptional circumstances. You must discuss these circumstances with your instructor at least 48 hours before the assignment or exam is due. (Note: Discussing the situation is not the same as merely informing your instructor.) In order for a late assignment to receive full marks, it must be previously discussed with and approved by your instructor. Lastly, a make-up date will be arranged. *If a student has an emergency and is unable to complete the exam by the due date, please inform your instructor as soon as possible and a new test date will be arranged. *

Schedule subject to change

Last Date to drop without a W~ Monday, August the 21st to the 26th

Last Date to drop with a W~ Monday, October the 28th

ADA ACCOMMODATION

In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

PREGNANT OR PARENTING STUDENTS

Western Kentucky University does not discriminate against any student or exclude any student from its educational programs or activities, including classes or extracurricular activities, on the basis of pregnancy and/or pregnancy-related conditions such as, but not limited to, childbirth, false pregnancy, termination of pregnancy, or recovery therefrom. Students who seek pregnancy or pregnancy-related accommodations should make their requests as soon as possible via WKU's Title IX Website at www.wku.edu/titleix/ under the heading, "Pregnancy or Pregnancy-Related Conditions." Students can also contact the Title IX Coordinator, Ena Demir, via email at ena.demir@wku.edu or by phone at (270) 745-6867 to request accommodations or seek assistance. We encourage students and faculty to work together to establish a plan that allows the student to complete the class and coursework without jeopardizing academic integrity and course standards. The Title IX Coordinator can help facilitate conversations between students and faculty regarding appropriate and reasonable accommodations.

If you are a WKU student and believe that you have experienced an incident(s) of discrimination or harassment based on pregnancy (or pregnancy related conditions or issues), please report it to the Title IX Coordinator via email at ena.demir@wku.edu or by phone at (270) 745-6867.

Additional resources for pregnant and parenting students can be found on WKU's Title IX Website at www.wku.edu/titleix/.

TITLE IX/ DISCRIMINATION & HARASSMENT

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Sex and Gender-Based Discrimination, Harassment, and Retaliation (#0.070) and Discrimination and Harassment Policy (#0.2040). Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Executive Director, Office of Institutional Equity/Title IX Coordinator, Ena Demir, 270-745-6867 or Title IX Investigators or Michael Crowe, 270-745-5429. Please note that while you may report an incident of sex/gender-based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.



Sexual Assault Resources

INCLUSION STATEMENT

Western Kentucky University (WKU) is committed to ensuring all members of our campus community have access to equitable and inclusive learning, working, and living environments. At the heart of our mission, we seek to provide holistic education and employment experiences that prepare students, faculty, and staff to become effective scholars, contributors, and leaders in our diverse and evolving communities. Consistent with our campus purpose statement and creed, this classroom will be a respectful space, welcoming all sexes, races, ages, national origins, ethnicities, gender identities/labels/expressions, intellectual and physical abilities, sexual orientations, faith/non-faith perspectives, income levels and socio-economic classes, political ideologies, educational backgrounds, primary languages, family statuses, military experiences, cognitive styles, and communication styles. If at any time during this course you are excluded or feel a sense of alienation from the course content, please feel free to contact me privately without fear of reprisal.

LAND ACKNOWLEDGEMENT STATEMENT

The history of our community and land gives us the opportunity to recognize, respect, and appreciate our place within that history. Western Kentucky University (WKU) honors and acknowledges the Indigenous peoples' land on which this University was built. All land in the state of Kentucky was once Indigenous territory, which is why it is our duty to acknowledge that WKU exists on Native land. This particular region of Kentucky was home to both the Shawnee (Shawandasse Tula) and Cherokee East (GWJᎠᎵᎠᎵ Tsalaguwetiya) tribes.

We also honor and acknowledge the former residents of Jonesville. According to the Jonesville History Project, “Jonesville was a predominantly African American community in Bowling Green, Kentucky, that was demolished in the 1960s to make way for the expansion of the WKU campus. This incident echoed a pattern across the country where the power of eminent domain was utilized to seize property from minority communities for large public works projects under the guise of urban revitalization.”

WKU Policy on Plagiarism

To represent ideas or interpretations taken from another source as one's own is plagiarism. Plagiarism is a serious offense. The academic work of students must be their own. Students must give the author(s) credit for any source material used. To lift directly from a source without giving credit is a flagrant act. To present a borrowed passage after having changed a few words, even if the source is cited, is also plagiarism. Students' work may be checked using plagiarism detection software.

WKU Policy on Cheating

No student shall receive or give assistance not authorized by the instructor in taking an examination or in the preparation of an essay, laboratory report, problem assignment, or other project that is submitted for purposes of grade determination. Cheating will result in an automatic zero on the assignment.

Policy on ChatGPT and Generative AI Tools

In general, I expect that the work you submit in this class will be your own and you are not authorized to use artificial intelligence (AI) tools such as ChatGPT, Grammarly, Tutor.ai, etc. for completing assignments. However, there may be specific assignments or activities in which we may utilize these tools to enhance your learning experience. In these instances, I will provide you with additional information about the assignment and how AI will be employed and cited. Again, unless permission is granted, you are expected to complete assignments without substantive assistance from others, including AI tools. If you are unsure if you are using AI tools appropriately in this course, I encourage you to visit with me. Examples of how to cite AI tools are available at <https://libguides.wku.edu/stylewrite/ai>. Any submitted assignment/activity found to have been entirely generated through AI will result in ZERO points.

WKU Writing Center

Students are encouraged to use the services of the Writing Center for their projects/papers. Face-to-face and online reviews are available.

Policy on Regular and Substantive Interaction

The U.S. Department of Education requires that distance education courses must include regular and substantive interaction between students and faculty. For more information about Regular and Substantive Interaction at WKU, please visit the [Regular and Substantive Interaction in Online and Distance Learning webpage](#).

In this course, regular and substantive interaction will take place in the following ways:

- Weekly announcements with information about upcoming course materials, reminders, and Updates
- Timely and constructive feedback on assignments provided within one week of submission
- Office hours availability *By appointment only*
- Providing information related to course content to further student understanding

Additional Resources for Students

- Academic Integrity: <https://www.wku.edu/handbook/academic-dishonesty.php/>
- Student Handbook: <https://www.wku.edu/handbook/index.php>
- Student Resource Portal: <https://www.wku.edu/online/srp/>
- Syllabus Information: <https://www.wku.edu/syllabusinfo/>
- Student Tutoring Services: <https://www.wku.edu/startcenter/>
- Free Tutoring at the WKU Learning Center: <https://www.wku.edu/tlc/>
- Public Health and Medicine Library Guides: <https://libguides.wku.edu/publichealth>
- WKU Counseling Center: <https://www.wku.edu/heretohelp/>
- WKU Student Accessibility Resource Center: <https://www.wku.edu/sarc/>