Compiled & Shared By: ✨ Hassan Sardar Naveed

👨‍👨‍👧‍👧 “Please remember me and my family in your prayers.” 🌸

📚 Bachelor of Science in Computer Science

🎓 University of the People

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UNIVERSITY OF THE PEOPLE

Syllabus for Introduction to Statistics

Credits: 3
MATH 1280

Instructor Contact Information:

You can also always send your instructor a private message through the Moodle Messaging system. Once logged into your course, click your instructor's Moodle profile page to be provided the ways in which to communicate with your instructor. Your instructor's email will also be listed in their profile.

Course Description

Introduction to Statistics introduces students to fundamental concepts in statistics and probability, fostering statistical thinking. It aims to equip students with the skills to perform basic statistical analyses on simple datasets. Key topics include descriptive statistics, probability, discrete and continuous random variables, sampling distributions, and the Central Limit Theorem. The focus is on applying statistical methods and interpreting results. Instead of focusing on advanced mathematics, the course emphasizes the underlying principles of statistics, using simulations to demonstrate essential mathematical ideas rather than relying on theoretical derivations.

Learning Objectives

Course Learning Outcomes (CLOs)

By the end of this course, students will be able to:

1. Discuss the fundamental key terms related to statistics and probability
2. Explain data using various statistical methods, including frequency distributions, measures of central tendency and dispersion, and graphical representations.
3. Describe probability concepts like independent and mutual exclusivity, and use probability distributions (e.g., binomial, Poisson, geometric, hypergeometric, uniform, exponential, normal) to model real-world situations.
4. Explain sampling, sampling distributions, principles of sampling, sampling variability, and apply the Central Limit Theorem.
5. Use LibreOffice Calculator to carry out computations and produce plots associated with data and probability.

Co/Prerequisites

None.

Course Materials

UoPeople courses use open educational resources (OER) and other materials specifically donated to the University with free permissions for educational use. Therefore, students are not required to purchase any textbooks or sign up for any websites that have a cost associated with them. The main required textbooks for this course are listed below and can be readily accessed using the provided links. There may be additional required/recommended readings, supplemental materials, or other resources and websites necessary for lessons; these will be provided for you in the course's General Information and Forums area, and throughout the term via the weekly course Unit areas and the Learning Guides.

1. Illowsky, B., & Dean, S. L. (2023a). *Introductory statistics*. OpenStax ; Rice University. https://openstax.org/details/books/introductory-statistics-2e/

Technology Requirements

- **LibreOffice Calculator**
  - LibreOffice. (n.d.). https://www.libreoffice.org/download/download-libreoffice/
    Use the above link to visit the official website and download the LibreOffice Suite. You can also find the instructions on using Libre office and the calculator for your calculations on the course homepage.
  - https://www.libreoffice.org/get-help/system-requirements/
    Read the details of system requirements for all operating systems on the above link.

Campus Tech Support Email for English programs: support@uopeople.edu

Regular and Substantive Interaction

As your instructor, they will interact and engage with each of you on a regular basis throughout the term to support your learning. They will provide direct instruction related to the course's learning objectives, respond to your questions, grade and/or provide feedback on your submitted coursework, post regular announcements, and engage in the course discussion areas regarding academic course content when appropriate.

Course Expectations and Learning Activities

Discussions

Some units in this course require that you complete a Discussion Assignment. You are required to develop and post a substantive response to the Discussion Assignment in the Discussion Forum. A substantive response is one that fully answers the question that has been posed by the instructor. In addition, you must extend the discussion by responding to at least two (2) of your peers' postings in the Discussion Forum. Grading rubrics are provided in the Discussion Forum for each week. Discussion Forums are only active for each current and relevant learning week, so it is not possible to contribute to the forum once the learning week has come to an end.

Assignments Activities

The assignment activities are graded by your instructor. The grading rubric is listed under the assignment instructions. The grading rubric is a document that outlines the criteria that your instructor will use to grade your work.

Class Introductions

This section is your opportunity to introduce yourself to your classmates and create a vibrant learning community. By sharing your background, interests, and goals, you can create meaningful connections and discover commonalities with your peers.

Quizzes

This course will contain three types of quizzes – the Self-Quiz, the Graded Quiz, and the Review Quiz. These quizzes may contain multiple-choice, true/false, or short answer questions. The results of the Self-Quiz will not count towards your final grade. However, it is highly recommended that you complete the Self-Quiz to ensure that you have adequately understood the course materials. Along with the Reading Assignments, the results of the Self-Quiz should be used as part of an iterative learning process, to thoroughly cover and test your understanding of course material.

You should use the results of your Self-Quiz as a guide to go back and review relevant sections of the Reading Assignments. Likewise, the Review Quiz will not count towards your final grade but should also be used to assist you in a comprehensive review and full understanding of all course material, in preparation for your Final Exam. Lastly, the results of the Graded Quiz will count towards your final grade. Specific instructions on the format and content of the Graded Quiz will be provided by your instructor.

Final Exam

The Final Exam will take place during the Thursday and Sunday of Week/Unit 9, following the completion of eight units of work. The format of the Final Exam is similar to that of the quizzes and may contain a combination of different question types. You will have one attempt to take the exam, and it will be graded electronically. Specific instructions on how to prepare for and take the Final Exam will be provided during Week 8 (located inside the Unit 9 Learning Guide). Final Exams must be taken without the use of course learning materials (both those inside and outside the course). If particular materials are allowed for use during the exam, these will be noted in the exam's instructions.

The Final Exam for this course must be done under the supervision of a proctor. Since you already secured your proctor before registering for this course, this is a reminder that you should coordinate with him/her before you take the exam. As a reminder, students are required to successfully complete proctored exams spaced throughout their program of study at UoPeople, in order to verify the student's identity in confirming a degree and diploma upon graduation.

Course Forum

The Course Forum is the place to raise issues and questions relating to the course. It is regularly monitored by the instructors and is a good place to meet fellow students taking the same course. While it is not required to participate in the Course Forum, it is highly recommended.

Participation Expectations

- Be involved and active in your courses.
- Be highly motivated and disciplined.
- Check the course homepage, calendar and assignment page, the course syllabus, your UoPeople email, and the Moodle course discussion forums several times a week.
- Post the required comments and responses to the discussion forum for your course.
- Keep up with your assignments and online quizzes/exams (as applicable) and manage your time well. These quizzes test your knowledge and comprehension of the new content.
- Participate actively in class discussions.
- Be polite and respectful.
- Use good grammar and correct spelling.
- Be honest and original. Plagiarism will not be tolerated in any online course.

Non-participation is characterized by lack of any assignment submissions, inadequate contributions to the Discussion Forums, and/or lack of peer feedback to Discussion/Written Assignments. Also, please note the following important points about course participation:

- Assignments must be submitted on or before the specified deadline. A course timeline is provided in the course schedule, and the instructor will specify deadlines for each assignment.
- Occasionally there may be a legitimate reason for submitting an assignment late. Most of the time, late assignments will not be accepted and there will be no make-up assignments.
- All students are obligated to inform their instructor in advance of any known absences which may result in their non-participation.

Feedback and Suggestions

We value your input and would encourage you to complete the end of course survey to provide us with course feedback and suggestions, and report issues

Evaluation and Grading Scale

Grading Weights

Category	% Of Grade	Grade Items (Learning Activities)	Associated Learning Objectives/Outcomes
Discussion Forums	20%	1. Unit 2 – Discussion Forum 2. Unit 5 – Discussion Forum 3. Unit 7 – Discussion Forum	1. Unit 2 – CLO 2 2. Unit 5 – CLO 3, 5 3. Unit 7 – CLO 1, 4, 5
Assignment Activities	55%	1. Unit 1 – Assignment Activity 2. Unit 2 – Assignment Activity 3. Unit 3 – Assignment Activity 4. Unit 4 – Assignment Activity 5. Unit 5 – Assignment Activity 6. Unit 6 – Assignment Activity 7. Unit 7 – Assignment Activity 8. Unit 8 – Assignment Activity	4. Unit 1 – CLO 1, 2, 5 5. Unit 2 – CLO 2, 5 6. Unit 3 – CLO 1, 2, 3, 5 7. Unit 4 – CLO 1, 2, 3, 5 8. Unit 5 – CLO 3, 5 9. Unit 6 – CLO 1, 3 9. Unit 7 – CLO 4, 5 10. Unit 8 – CLO 1, 2, 4, 5
Graded Quiz	10%	1. Unit 3 – Graded Quiz 2. Unit 6 – Graded Quiz	11. Unit 3 – CLO 1, 2, 3, 5 12. Unit 6 – CLO 1, 2, 3, 4, 5
Final Exam	15%	1. Unit 9 – Final Exam	13. Unit 9 – CLO 1, 2, 3, 4, 5
TOTAL	**100%**		

Grading Scale

Letter Grade	% Grade	Grade Points
A	98%-100%	4.00
A	93-97%	4.00
A-	90%-92%	3.67
B+	88%-89%	3.33
B	83%-87%	3.00
B-	80%-82%	2.67
C+	78%-79%	2.33
C	73%-77%	2.00
C-	70%-72%	1.67
D+	68-69%	1.33
D	63%-67%	1.00
D-	60%-62%	0.67
F	<60	0.00

Letter Grade	% Grade	Grade Points
W	N/A	N/A

Students may also be granted Withdrawal (W), if they withdraw from the course, or an Incomplete (I) should their circumstances permit.
A student who feels they were graded unfairly, or who seeks to dispute a grade, may initiate a grade appeal process.
Refer to University Policies for more information on withdrawals and appeals.

Course Schedule

UNIT 1: Sampling and Data

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Assignment activity due 6th day of the week
- Self-quiz due 7th day of the week

UNIT 2: Descriptive Statistics

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Discussion first response due 4th day of the week
- Discussion replies due 6th day of the week
- Assignment activity due 6th day of the week
- Self-quiz due 7th day of the week

UNIT 3: Probability Topics

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Assignment activity due 6th day of the week
- Self-quiz due 7th day of the week
- Graded quiz due 7th day of the week

UNIT 4: Discrete Random Variables

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Assignment activity due 6th day of the week
- ∉ Self-quiz due 7th day of the week

UNIT 5: Geometric, Hypergeometric and Poisson Distribution

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Discussion first response due 4th day of the week
- Discussion replies due 6th day of the week
- Assignment activity due 6th day of the week
- Self-quiz due 7th day of the week

UNIT 6: Continuous Random Variables

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Assignment activity due 6th day of the week
- ∉ Self-quiz due 7th day of the week
- Graded quiz due 7th day of the week

UNIT 7: The Normal Distribution

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Discussion first response due 4th day of the week
- Discussion replies due 6th day of the week
- Assignment activity due 6th day of the week
- Self-quiz due 7th day of the week

UNIT 8: The Central Limit Theorem

- Watch/Read the reading assignments due 3rd – 4th day of the week (recommended)
- Assignment activity due 6th day of the week
- Self-quiz due 7th day of the week

UNIT 9: Final Exam

- Final exam due 7th day of the week

University Policies & Processes

Late Work/Make-up Policy

Please review the Late Work policy in the University Catalog.

Code of Conduct

University of the People expects that students conduct themselves in a respectful, collaborative, and honest manner at all times. Harassment, threatening behavior, or deliberate embarrassment of others will not be permitted. Any conduct that interferes with the quality of the educational experience is not allowed and may result in disciplinary action, such as course failure, probation, suspension, or dismissal. For more information on this topic, please review the General Code of Conduct in the University Catalog.

Procedures for Resolving Academic Grievances/Appeals

If you believe that the final grade you received for a course is erroneous, unjust, or unfair, please contact your course instructor. This must be done within seven days of the posted final grade. For more information on this topic, please review the Grievance Policy and Grade Appeals Procedure in the University Catalog.

Withdrawal and Drop Date Policy

Please review the Course Drops and Withdrawals policy of the University Catalog.

Academic Integrity and Plagiarism

Please review the Code of Academic Integrity in the University catalog.

Intellectual Property

UoPeople respects the intellectual property rights of others who seek to create, preserve, and disseminate knowledge through teaching, collective learning, and continued research at the University at large. For more information on this topic, please review the Intellectual Property policy in the University catalog.

Reasonable Accommodations

Contact your Program Advisor to open a request for support.

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Student Support Services & Resources

English Programs

Academic Advising: advising@uopeople.edu
Financial Aid: financial.aid@uopeople.edu
Library Resources: library@uopeople.edu
Payment Processing: payments@uopeople.edu
Student Services: student.services@uopeople.edu
Technical Support: support@uopeople.edu