



College of Natural & Applied Sciences
Division of Mathematics & Computer Science

Course: Introductory Statistics – MA-151 – 05
Semester: Fañomnåkan 2024 (Spring 2024)
Meetings: TTh 12:30 PM – 13:50 PM (Online via Big Blue Button on the Moodle)
Instructor: JaeYong Choi **Office:** N/A
Email: choij@triton.uog.edu **Telephone:** N/A
Office hours: MTWTh 09:30 AM – 11:00 AM or by arrangements.
(Online office hours via Big Blue Button on the Moodle)

Catalog Course Description:

This course presents statistical methods as applied to the description and display of data, and to drawing conclusions from statistical data, and introduces the basic probability theory needed to understand and use the techniques of elementary statistics. Prerequisite: MA084b, MA 085 Level II or placement.

Required Textbook:

Elementary Statistics, A Step by Step Approach, 10th Edition by Allan G. Bluman

Calculator:

A calculator is required for this course and will be used on all assignments and tests.

Grading Policy:

<u>Description:</u>	<u>Percent of Total Grade:</u>
Tests:	40% (20% each)
Final:	30%
Quizzes:	15%
Participation	5%
Attendance	10%

Final grade:

A+ = 98-100%	A = 93-97%	A- = 90-92%	
B+ = 87-89%	B = 83-86%	B- = 80-82%	
C+ = 77-79%	C = 70-76%	D = 60-69%	F = Below 60%

Evaluation

Homework:

Homework will be assigned for each one or two section(s) on the Moodle. You are expected to work on the homework to prepare for the quizzes and the tests. Homework is an essential component of the course. To be successful, a student must complete all assigned homework even if it is not collected or graded.

Quizzes/Tests/Final Exam:

There will be online chapter quizzes, as well as two tests and a cumulative final exam in person. Tests will be announced with a testing place at least one week in advance. Only a writing implement, scratch papers (No notes), a scientific calculator and a drink will be allowed to around your test taking area and all other material, especially math related, must be kept out of view. There will be no make-ups for the tests without documentation of circumstances, i.e., doctor's note, etc. If you miss any test, you will receive the grade "F." All work on exams must be shown and submitted in order to receive full credit. You

are not allowed to use any electronics on the quizzes, tests or final, other than a stand-alone calculator. This means no calculator apps on cellphones, computers, or tablets.

Attendance/Participation:

Students are expected to attend every scheduled class. Your attendance in class is encouraged and is directly related to your grade. It is the student’s responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes. Please inform the instructor if you will be absent. However, we must make it a point to attend all class sessions on time, if it exists. For participation, there will be forum where you can ask questions if something is not clear. You are encouraged to answer other students’ questions. This will count as your participation in the class.

Course Student Learning Objectives:

Course SLOs:	Program Learning Outcomes (PLOs)	University Learning Outcomes (ILOs)	GE QR Learning Outcomes	Method of Assessment
Understand the fundamental ideas of statistics, such as variability, types of variables, distribution, association, and sampling.	MA PR-1	ILO-1 ILO-2 ILO-3	QR-5	Questions on homework assignments, quizzes and tests.
Construct and interpret graphical summaries of data: histograms, boxplots, bar and pie graphs.	MA PR-1 MA PR-3 MA PR-4	ILO-1 ILO-2	QR-1 QR-2	Questions on homework assignments, quizzes and tests.
Calculate and interpret the numerical summaries of data. Use statistics appropriate to the shape of the data distribution to compare center (median, mean, mode) and spread (interquartile range, standard deviation) of two or more different data sets.	MA PR-1 MA PR-3 MA PR-4	ILO-1 ILO-2	QR-3 QR-4	Questions on homework assignments, quizzes and tests.
Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of outliers.	MA PR-1 MA PR-3 MA PR-4	ILO-1 ILO-2 ILO-3	QR-4 QR-5	Questions on homework assignments, quizzes and tests.
Define, and apply the concepts of sample space, events, probability, random variables and their distributions to calculate elementary probabilities.	MA PR-1 MA PR-3 MA PR-5	ILO-1 ILO-2 ILO-6	QR-3	Questions on homework assignments, quizzes and tests.
Compute conditional probabilities and use them to determine the independence of events, apply the Bayes’ rule.	MA PR-1 MA PR-5 MA PR-6	ILO-1 ILO-2 ILO-6	QR-3 QR-4	Questions on homework assignments, quizzes and tests.
Use the sampling distribution of the sample mean to calculate probabilities.	MA PR-1 MA PR-3	ILO-1 ILO-2	QR-3 QR-6	Questions on homework assignments, quizzes and tests.
Represent data of two quantitative variables on a scatter plot, compute and interpret the correlation, and describe how the variables are related. (if time permits)	MA PR-1 MA PR-2 MA PR-3 MA PR-4	ILO-1 ILO-2	QR-1 QR-2 QR-4 QR-6	Questions on homework assignments, quizzes and tests.

Compute the linear regression to make and interpret the model in the context of the data. Use the linear regression to make predictions. (if time permits)	MA PR-1 MA PR-2 MA PR-3 MA PR-4 MA PR-6	ILO-1 ILO-2 ILO-3	QR-1 QR-2 QR-4 QR-6	Questions on homework assignments, quizzes and tests.
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QR GE Learning outcomes:

UOG students will be able to apply analytical and QR reasoning to address complex challenges and everyday problems by:

1. Interpreting information presented in a mathematical and graphical form;
2. Representing information in a mathematical and graphical form;
3. Effectively calculating using quantitative data;
4. Analyzing quantitative information in order to scrutinize it and draw appropriate conclusions;
5. Evaluating the assumptions used in analyzing quantitative data
6. Communicating quantitative information in support or refutation of an argument.

Math Program Learning Objectives:

MA PR-1: demonstrate critical thinking, problem solving skills and ability to use mathematical methods by identifying, evaluating, classifying, analyzing, synthesizing data and abstract ideas in various contexts and situations.

MA PR-2: exhibit a sound conceptual understanding of the nature of mathematics, and demonstrate advanced mathematical skills in mathematical analysis, modern algebra and other mathematical discipline(s).

MA PR-3: argue and reason using mathematics, read, create and write down logically correct mathematical proofs, use exact mathematical language and communicate mathematics efficiently orally, in writing and using information technology tools.

MA PR-4: apply abstract thinking, mathematical methods, models and current practices in the sciences, including state-of-the-art mathematical software, to solve problems in theoretical mathematics or in a diverse area of mathematical applications.

MA PR-5: show maturity in mathematical knowledge and thinking that prepares and encourages students to pursue graduate studies in mathematics or in related fields.

MA PR-6: demonstrate an appreciation of and enthusiasm for inquiry, learning and creativity in mathematical sciences, a sense of exploration that enables them to pursue lifelong learning and up-to-date professional expertise in their careers through various areas of jobs, including governmental, business or industrial jobs in mathematics, related sciences, education or technology.

Institutional Expected Student Learning Outcomes

UOG Expected Student Learning Outcomes

Some of the expected fundamental knowledge, skills, and values that the University of Guam student will have demonstrated upon completion of any degree are:

ILO1: Mastery of critical thinking & problem solving

ILO2: Mastery of quantitative analysis

ILO3: Effective oral and written communication

ILO4: Understanding & appreciation of culturally diverse people, ideas & values in a democratic context

ILO5: Responsible use of knowledge, natural resources, and technology

ILO6: An appreciation of the arts & sciences

ILO7: An interest in personal development & lifelong learning



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Tobacco-Free/Smoke-Free/Vape-Free Campus:

University of Guam is a tobacco-free/vape-free campus. Thank you for not using tobacco/vape products on campus, and for helping make UOG a healthy learning and living environment. <http://www.uog.edu/smoke-free-uog>

Plagiarism Statement:

The term “plagiarism” includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials (UOG Student Handbook, p. 49). Cases of plagiarism are referred to the Student Discipline and Appeals Committee. In this course this penalty for plagiarism is [up to the instructor – the most common penalties are no credit for the assignment or failure in the course].

Notification of Rights Under FERPA:

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights for students, parents and school officials can be viewed at <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html>.

Special Accommodations:

The University is committed to maintaining the campus community as a place of work and study for faculty, staff and students, free of all forms of discrimination and harassment. If you experience harassment or discrimination, then you should report it immediately to Mr. Larry Gamboa, Acting EEO Director at the EEO/ADA & Title IX Office, Institutional Compliance Officer (671) 735-2244 located in Dorm 1. For immediate assistance in an emergency call 911.

CollegeNET Course Evaluations:

The student course and faculty evaluations for courses will be administered at the completion of the semester within CollegeNet. Student participation is essential and appreciated. Student responses are anonymous and cannot be traced back to individual students. You will need your WebAdvisor login credentials to complete the evaluation. If you experience login issues please refer inquiries to OIT staff to assist at 735-2630/40.

COVID Statement

The University of Guam is experiencing continued disruption to delivery of instruction during the global coronavirus pandemic. The University will follow executive orders and may be forced to close again, causing more modifications as the semester progresses. All changes will be posted on the UOG website, www.uog.edu.

- Contact Office of Information Technology at 735-2630 or oit@triton.uog.edu
- Contact the Triton Advising Center at 735 – 2271 or tac@triton.uog.edu
- Contact Uplift Counseling Services at 787-7978 or uplift@westcare.com
- Contact Project Tulaika Mental Health Services at 647-5317; 647-1901; 647-5440; 647-8833/34 or care@gbhwc.guam.gov

In face to face courses, wearing masks and social distancing is required. Anyone who has a fever, or any other symptom, should stay home. If you do not comply with these directions, you will be asked to leave, and if you do not, class will be cancelled. Patience, respect, and cooperation are needed from all of us to persist through these uncomfortable times.

DSS Accommodation Services

For individuals covered under the ADA (Americans with Disabilities Act), if you are a student with a disability requiring academic accommodation(s), please contact the Disability Support Services Office to discuss your confidential request. A Faculty Notification letter from the Disability Support Services counselor will be provided to me. To



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register for academic accommodations, please contact or visit Sallie S. Sablan, DSS counselor in the School of Education, office 110, disabilitysupport@triton.uog.edu or telephone/TDD 671-735-2460.

No Unauthorized Recording:

Only the instructor may record class sessions. Unauthorized recording of online class meetings is not allowed, to include screen shots that include identifiable information of any person in the session. Not only is the delivery of course content the intellectual property of the instructor, but students enrolled in the course have privacy rights. Unauthorized recording and distribution of online courses may violate federal law.

This syllabus is subject to change. If any part of the syllabus needs to be changed you will be notified in class.