UNIVERSITY OF GUAM
UNIBETSEDÅT GUAHAN

College of Natural and Applied Sciences
Mathematics and Computer Science
COURSE SYLLABUS

Course: MA110-03 Basic Mathematical Applications
Semester: Fanuchånan 2024 (Fall 2024)
Meeting: MW 11:00AM-12:20PM
Instructor: Gino Reyes
Email: reyesg11029@triton.uog.edu
Office Hours: By appointment

Text:
Harshbarger, Ronals J. and Reynolds, James J. Mathematical Applications for the Management, Life, and Social Sciences 11th Edition. Boston: CENGAGE Learning, 2016.

Note: E-book is available for purchase at the bookstore.

Catalog Course Description:
This course covers linear, quadratic, polynomial, exponential and logarithmic functions and their applications to finance and economics. This course also introduces matrix operations and its applications. Prerequisite: MA085 Level II, placement or equivalent.

Rationale for Offering Course:
Basic Mathematical Applications satisfies the general education requirement. It introduces the finite, discrete side of mathematics.

Calculators:
You are required to have a scientific or graphing calculator for this class. Graphing calculators are strongly recommended. Only standalone calculators will be allowed on tests. Calculator applications on phones, laptops, tablets, smart-watches, or other devices with Internet access or messaging capability will not be allowed for assessments. When calculator use is permitted, complete work for a problem is still expected.

Attendance:
Students are highly expected to attend every class meeting. Attending class is mandatory as in-class assignments will be given on each class meeting. If you are going to be absent, please inform the instructor along with an excuse. Please let the instructor know ahead of time if you need to leave the class early unless the reason for leaving is an emergency. **More than 6 UNEXCUSED absences** will result in a failure for this course

Make-up Policy:
Make-up for homework and tests may be given only for extenuating circumstances. For example, you have to go off-island, you will be hospitalized or under serious medical treatment, deployment, etc..

Grading:

10% Attendance and Participation
15% Quizzes
25% Exam 1
25% Exam 2
25% Final Exam

100% Total percentage

Letter Grade	Grade Point Value	Percent Grade
A+	4.00	98-100%
A	4.00	93-97%
A-	3.67	90-92%
B+	3.33	87-89%
B	3.00	83-86%
B-	2.67	80-82%
C+	2.33	77-79%
C	2.00	70-76%
D	1.00	60-69%
F	0.00	< 60%

Tentative Schedule:

Part	*Topics Covered*
Part I	0.2 The Real Numbers 0.3 Integral Exponents 0.4 Radicals and Rational Exponents 0.5 Operations with Algebraic Expressions 0.6 Factoring 0.7 Algebraic Fractions 1.1 Solutions of Linear Equations and Inequalities In One Variable 1.2 Functions 1.3 Linear Functions 1.5 Solutions of Systems of Linear Equations 1.6 Applications of Functions **Review** **Exam 1**

Part II	2.1 Quadratic Equations 2.2 Quadratic Functions: Parabolas 2.3 Business Applications 3.1 Matrices 3.2 Multiplication of Matrices 3.4 Inverse of a Square Matrix: Matrix Equations **Review** **Exam 2**

Part III	4.1 Linear Inequalities in Two Variables 4.2 Linear Programming: Graphical Methods 5.1 Exponential Function 5.2 Logarithmic Functions and Their Properties 5.3 Equations and Applications with Exponential and Logarithmic Functions **Review** **Final Exam**

Homework:

Homework will be given occasionally. Problems will mainly be sourced from the course text relating to topics learned on the day the homework is assigned. Although homework is not graded, all quizzes will be based on the homework so students are expected to do them anyway.

Quizzes:

Quizzes will be given about once a week at the beginning of class, so try your best to come into class on time. Questions on a quiz will cover 2-4 sections of the book.

Exams:

There will be **3** exams. All notes and the textbook are prohibited from use. Very special circumstances will be handled very specially by consultation with the instructor. Except for true emergencies, these special cases are arranged in advance with the instructor.

Tentative Exam Schedule:

Exam 1: September 18, 2024
Exam 2: October 30, 2024
Final Exam: December 11, 2024

Curriculum Mapping:

Course SLOs	*UOG ILOs*	*Method of Assessment*
SLO 1	ILO 1, 2	Homework and Exams
SLO 2	ILO-1, 2, 3, 5	Homework and Exams
SLO 3	ILO 1, 2	Homework and Exams
SLO 4	ILO 1, 2, 3, 5, 6	Homework and Exams

Student Learning Outcomes (SLOs):
SLO 1: Demonstrate familiarity with linear, quadratic, exponential and logarithmic functions.
SLO 2: Apply the concept of function in making models for problem solving.
SLO 3: Solve systems of equations and perform operations on matrices.
SLO 4: Construct mathematical models and solutions for optimization problems graphically.

Institutional Learning Outcomes (ILOs):
ILO 1: Mastery of critical thinking & problem solving
ILO 2: Mastery of quantitative analysis
ILO 3: Effective oral and written communication
ILO 4: Understanding & appreciation of culturally diverse people, ideas & values in a democratic context
ILO 5: Responsible use of knowledge, natural resources, and technology
ILO 6: An appreciation of the arts & sciences
ILO 7: An interest in personal development & lifelong learning

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

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. Visit the University of Guam Smoke Free UOG page for more information.

Academic Integrity Policy:
Academic Integrity is about performing your role as student in ways that are honest, trustworthy, respectful, responsible, and fair (see the International Center for Academic Integrity website for more information). As a

student, you will complete your academic assignments in the manner expected by the instructor. Academic dishonesty, including, but not limited to, cheating and plagiarism may result in suspension or expulsion from the University. Refer to the UOG Student Handbook and Code of Conduct for more information.

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

UOG recommends individuals continue to wear masks as they feel appropriate, while under the public health emergency. Anyone who displays symptoms of COVID-19 should stay home. Patience, respect, and cooperation are needed from all of us to persist through these uncomfortable times.

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:

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 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.

CollegeNET Course Evaluations:

Course evaluations will be available for students to complete during the three-week period before the semester ends. You can access the course evaluations by clicking on "CollegeNET Course Evaluations" in the drop-down log in menu on the University of Guam's website.

Tutoring:

The CNAS Math Tutor Lab is located at the Agriculture and Life Sciences Building in Room 230 (ALS230). The Math Tutor Lab is open for in-person and online tutoring from Monday-Friday (except for observed holidays). Please visit the website for current hours of operation. For more information, please call (671)735-2064, email mathtutorlab@triton.uog.edu, or visit the UOG Math Tutor Lab's website.

Contacts:

Write the names and contact information of classmates you can contact if you miss a session or want to study together. Study groups are highly encouraged!

Disclaimer:
This syllabus is subject to change.

Version updated 08/21/24