



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

## **MA161B-01 College Algebra & Trig (3 Credits)**

**Fall (Fanuchånan) 2024**

**Instructor: Dr. Hyunju Oh**

**Class Meeting: TTH 2:00-3:20pm Room: SC121**

**Office: ALS Rm316**

**Phone: 671-735-2142**

**Email: ohh@triton.uog.edu**

**Office Hours: (MTWTh) 12:30 – 1:30pm, (MW) 3:30-4:30pm, or by appointment**

**Course Code Moodle: MA-161B-01**

**Encryption Key: MA161bfa24oh01**

Please Note: The Enrollment Key is CASE SENSITIVE, and there are NO spaces before and after the enrollment key.

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### **Textbook:**

Algebra and Trigonometry with Analytic Geometry, 13th edition, by Swokowski and Cole *ISBN-13: 978-0-8400-6852-1; ISBN-10: 0-8400-6852-2*

### **Catalog Description:**

MA161a includes algebraic, exponential and logarithmic functions, systems of equations and inequalities. MA161b includes trigonometry, additional algebraic functions, sequences, series, and probability. A student may receive credit for either the MA161a-b sequence or the MA165 course, but not a combination of the two.

### **Prerequisite:**

Grade of C or better in MA161a, or placement into B.

### **Rationale for Course:**

Satisfies general education requirements. Required for STEM (science, technology, engineering, mathematics) majors. Prepares students for calculus and other upper-level mathematics courses, as well as courses in other STEM disciplines such as physics, pre-engineering, chemistry, and biology.

### **Calculators:**

A scientific graphing calculator such as TI-83 is required for this course. Students are expected to have a working calculator for Quiz/Test/Exam with exception. No calculator sharing is permitted during quiz and test periods. **Laptop, tablet, and cellphone are NOT allowed to use during quizzes and tests.**

**Tentative Course Schedule:**

|             |   |
|-------------|---|
| Weeks 1-5   | Ch. 6: The Trigonometric Functions          |
| Weeks 5-10  | Ch. 7: Analytic Trigonometry                |
| Week 9      | Fall Break (Oct. 7-12, 2024)                |
| Weeks 11-15 | Ch. 8: Application of Trigonometry          |
| Weeks 16-17 | Ch.9: Systems of Equations and Inequalities |
|             | Sec 10.5: The Binomial Theorem              |

(This is a tentative schedule, and is subject to change, should a topic require more or less time in class)

**Tentative Test Schedule:**

Test 1: 6th Week (Sept. 16 – 19)  
 Test 2: 11th Week (Oct. 21 – 24)  
 Test 3: 16th Week (Nov. 25 – 27)  
 Final Exam (Cumulative) Dec. 10 (Tue) 2:00am – 3:50pm

**Evaluation:**

The grade distribution and grading scheme are as follows:

|                |            |            |            |                |  |
|----------------|------------|------------|------------|----------------|--|
| Quizzes 20%    |            | Tests 60%  |            | Final Exam 20% |  |
| Grading Scale: |            |            |            |                |  |
| 98-100%: A+    | 93-97%: A  | 90-92%: A- | 87-89%: B+ | 83-86%: B      |  |
| 80-82%: B-     | 77-79%: C+ | 70-76%: C  | 60-69%: D  | 0-59%: F       |  |

***Students' work is usually graded on a partial credit basis. Students' written solutions must include all work needed to solve problems. Points will be deducted (or given none) for omitting any work even if the answer is correct.***

**Quiz:**

We will have quizzes on **Thursday** classes at the beginning of each week. Quizzes will be generated from homework and lecture notes. Your **two(2) lowest grades** will be dropped for your final grade evaluation. **If you miss a quiz, that is one of the grades that will be dropped. Missing three or more quizzes will result in grade F as a course grade regardless of your total points.**

If you want to **improve your quiz score**,

- You can retake the quiz in a week after studying the section(s) related quiz materials for at least 2 hours with Mr. Mark Ira Galang (our Math tutor: galangm15766@gotritons.uog.edu) or a tutor in Math Tutor Lab (www.uogmathlab.org).
- Submit the signed time log to tutor and have a chance to retake the quiz in a week. The higher score will be recorded in the gradebook.

- No more than 3 quizzes will be available for retaking during the semester.

**Note that** Mr. Mark Ira Galang will help with your homework problems/lecture materials. Please make an appointment with him.

**Homework:**

Homework will be assigned to each class. To be successful, a student must complete all assigned homework even though it is not collected and graded. Keep in mind that quizzes/tests are based on homework problems, so practice, practice, and practice!

**Tests/Final Exam:**

We will have three tests and a cumulative final exam. All notes and the textbook are prohibited from use on tests and on the final exam. It is crucial to do well on Tests and Final Exam. Missing any single test or final exam will result in grade F. 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.

**Any evidence of cheating will result in a "0" for that test/Final exam and an "F" for the entire course regardless of your total points!!!**

**Attendance:**

Students are expected to attend every scheduled class. It is the students' responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes. In case you must leave early, you need to inform the instructor in advance about your leaving class early. Please inform the instructor if you will be absent.

**Make-up policy:**

There will be **no make-up** tests unless you contact the instructor IMMEDIATELY for extenuating circumstances. For example, you must go off-island, you will be hospitalized or under serious medical treatment, deployment, etc.

**Withdrawal from Class:** [UOG Student Handbook, p.33-34]

Students may withdraw from a class or classes during the first week of instruction of a regular semester and the first two days of a summer session without anything being recorded on their transcripts. From the second through the eighth week of instruction of a regular semester and from the third day of classes through the third week of a summer term, students may withdraw by using the Withdrawal feature in their Webadvisor account.

**Academic Dishonesty:**

All assignments and Quiz/Test/Exam must be your own work. 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. Plagiarizing in your essay or **CHEATING on Quiz/Test/Exam will result in Course Grade F regardless of your total points.** If you are not sure what plagiarism is and how to avoid it in using sources for your work, see [www.indiana.edu/~wts/pamphlets/plagiarism.shtml](http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml) but be careful when paraphrasing not to change the meaning of scientific information. Answers you write on Quiz/Test/Exam must come only from in your head or the information supplied in the test papers; anything else is cheating. The term cheating includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations, e.g., looking at other students answers, using crib notes (including electronic), getting information from another person via any kind of communication; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; or (3) the acquisition, without permission, of tests or other academic material belonging to a member of the University faculty or staff. If you need to use an electronic translator, you must discuss this with me in advance.

### **Your Math Resources: Office Hours, Math Tutor Lab, TRiO:**

There are several campus resources available to you if you need extra help with any of the course material.

- Your instructor! Come to my office hours or email me to set up an appointment to meet at another time if you can't make my office hours.
- The Math Tutor Lab! The CNAS Math Tutor Lab is located at the Agriculture and Life Sciences Building in Room 230 (ALS230). MA085/094 students will have priority at the tutor lab and can book an appointment at the tutor lab website [uogmathlab.org](http://uogmathlab.org). NON-MA085/094 students will be helped as a walk-in only on a first come-first serve basis. Fall 2017 tutor lab hours of operation are Monday-Friday 9am-5pm. For more information, please call 735-2064, email [mathtutorlab@triton.uog.edu](mailto:mathtutorlab@triton.uog.edu) or visit the tutor lab website.
- TRiO! The TRiO Programs offers tutoring services to students who meet certain eligibility requirements. For more info, check out their website: <http://www.uog.edu/trio-programs-home>.

### **Learning Objectives and Outcomes:**

Ever wondered why we require certain courses for general education, or for a given major, or as a prerequisite for another course? Read on below to see what the MA161a student learning objectives are (what you should expect to learn in this course), how they tie into the Math Program Learning Outcomes, and how they tie into the bigger picture – the University's Institutional Learning Outcomes.

#### **MA161b Course Student Learning Objectives (SLOs)**

| <b>Course SLOs:</b>  | <b>Program Learning Outcomes (PLOs)</b> | <b>University Learning Outcomes (ILOs)</b> | <b>Method of Assessment</b>                          |
|--|---|--|--|
| Demonstrate an understanding of polynomial, rational, exponential, and logarithmic functions and their | MA PR-1<br>MA PR-3<br>MA PR-4           | ILO-1<br><br>ILO-2                         | Questions on homework, workshops, quizzes and tests. |

|  |                               |                         |  |
|--|-------------------------------|-------------------------|--|
| corresponding graphical representations.   |                               |                         |  |
| Generate graphs of polynomial, rational, exponential, and logarithmic functions without a graphing calculator.                                 | MA PR-1<br>MA PR-3<br>MA PR-4 | ILO-1<br>ILO-2          | Questions on homework, workshops, quizzes and tests. |
| Use polynomial, rational, exponential, and logarithmic functions to solve real-life applications and problems.                                 | MA PR-1<br>MA PR-3<br>MA PR-4 | ILO-1<br>ILO-2<br>ILO-6 | Questions on homework, workshops, quizzes and tests. |
| Sketch the graphs of different kinds of functions, identify their domain and range, and construct new functions from a given set of functions. | MA PR-1<br>MA PR-3<br>MA PR-4 | ILO-1<br>ILO-2          | Questions on homework, workshops, quizzes and tests. |
| Solve different kinds of equations: linear, quadratic, radical, polynomial, exponential, and logarithmic.                                      | MA PR-1<br>MA PR-3<br>MA PR-4 | ILO-1<br>ILO-2          | Questions on homework, workshops, quizzes and tests. |
| Formulate appropriate mathematical equations and use these equations to solve word problems.   | MA PR-1<br>MA PR-3<br>MA PR-4 | ILO-1<br>ILO-2<br>ILO-6 | Questions on homework, workshops, quizzes and tests. |
| Demonstrate skill in performing the fundamental operations on radicals, polynomials, and complex numbers.                                      | MA PR-1<br>MA PR-3            | ILO-1<br>ILO-2          | Questions on homework, workshops, quizzes and tests. |

(Note: Student Learning Outcomes for MA161a are undergoing revisions.)

### **Math Program Learning Outcomes:**

**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.

**(Note: Math Program Learning Outcomes are undergoing revisions.)**

### **Institutional Expected Student Learning Outcomes:**

### **UOG Expected Student Learning Outcomes December 2008**

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

### **Academic Integrity Policy:**

Academic Integrity is about performing in your role as student in ways that are honest, trustworthy, respectful, responsible, and fair (see [www.academicintegrity.org](http://www.academicintegrity.org) 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](http://www.uog.edu).

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

**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.

**UOG Disabilities Policy**

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 accommodation, please contact or visit Sallie S. Sablan, DSS counselor in the School of Education, office 110, [disabilitysupport@triton.uog.edu](mailto:disabilitysupport@triton.uog.edu) or telephone/TDD 671-735-2460.

Office Hours: Monday to Thursday 9:00-noon and 1:00-3:00; Friday by appointment only

To schedule an appointment at <https://calendly.com/sssablan>

Office: School of Education, room 110

Office Phone Number/TTY: 735-2460

Email address: [sssablan@triton.uog.edu](mailto:sssablan@triton.uog.edu)

Disability Support Services email: [disabilitysupport@triton.uog.edu](mailto:disabilitysupport@triton.uog.edu)

Scheduled appointments preferred.

**Tobacco-free/Smoke-free/Vaping-free campus:**

UOG is a tobacco-free/smoke-free, vaping/e-cigarette free campus. Thank you for not using tobacco products or e-cigarettes on campus, for helping to fight cancer, and for helping make UOG a healthy learning and living environment.

**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>