AMERICAN SAMOA COMMUNITY COLLEGE

"Saili le Atamai"
Since 1970

Mathematics
Math 250: College Algebra & Trigonometry
Spring 2021

Course Alpha/Title/Section: Math 250: College Algebra & Trigonometry (Sec. 02)

Class Days/Time: MWF, 11:00am – 12:20pm, RMA-5

Academic Department: Mathematics

Office Location: A12

Instructor: Laau Liufau

Office Hours: MWF: 1:00 – 2:00/ Daily

Email Address: l.liufau@amsamoa.edu

Contact Number: 699-9155, ext. 505 , 258-9509

Textbook Title: Algebra and Trigonometry, 4th edition
ISBN Number and Price of textbook: ISBN – 0-534-36959-6
Publisher Name/Copyright Year: Wadsworth Cengage Learning

Additional Materials/Resources: A graphing/scientific calculator is required for this class. Other materials will be provided by the instructor.

Course Description: A minimum math course required for all Associate of Arts students. Basic algebraic properties of real number, linear and quadratics equations and inequalities, functions and graphs, analytic trigonometry and functions, logarithmic and exponential functions, conic sections, sequences and series. An introduction of analytical geometry is also presented. This course is designed for students wishing to go on to four-year college programs. A Scientific calculator /graphing calculator is required.

Pre – requisite(s): MATH 151

Course Learning Outcomes (CLO):

1. Demonstrate knowledge of the application of algebra and trigonometry to problem solving
2. Develop skills in the interpretation of polynomial , rational, exponential, and logarithmic functions to model real life situations.
3. Construct graphs of polynomials and trigonometric functions using technology, and relate it to real life phenomenon.
4. Demonstrate the ability to analyze, synthesize, and evaluate algebraic and trigonometric problems and formulate effective solutions.
5. Apply conics, sequences and series in problem solving.

Course Objectives:

1. Identify, solve and graph different types and systems of equations and inequalities
2. Explore and apply properties and operations of algebra to problem solving
3. Simplify and factor polynomial expressions
4. Identify, simplify and solve functions and their graphs
5. Determine zeros and domain of polynomial and rational functions, and sketch graphs based on asymptote
6. Evaluate, solve and model exponential and logarithmic functions in problem solving

7. Solve and graph trigonometric functions, and apply it to problem solving
8. Evaluate, simplify, and solve trigonometric identities and equations
9. Apply trigonometry to problem solving using law of sines and cosines

Methods of Instruction:

1. Lectures
2. Class Discussions Discussion
3. Presentations
4. MOODLE Accessibility & Accountability

Grading Scale:

A+	98-100	A	94-97	A-	90-93
B+	88-89	B	84-87	B-	80-83
C+	78-79	C	74-77	C-	70-73
D+	68-69	D	64-67	D-	60-63

Course Requirements:

- Chapter Tests 45%
- Quizzes 10%
- Homework 20%
- Presentations/Projects) 5%
- Comprehensive Final Exam 20%

1. Chapter Tests. Forty five percent (45%) of the final grade is from these tests. Each student is required to take these tests as scheduled. A make-up is allowed if these conditions are met:

   a) You must have a legitimate excuse for being absent.

   b) The make-up must be taken before the next class meeting. There is no make-up allowed once the test papers have been given back. Each test is worth 100 points assessing students' skills and knowledge on mathematical topics indicated on the course topical outline.

   Students with homework not turned in on the day a chapter test is scheduled will not be allowed to take the test.

2. Pass all in-class quizzes (10%)

   Quizzes are announced or pop ups. There will be AT LEAST one quiz per chapter. Quiz is a formative assessment tool to enforce students' knowledge on related mathematical topics discussed in the classroom.

3. Homework is the main responsibility of the student. Twenty (20%) percent of the final grade is from these homeworks. Students are required to submit all assigned homework on tests dates.

   Homework papers must be **stapled** or will be returned ungraded. Homework problems allow the students the opportunity to reinforce what they have learned in the classroom, and to allow the instructor the chance to provide instant feedback on topics students find them challenging.

4. Require to do an Individual presentation relating to area of interest
   Each learner is required to present a power point or use the whiteboard presentation applying mathematics in his/her area of interest (5%)

5. Comprehensive Final Examination is "mandatory" (20%)

NP"

6. Homework are to be turned in on tests dates. If turned in a day late, you will lose a half point. No point if turned in two days late.

Important Dates:

• **J**anuary 19	**INSTRUCTION BEGINS**
• January 19 - 20	Late Admissions & Late Registration
• January 21 - 29	Administrative Drop Period07
• January 21 - 29	Drop Only Period
• **January 18**	**HOLIDAY – Martin Luther King Je.**
• February 08 – March 26	Withdrawal Period to Receive a "W"
• February 15	HOLIDAY –President's Day
• **March 15 - 19**	**SPRING BREAK**
• March 29 – April 16	Withdrawal Period to Receive a "W/F" or "W/NP:
• April 19 –May 13	Summer & Fall 2021 Priority Registration (15weeks)
• **April 02**	**HOLIDAY – Good Friday**
• May 07	Last Day to Complete Withdrawal from ASCC
• **May 07**	**INSTRUCTION ENDS**
• **May -14**	**Final Examinations**

Attendance: (2018-2020 ASCC General Catalog, p. 40)

All students attending ASCC are expected to attend all of their scheduled classes. Students with excessive absences during the first two weeks of instruction will be administratively dropped. Instructors are required to include in their course syllabi the College's attendance policy and have it distributed to students during the first week of instruction. A student cannot exceed six (6) absences for Monday, Wednesday, Friday classes, four (4) absences for Tuesday, Thursday classes; and three (3) absences for CAPP and summer sessions. Students with excessive absences, in accordance to this policy, will receive a lower or failing grade for the semester or session.

15 Weeks Semester(s)	*= 6 absences for courses offered on Mondays, Wednesdays, and Fridays*
	= 4 absences for courses offered on Tuesdays and Thursdays
10 Weeks Session(s)	*= 4 absences for courses offered on Mondays, Wednesdays, and Fridays*
	= 3 absences for courses offered on Tuesdays and Thursdays
6 Weeks Session(s)	*= 3 absences for courses offered daily*
	= 2 absences for courses offered daily
5 Weeks Session(s)	*= 3 absences for courses offered daily*
	= 2 absences for courses offered daily

A student can be excused from classes at the discretion or upon verification by the instructor, for the following reasons: medical reasons, family emergency, special curricular activities, military obligations, jury duty, and related official College sponsored activities. It is the responsibility of the student to make arrangements with his/her instructor(s) for work to be made up for absences due to legitimate reasons. Students are required to submit in writing, justifications or provide documentation for absences to the Dean of Academic Affairs.

Veteran students are to refer to the Student Services Veterans Educational Benefit sections for additional requirements.

Textbook Policy: (2020 – 2022 ASCC General Catalog, p. 38)

Students are required to purchase textbooks, workbooks, and other instructional materials designed for the course(s) they are enrolled in. Textbook costs vary from course to course. Every student must have the required materials identified in the current syllabus of the course(s) in which they are officially enrolled by the end of the first week of instruction. Students' failure to provide their instructors proof of this requirement will result in an immediate recommendation by the instructor to drop the course(s). If the student does not drop the course or purchase the required materials, then the instructor may initiate an administrative drop.

Academic Honesty and Integrity: (ASCC General Catalog 2020 -2022, p. 33)

ASCC prohibits the following actions:

- *Plagiarism, the submitting of one person's written ideas or thoughts as one's own without giving proper citation or credit to the original author; and,*
- *Cheating that includes, but is not limited to, unauthorized sharing of information on any exam with others before the end of all final exams; and,*
- *The abuse of library or other institutional materials, misuse of library privileges and unlawful duplication and/or distribution of copyrighted materials; and,*
- *Knowingly furnishing false information to the college with the intent to deceive or fraud; and*
- *Forgery, alteration or misuse of documents, records, or identification; and,*
- *The attempted or actual theft or damage of college property.*

Students in violation of any of the actions listed above will be reported to the Dean of Student Services to be disciplined and/or counseled, which may result to probation, suspension, or expulsion in accordance to the severity of the action.

Access and Reasonable Accommodation: (ASCC General Catalog 2018-2020, p. 13)

ASCC is committed to assist and provide appropriate academic access services to students with a certified disability who meet the academic and essential requirements for admission or participation in any education program or activity at the College to which they can be given appropriate and reasonable accommodation.

Topical Outline:

	Content Outline	Objectives:	CLO's:	Assessment:
Week 1	**Introduction of Syllabus** -Review of the structure of the set of real numbers, rational & irrational numbers. -Sec. 2.1-2.2 Functions & Graphs of Functions			Homework - Problems

Week 2	-Sec. 2.3-2.4 Info. from Average Rate of Change -Sec. 2.5-2.6 Linear & Transformations of Functions			Homework - Problems
Week 3	-Sec. 2.7-2.8 Combining Functions & One-to-One, & Inverse Functions -Test #1 -Sec. 3.1-3.2 Polynomial Functions & Their Graphs & Quadratic Functions			Homework - Problems Test#1
Week 4	- Sec. 3.1-3.2 Polynomial Functions & Their Graphs & Quadratic Functions -Sec. 3.3 Dividing Polynomials -Friday: MOODLE			Homework - Problems
Week 5	Sec. 3.4 Real Zeros of Polynomials -Sec. 3.5 Complex Zeros and Fundamental Theorem of Algebra -Friday: MOODLE			Homework - Problems
Week 6	-Sec. 3.6 Rational Functions -Sec. 3.7 Polynomial and Rational Inequalities -Test #2 -Friday: MOODLE			Homework - Problems Test#2
Week 7	-Sec. 4.1-4.2 Exponential & Natural Exponential Functions -Sec. 4.3 Logarithmic Functions -Sec. 4.4 Laws of Logarithms -Friday: MOODLE			Homework - Problems
Week 8	-Sec. 4.5 Exponential and Logarithmic Equations -Sec. 4.7 Logarithmic Scales -Test#3 -Friday: MOODLE			Homework - Problems Test#3
Week 9	-Sec. 5.1 Angle Measures -Sec. 5.2 Trig. Of Right Triangles -Friday: MOODLE			Homework - Problems
Week 10	-Sec. 5.3 Trig. Functions of Angles -Sec. 5.4 Inverse Trig. Functions and Right Triangles -Friday: MOODLE			Homework - Problems
Week 11	-Sec. 5.5 The Law of Sines -Sec. 5.6 The Law of Cosines -Friday: MOODLE			Homework - Problems
Week 12	-Sec. 6.1 The Unit Circle -Sec. 6.2 Trig. Functions of Real Numbers -Friday: MOODLE			Homework - Problems

Week 13	-Sec. 6.3 Trig. Graphs -Sec. 6.5 Inv. Trig. Functions and Their Graphs -Test#4 -Friday: MOODLE			Homework - Problems Test#4
Week 14	-Sec. 7.1 Trig. Identities -Sec. 7.2 Addition and Subtraction Formulas -Sec. 7.3 Double-Angles, Half-Angles, Product-Sum Formulas -Friday: MOODLE			Homework - Problems
Week 15	-Sec. 7.4 Basic. Trig. Equations -Presentations -Review -Friday: MOODLE			Homework - Problems Presentations
FINALS	**FINAL EXAM**			Final Exam

Disclaimer: Subject to change to accommodate circumstances beyond the control of the instructor.