

College of Micronesia – FSM
P.O.Box 159
Kolonia, Pohnpei

Course Outline Cover Page

Technical Mathematics II
Course Title

MS 106
Department and Number

Course Description: This course is a continuation of MS 104 and is designed to provide vocational students with the mathematical tools needed to succeed in selected higher level technical occupational programs. Topic covered include exponents and monomials, polynomials, roots and radicals, graphing trigonometric functions, angle formulas, and the applications of trigonometry, vectors, complex numbers and logarithms.

Prepared by: Brent Villiers

State: National Campus

	Hours per Week	No. Of Weeks	Total Hours	Semester Credits
Lecture	3/6	16/8	64	3
Laboratory	3/6	16/8	48	1
Total Semester Credits:				4

Purpose of Course

Degree Requirement	_____
Degree Elective	_____
Advanced Certificate	_____
Certificate	_____
Remedial	_____
Other (Workshop)	_____

Prerequisite Course(s): MS 104

General Objective:

This course is designed to give the students entering the more technical occupational programs the mathematical skills to succeed in their chosen field of study. There is an emphasis on the electronic and telecommunications applications.

Learning Outcomes: Upon successful completion of this course the student will be able to:

1. Define exponents, multiply and divide powers, raise a power to a power and a product or a quotient to a power.
2. Describe, add, subtract, multiply and divide polynomials.
3. Factorize polynomials.
4. Simplify radicals and solve equations using one and two radical expressions.
5. Graph linear equations, find the slope of a line and find the equation of a line.
6. Solve systems of equations by graphing, substitution and addition. Identify consistent, inconsistent and dependent systems by their graphs, substitution or addition.
7. Analyze statistical data.
8. Graph trigonometric functions.
9. Find the trigonometric function of an angle using a reciprocal or ratio identity, or Pythagorean and related identities.
10. Find the exact trigonometric function value of a given angle using the sum and difference formulas and use the proper formula to find the exact trigonometric value of a given angle.
11. Define the applications of trigonometry.
12. Graph polar equations.
13. Add vectors using analytical method.
14. Perform rectangular to polar conversions and vice versa, add, subtract, multiply and divide complex numbers.
15. Define exponential and logarithmic functions and describe their relationship. Apply the change of base formula.

STUDENTS SHOULD BE MADE AWARE OF OCCUPATIONAL HEALTH AND SAFETY ISSUES IN ALL SITUATIONS AND BE EXPECTED TO DEMONSTRATE SAFE WORKING PRACTICES AT ALL TIMES.