University of the Philippines, Manila
College of Arts and Sciences
Department of Physical Sciences and Mathematics
Mathematics and Computer Science Unit

Course Number: MATH 17
Course Title: College Algebra and Trigonometry
Credits: 5 Units
Hours/Week: 5 Hours
Textbook: College Algebra and Trigonometry by Louis Leithold
                  Modern College Algebra (3rd Edition) by Elbridge P. Vance

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Algebra

I.   Sets and Real Numbers
   a. Introduction
   b. Sets
   c. The Real Number System

II. Algebraic Expressions
   a. Definitions
   b. Removing Grouping Symbols
   c. Addition and Subtraction
   d. Laws of Exponents
   e. Multiplication and Division
   f. Special Products
   g. Factoring
   h. Algebraic Fractions
   i. Radicals and Rational Exponents

   FIRST DEPARTMENTAL EXAMINATION

III. Complex Numbers
   a. The Set of Complex Numbers
   b. Operations on Complex Numbers
   c. Simplification of Powers of i

IV. Equations
   a. Equations and Solution Set
   b. Equations in One Unknown
   c. Equations in Two Unknowns
   d. Systems of Equations
   e. Applications to Verbal Problems
   f. Variation
   g. Arithmetic Sequences and Series
   h. Geometric Sequences and Series

   SECOND DEPARTMENTAL EXAMINATION

V.   Inequalities
  a. Introduction
  b. Solving Linear Inequalities
  c. Solving Quadratic and Rational Inequalities
  d. Solving Inequalities Involving Absolute Values

VI.   Functions and Relations
  a. Relation
  b. Functions
  c. Some Special Types of Functions
  d. Functional Notation
  e. Operations on Functions
  f. Odd and Even Functions
  g. Polynomial Functions
  h. Inverse Function
  i. Exponential and Logarithmic Functions

THIRD DEPARTMENTAL EXAMINATION

Trigonometry

I.   Circular Functions
  a. Angles and Angle Measurement
  b. Special Angles
  c. Identities
  d. Equations Involving Circular Functions
  e. Sketching Circular Functions
  f. Inverse Circular Functions

FOURTH DEPARTMENTAL EXAMINATION

II.   Trigonometric Functions
  a. Solutions of Right Triangles
  b. Solutions of Oblique Triangles

III.   Complex Numbers
  a. Geometric Interpretation of Complex Numbers
  b. Trigonometric Form of a Complex Number
  c. Product and Quotient of Complex Numbers in Trigonometric Form or Polar Form
  d. Powers and Roots of Complex Numbers

IV. Graphing of Sine and Cosine Functions

FIFTH DEPARTMENTAL EXAMINATION

FINAL EXAMINATION

Class Policies

1. Attendance is required. A student who is absent for more than 6 times, and failed to officially drop the course will be given a grade of 5.0.
2. Cheating is punishable with a grade of 5.0.
3. *Special Examination*: A student who was not able to take an exam because of health reasons will be given a makeup exam, but he or she must submit an excuse letter signed by his or her parents or guardian and a medical certificate approved by the PGH Health Service Unit. The special exam will be scheduled after the final exam, and will include ALL the topics discussed in class. It will only be given for one missed exam. If the student missed another exam, he or she will automatically get a zero. A student who missed the scheduled special exam will get a score of zero.
4. *Advance Examination*: There will be no advance exam.
5. *Final Exam Exemption:* A student may be exempted from taking the final exam if his or her class standing is 2.0 or higher.
6. There are no special projects to compensate for low grades. Duh!
7. Complaints regarding exam results will only be entertained for a week, after it was released. Only complaints written in black or blue pen will be entertained.
8. A student may officially drop the course on or before the scheduled date. A student is considered to have officially dropped the course only upon submission of the instructor's copy of the dropping slip. Otherwise, he or she will be given his corresponding grade.
9. A student will be graded according to the following grading scale.

Computation of Grade:

$$\text{Final Grade} = \frac{2}{3} \text{ (Class Standing)} + \frac{1}{3} \text{ (Final Examination)}$$

Class Standing = 0.90 (Average of 5 Departmental Exams)
                 + 0.10 (Quizzes, Exercises, Assignments, etc)

Grading Scale:

93-100	1.00
90-92	1.25
87-89	1.50
84-86	1.75
80-83	2.00
75-79	2.25
70-74	2.50
65-69	2.75
60-64	3.00
55-59	4.00
< 54	5.00