Purpose of Course: "Trigonometry" means the study of "tri-gons", or triangles. Trigonometry is used to determine lengths and distances based upon angles, or vice versa. Applications of trigonometry are abundant, and will be presented throughout the course.

Prerequisite: Math 116 with a grade of C or better OR all of the following:
- Four years of High school mathematics including Algebra I and II and geometry
- A score of at least 18 on the Math Placement Exam
- A Math ACT score of at least 22 and a GPA of at least 3.0 in high school mathematics

Special Requirements: A graphing calculator is required for this course.

Math Lab: The Math Lab in COHH is open to assist you with any math problems you have. The Lab is open (tentatively) 8:30 – 4:30 Monday through Thursday and 8:30 – 2 Friday.

Attendance Policy: Registration in a course obligates the student to be regular and punctual in class attendance. Three or more unexcused absences from class may result in an "F" as final course grade. A student absent from class bears full responsibility for subject matter and announcements missed.

Testing and Grading: Students are responsible for material presented in class and the material in the text. There will be three one-hour in-class tests, each worth 100 points. The comprehensive final exam, to be given 8:00-10:00 a.m. Monday, December 13, 2010, is worth 150 points. There will be up to 150 points of daily grades, consisting of homework, quizzes, or projects. Grading will follow the 10-point scale. An unofficial list of your grades will be available to you on Blackboard.

“This course meets the General Education mathematics requirement in Category D-2, with the goal of providing students with the ability to understand and apply mathematical skills and concepts. After completing Math 117, students will be able to: use fundamental mathematical reasoning principles; use graphical, symbolic, and numerical methods to solve practical problems; and interpret information presented in tables or graphical displays.”

“In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC A-200 of the Student Success Center in Downing University Center. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.”

The text and course outline are given in the departmental syllabus, which follows.
Math 117 Syllabus (Fall 2010)

Days in Session (Fall / Spring).………………………………… MWF…41 days / 42 days
TR……29 days / 28 days

This schedule is designed for a fall semester. The order of topics may be changed at the instructor’s discretion.

Chapter P: Prerequisites………………………………………2 days (MWF)
Section P.3  (Other sections for review as desired by instructor)

Chapter 1: Trigonometry……………………………………………11 days (MWF)
Section 1.1 Radian and Degree Measure 8 days (TR)
1.2 Trigonometric Functions: The Unit Circle
1.3 Right Triangle Trigonometry
1.4 Trigonometric Functions of Any Angle
1.5 Graphs of Sine and Cosine Functions
1.6 Graphs of Other Trigonometric Functions
1.7 Inverse Trigonometric Functions
1.8 Applications and Models

Chapter 2: Analytic Trigonometry………………………………….11 days (MWF)
Section 2.1 Using Fundamental Identities 8 days (TR)
2.2 Verifying Trigonometric Identities
2.3 Solving Trigonometric Equations
2.4 Sum and Difference Formulas
2.5 Multiple-Angle Formulas

Chapter 3: Additional Topics in Trigonometry…………………………7 days (MWF)
Section 3.1 Law of Sines 4 days (TR)
3.2 Law of Cosines
3.3 Vectors in the Plane
3.4 Vectors and Dot Products (Optional)

Chapter 4: Complex Numbers……………………………………………3 days (MWF)
Section 4.1 Complex Numbers (Optional) 2 days (TR)
4.2 Complex Solutions of Equations (Optional)
4.3 Trigonometric Form of a Complex Number
4.4 DeMoivre’s Theorem

Chapter 6: Topics in Analytic Geometry……………………………………3 days (MWF)
6.6 Parametric Equations 2 days (TR)
6.7 Polar Coordinates
6.8 Graphs of Polar Equations

Exams / Review…………………………………………………………4 days