Appendix A – Course Syllabi

Please use the following format for the course syllabi (2 pages maximum in Times New Roman 12 point font)

1. Course number and name

Math 190: Trigonometry and Pre-Calculus

2. Credits and contact hours

4 credit, 5 contact hours

3. Instructor's or course coordinator's name

Dr. Amal Mostafa

4. Text book, title, author and year

Precalculus With Calculus Previews, Fourth Edition. Expanded Volume by Zill and Dewar, 2010.

a. other supplemental materials

Supplement materials on complex numbers and Euler's formula.

5. Specific course information

a. brief description of the content of the course (Catalog Description)

An emphasis on functions included trigonometric functions expressed in words, equations, graphs, and tables of values, especially logarithm, exponential and inverse functions. Also included are translation and composition of functions, absolute value and rational functions, root finding and applications of functions with a view toward the study of calculus. Above average symbolic manipulation skills are assumed as a prerequisite. Technical reading and writing are an important part of this course. Much of the material and activities are geared to preparing students with the prerequisite skills and concepts needed to succeed in calculus.

b. prerequisites or co-requisites

The prerequisite is "having passed Math 121G with a grade of C or better." A student can also place into Math 190 via a combination of ACT scores and GPA or by performing well on the departmental Mathematics Placement Exam.

c. indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program

It's a required course

6. Specific goals for the course
    a. Specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.

        - Students will internalize fundamental algebraic, trigonometric, exponential, and logarithmic concepts necessary for success in calculus and be able to apply them in new situations.
        - Students will internalize fundamental algebraic, trigonometric, exponential, and logarithmic computational skills necessary for success in calculus and be able to apply them in new situations.
        - Students will use mathematics as a language for describing relationships and as a tool for solving problems.
        - Students will become better technical readers.
        - Students will become more comfortable and more skilled with oral and written communication of mathematical ideas.
        - Students will gain confidence in their ability to solve problems and will display greater endurance and less frustration when confronted with mathematical challenges.

7. Brief list of topics to be covered

- Inequalities, Equations, and Graphs (Absolute Value, Circles)
- Functions (Symmetry and Transformations, Quadratic Functions, Piecewise-Defined Functions, combining functions)
- Polynomials and Rational Functions(Division of polynomial functions, Zeros and factors of polynomial functions, real zeros of polynomial functions, rational functions)
- Trigonometric Functions
- Triangle Trigonometry
- Exponential Logarithmic Functions
- Conic Sections