Rowan University

Department of Mathematics

Math 01.122-1 Pre-Calculus Mathematics (Fall 2010)

Syllabus

Course Information:

- **Math 01.122-1 Pre-Calculus**, Tuesday and Thursday, 4:45 – 6:25 pm, Education Building room 3117. First class will be on 2 Sep 2010.
- Prerequisite: Math 01.121 Intermediate Algebra or equivalent preparation: e.g. high school algebra II.
- Description: This course helps prepare students weak in Algebra for Calculus I or Calculus/T&A. There will be a heavy emphasis on trigonometric functions (including their inverses and related functions) and exponential and logarithmic function. The remainder of the course will consist of a review of intermediate algebra, the structure of the real number system, elementary analytic geometry, and algebraic, graphs of functions and conic sections also are studied.
- Use of a graphics calculator like the TI-83 is required.
- Course Text: Hungerford and Shaw, **Contemporary Precalculus:** A graphing Approach, 5/E,Cengage, 2009.

Instructor Information:

- Don Bailey, baileyd@rowan.edu. I generally check email 4 or 5 times a day. In an emergency please call the Math department @ 856-256-4844 during normal business hours. You can find my web page from the following page: http://www.rowan.edu/colleges/las/departments/math/facultystaff/index.html
- Available for assistance by appointment. If needed, I can be available on Tuesdays and Thursdays from 4pm till the beginning of class outside of our classroom.

Grading Information:

		A	95 to 100	A-	90 to 94
B+	87 to 89	B	83 to 86	B-	80 to 82
C+	77 to 79	C	73 to 76	C-	70 to 72
D+	67 to 69	D	63 to 66	D-	60 to 62
		F	Below 60		

Delivery methods:

- Standard lectures and demonstrations using graphing calculators and other technology.

Attendance Policy:

- Attendance will be taken at all classes.
- The student is expected to attend all classes.
- A student who has more than 4 absences may result in an average being lowered by one full grade.

Evaluation methods - Student's progress will be evaluated on the following basis:

- Unit Tests.
- Students are expected to take tests on the day scheduled. Should an emergency arise, the student should contact the instructor (baileyd@rowan.edu) before the scheduled test time. A sincere attempt will be made to return the tests as promptly as possible, generally by the next meeting. A 20-point penalty may be charged if a make-up test is taken after graded test papers have been returned to the class. No re-tests are given.
- Homework and Regular Quizzes. (optional)
- Comprehensive final examination.
- The Student Code of Conduct and Policies and Procedures found in the Student Guide will be followed. The Student Handbook and additional pertinent information are located at: http://www.rowan.edu/studentaffairs/Infoguide/ and http://www.rowan.edu/provost/policies/

Withdrawal policy:

- Students are allowed only two attempts in passing a course; withdrawing after the DROP/ADD period constitutes an attempt.
- Please refer to the Mathematics department withdrawal policy: http://www.rowan.edu/colleges/las/departments/math/acad/Course%20withdraw%20policy.html
- Students who stop attending a class (or never attend) but do not officially withdraw will receive an F. Please contact me to resolve any issues.
- Students will only be allowed to add a course after the DROP/ADD period for exceptional circumstances beyond the students' control.

Objectives:

At the end of this course, students will demonstrate the ability to:

- Manipulate and evaluate algebraic, exponential, logarithmic and trigonometric functions.
- Graph linear and quadratic functions, including those describing the conic sections, in both rectangular and polar coordinates.
- Graph algebraic, exponential, logarithmic and trigonometric function

Important notes:

- All cell phones must be turned off or on silent mode while in class.
- If you need to make a call then please leave the classroom so as to not disturb the remainder of the class.
- Your academic success is important. If you have a documented disability that may have an impact upon your work in this class, please contact me. Students must provide documentation of their disability to the Academic Success Center in order to receive official University services and accommodations. The Academic Success Center can be reached at 856-256-4234. The Center is located on the 3rd floor of Savitz Hall. The staff is available to answer questions regarding accommodations or assist you in your pursuit of accommodations. We look forward to working with you to meet your learning goals.
- If you are really weak in basic Algebra, then please see me at the beginning of the course so we can put together a game plan for success.
- Homework must be done and understood.
- Attendance is important particularly during tests. Make-up tests are difficult to create and hard to administer. This is, by far, my biggest concern.
- The student is responsible for all assignments and announcements made in class. If the student is absent for any reason, the student is expected to be aware of any assignments and/or announcements, and to keep up with the class work.

General Outline:
Chapters 1 & 2 (1.5 weeks) Functions and Their Graphs.
Topics include linear and quadratic functions, graphs, composite functions, inverse functions, and parametric equations.

Chapter 3: (2 weeks) Polynomial Functions.
Graphs of polynomial functions, real zeros, rational zeros and complex zeros of polynomials.

Chapter 4: (2 weeks) Rational Functions and Functions Involving Radicals
Asymptotes and graphs of rational functions, equations and inequalities with rational functions.

The following chapters will be presented first and may take longer than listed:

Chapter 5: (1.5 weeks) Exponential and Logarithmic Functions.
Topics include exponential and logarithmic functions, compound interest, and growth and decay.

Chapter 6: (2.5 weeks) Trigonometric Functions.
Angle measurement, basic definitions of trig functions, and computing values of trig functions, graphs of the 6 trig functions.

Chapter 7: (2.5 weeks) Analytic Trigonometry.
Inverse trig functions, trig identities, sum and difference formulas, double and half angle formulas, and trig equations are covered.

Chapter 8: (1 week) More Applications of Trigonometry.
The Law of Sines and Cosines, areas of triangle, DeMoivre's Theorem.