El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA   **Mathematics**

COURSE RUBRIC AND NUMBER   **NCBM 0114**

COURSE TITLE   **Non-Course Based Instruction for Math**

COURSE CREDIT HOURS   **1   1   :   0**
                                                      Credits   Lec   Lab

I.   Catalog Description

Provides a review of the material covered in Precalculus I, College Algebra, and Geometry course. This material is reordered for a "just-in-time" to complement the Math 1314 material. Students taking this course should have a score of 344-349 or higher on the TSI Assessment. This course is a Non-Course Base Option that supports students whose placement scores indicate that they can succeed in MATH 1314 with co-enrollment into NCBM 0114. Prerequisite: Score of 344-349 on the TSI Assessment. **Corequisite: MATH 1314.** (can be taken concurrently).

II.   Course Objectives

Upon satisfactory completion of the course, the student will be able to solve mathematical problems that relate to:

A. Unit I. Equations, Inequalities, Modeling, Functions, and Graphs
   1. Equations in One Variable
   2. Equations and Graphs in Two Variables
   3. Constructing Models to Solve Problems
   4. Quadratic Equations
   5. Linear, Absolute Value, Quadratic, and Rational Inequalities
   6. Functions, Relations, and Their Graphs
   7. Families of Functions
   8. Operations with Functions, Constructing Functions, and Finding Inverse Functions

B. Unit II. Polynomial and Rational Functions
   1. Linear and Quadratic Functions
   2. Complex Numbers
   3. Zeros of Polynomial Functions
   4. Theory of Equations
   5. Graphs of Polynomial and Rational Functions

C. Unit III. Exponential and Logarithmic Functions
   1. Exponential Functions and Their Applications
   2. Logarithmic Functions and Their Applications
   3. Properties of Logarithms

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4. Equations and Applications of Exponential and Logarithmic Functions

D. Unit IV. Systems of Equations and Inequalities and Using Matrices to Solve These Systems
   1. Systems of Linear Equations in Two and Three Variables
   2. Nonlinear Systems of Equations
   3. Partial Fractions - optional
   4. Systems of Inequalities in Two Variables
   5. Solving Linear Systems Using Matrices
   6. Operations with Matrices and Finding Inverses of Matrices
   7. Using Determinants to Solve Linear Systems - optional

III.   THECB Learning Outcomes (ACGM)

Upon successful completion of this course, students will:
1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential, and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve, and apply systems of linear equations using matrices.

IV.   Evaluation

There will be at least three in class exams (100 points each) and one required in class comprehensive final exam to evaluate student learning for the course. Quiz grades and homework grades may also be used in the evaluation of the final grade, if the instructor so chooses. A comprehensive final exam is mandatory for all students. Students will be assessed on Unit I-Unit IV and given a comprehensive final exam.

The course grade will be assigned based on the following scale.
     CR (Credit)….100-70
     NC (No Credit)…Below 69.

I and W Grades: The student is responsible for completing the necessary forms for I or W (except as noted below). I and W grades may be assigned whenever appropriate deadlines are met. To be eligible for an I, the student must complete 80% of the course with at least a 75% average. The proper forms must also be signed by both the student and the instructor before being submitted to the Registrar.

V.   Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI.   6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.

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