

VERNON COLLEGE
SYLLABUS

DIVISION: Mathematics and Science

DATE: 2013-2014

COURSE NUMBER AND TITLE: MATH 0302 Intermediate Algebra

CREDIT HRS: 3

HRS/WK LEC: 3

HRS/WK LAB: 1

LEC/LAB COMB: 4

I. VERNON COLLEGE GENERAL EDUCATION PHILOSOPHY STATEMENT

General education at Vernon College reflects the institution's deep conviction that successful, satisfying lives require a wide range of skills and knowledge. We are dedicated to providing educational opportunities that develop the academic, career, and personal capabilities of individuals so they may achieve self-fulfillment and participate fully and positively in a democratic society. Vernon College has identified the following college-level competencies generated from the general education core:

GENERAL EDUCATION CORE COMPETENCIES:

- A. Critical Thinking: Students will evaluate the validity of ideas through a creative process of questioning, analyzing, and synthesizing.
- B. Communication/Interpersonal: Students will develop effective reading, writing, speaking, and listening skills to communicate verbally and nonverbally.
- C. Scientific and Mathematical Literacy: Students will apply an understanding of mathematical, natural, and behavioral scientific principles and methods to solve abstract and practical problems.
- D. Information Literacy: Students will develop the information literacy skills to confidently and competently locate, use, and evaluate information.
- E. Cultural Literacy: Students will develop an appreciation of human culture and its diversity and the role of the creative arts in society.

II. CATALOG DESCRIPTION:

A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. Prerequisite: A "C" or better in MATH 03102 Texas Success Initiative complete in math. Lab Fee: \$24.00; Special Fee: \$27.00

III. REQUIRED BACKGROUND:

Prerequisite: A "C" or better in MATH 03102 Texas Success Initiative complete in math.

IV. TEXTS:

Elementary & Intermediate Algebra, 2nd Edition, Sullivan, Struve and Mazzarella, Value Pack, Pearson - Prentice Hall; 2007. (Includes required software and solutions manual)

Graphing Calculator Required - see instructor for model recommendations

COURSE NUMBER AND TITLE: MATH 0302 Intermediate Algebra

V. METHODS OF INSTRUCTION:

Lecture and Lab: Instructor-led class discussions and activities.

Lab: Collaborative and interactive learning methods, such as group work and instructor-guided activities using graphing calculators or other learning support tools and applications will be used, including audio-visual support media. In-class exercises and/or similar computer-aided tools for assessment will be used.

Students desiring auxiliary aids and services for this course should make their requests to the instructor and the Special Services Director.

VI. COURSE CONTENT:

1. Complex Numbers
2. Radicals and Rational Exponents
3. Solution of quadratic equations and inequalities
4. Graphing of quadratic functions
5. Word problems using the concepts of quadratic equations

VII. COURSE OUTCOMES:

By the end of the course the student will:

1. Define, represent, and perform operations on real and complex numbers.
2. Recognize, understand, and analyze features of a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
4. Identify and solve absolute value, polynomial, radical, and rational equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret and justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

VIII. ASSESSMENT:

The student will be evaluated by his/her performance in solving problems requiring the outcomes listed above. Assessments may include homework assignments, work in class, quizzes during class and examinations. An overall success rate of 70% will be required for a passing grade. Instructors will evaluate the performance of students and make adjustments in teaching strategies as needed.

IX. ATTENDANCE FOR DEVELOPMENTAL ACTIVITIES:

According to VC's developmental education plan, a student whose performance is below the minimum passing standard set by the Coordinating Board for a tested skill on a THECB approved assessment test must continuously participate in a developmental

COURSE NUMBER AND TITLE: MATH 0302 Intermediate Algebra

education program until the student is considered COLLEGE READINESS CLEAR in all three academic areas of reading, writing, and math. "Continuously" means that until the institution certifies that a student has successfully completed developmental education, a student enrolled each semester must enroll and participate in at least one developmental program. Although continuous enrollment in developmental courses is not required by SB 286, Vernon College has elected to continue this as an institutional policy. Each student will be held responsible for his/her classroom attendance. Excessive absenteeism (see course syllabus/outline) in a developmental course/program will result in a student being administratively withdrawn. The grade of "WF" will be awarded for administrative withdrawals.

X. DEVELOPMENTAL COURSE DESIGNATION:

The 78th Texas State Legislature repealed TASP (Texas Academic Skills Program) as of September 1, 2003. The Texas Success Initiative (TSI) is the state-mandated replacement for TASP laws. The program is intended to assess a student's COLLEGE READINESS for first year college-level academic courses. It requires an assessment of the student's basic academic skills in math, reading, and writing. Approved placement tests include these three sections as well as an essay in the writing section. As part of the TSI, all students are required to take an approved placement test unless exempt by the criteria described in the TSI. Vernon College will note if a student is COLLEGE READINESS CLEAR (meaning student has passed all three academic areas of reading, writing, and math, or student is exempt from taking test) or NOT CLEAR (meaning student has not passed all three academic skills areas.) Vernon College offers the Accuplacer Test and the regularly scheduled THEA test. Accuplacer is a state approved computerized placement test. It is offered in the Vernon College Testing Center by appointment only. Vernon College will accept scores of other state-approved placement tests, including Quick THEA, ASSET, COMPASS, and MAPS. When a student has taken two or more different placement tests, Vernon College will accept test results that best benefit the individual student.

Accuplacer		THEA	
Section	Passing Score	Section	Passing Score
Reading	78	Reading	230
Math	63	Math	230
Writing	80 with an essay of 5	Writing	220

ASSET		COMPASS	
Section	Passing Score	Section	Passing Score
Reading	41	Reading	81
Math	38	Math	39
Writing	40 with an essay of 5	Writing	59 with and essay of 5

IMPORTANT! The TSI law is in effect for all first-time college students registering for Spring 2004, and future semesters. Students who do not have placement scores or documented exemptions on file at Vernon College prior to enrolling will be severely limited in course selection. Please refer to course pre-requisites for course selection.

Vernon College does not discriminate on the basis of color, race, gender, age, religion, national origin, or disability.