

Course number, title and credits; total time allocation

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|----------------------|------------|--------------|----------|--------------|-----------------------------|--------------|
| Course Letter/Number | <u>131</u> | Credits | <u>4</u> | Title | <u>Intermediate Algebra</u> | |
| Lecture/Discussion | <u>4</u> | hrs/semester | Lab | hrs/semester | Clinical | hrs/semester |

Catalog Description and Pre- and Co-requisites (Same as taxonomy and catalog)

Emphasizes simplifying expressions, solving equations, and graphing functions, including linear, quadratic, polynomial, rational, radical, exponential, and logarithmic. Problem solving and mathematical modelign are integrated throughout. Appropriate technology includes a graphing calculator. The mathematics department recommends that the prerequisite not be more than two years old. If the prerequisite is more than two years old, then the recommendation is that the course placement exam be taken or the prerequisite be retaken to ensure the success of the student.

Prerequisite: MAT 031, with 2.0 minimum, within 2 years

Knowledge, Skills and Abilities Students Acquire from this Course (Educational Objectives)

1. Simplify Algebraic expressions involving polynomial, rational, radical, exponential, and logarithmic functions.
2. Solve equations, inequalities, and systems of equations and inequalities.
3. For functions described algebraically or graphically:
 - a. evaluate, find domain and range, find inverse
 - b. perform algebraic operations and graphical translations
4. Solve application problems, including the ability to:
 - a. represent a situation using a graph, table or equation
 - b. forecast outcomes from above representations
 - c. solve optimization problems
5. Use appropriate technology as part of their completing the objectives above.
6. Demonstrate a knowledge of current technology and/or scientific issues.

Associate Degree Outcomes Addressed in this Course (These must appear in course syllabus.)

- ADO 3: Demonstrate computational skills and mathematical reasoning
- ADO 7: Critical Thinking and Problem Solving

Units/topics of Instruction

See course description and educational objectives.

Instructional Techniques and Procedures

Although techniques vary from instructor to instructor, this course usually consists of mostly lecture and group work.

Instructional Use of Computer or Other Technology

A graphing calculator is used extensively in this course. The instructor may choose to incorporate the use of MyMathLab in homework, quiz and test assignments. Also, the instructor may choose to incorporate the use of EXCEL in solving various application problems.

Instructional Materials and Costs to Students

The instructional material for this course may vary by instructor but can include a textbook, MyMathLab, or both. The graphing calculator must be bought by all students.

Skills and abilities students should bring to the course

| | |
|---|--|
| Able to read <input type="checkbox"/> a limited amount of material <input checked="" type="checkbox"/> an average amount of material <input type="checkbox"/> an above average amount of material | Able to compute <input type="checkbox"/> basic, pre-algebraic problems <input type="checkbox"/> simple algebraic problems <input checked="" type="checkbox"/> higher order mathematical problems <input type="checkbox"/> |
| Able to read <input type="checkbox"/> relatively easy material <input checked="" type="checkbox"/> moderately difficult material <input type="checkbox"/> technical or sophisticated material | Able to write <input checked="" type="checkbox"/> short compositions <input type="checkbox"/> medium length compositions <input type="checkbox"/> lengthy compositions |
| Able to use technology <input checked="" type="checkbox"/> keyboard skills/familiar with computer <input checked="" type="checkbox"/> computer application <input checked="" type="checkbox"/> web navigation | Other necessary abilities <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

The course is usually scheduled

Day: Fall Winter Spring

Evening: Fall Winter Spring

Prepared by _____

Date _____

Approved by Dept. _____

Date _____

Approved by Dean _____

Date _____

Approved by Curr. Comm. _____

Date _____

(Last names, please)

Form Revised 12/4/00