Document 5

Course number, title and credits; total time allocation

| Course Letter/Number | **131** | Credits | **4** | Title | **Intermediate Algebra** |

| Lecture/Discussion | **4** | 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			Able to compute		
	___	a limited amount of material		___	basic, pre-algebraic problems
	x	an average amount of material		___	simple algebraic problems
	___	an above average amount of material		**x**	higher order mathematical problems
				___	

Able to read			Able to write		
	___	relatively easy material		**x**	short compositions
	x	moderately difficult material		___	medium length compositions
	___	technical or sophisticated material		___	lengthy compositions

Able to use technology			Other necessary abilities	
	x	keyboard skills/familiar with computer		___
	x	computer application		___
	x	web navigation		___

The course is usually scheduled

Day: [x] Fall   [x] Winter   [x] Spring

Evening: [x] Fall   [x] Winter   [x] 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