|  |  |
| --- | --- |
| **PROFESSOR:** | **PHONE NUMBER:** |
| **OFFICE LOCATION:** | **E-MAIL:** |
| **OFFICE HOURS:** | **SEMESTER:** |

1. **COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:**

**MAT 1033 INTERMEDIATE ALGEBRA (4 CREDITS)**

This course is intended to prepare students for college level algebra courses needed to meet the State requirements for math competencies. This course should adequately prepare the student for MAC 1105 and provide a strong algebra foundation for higher level math.

1. **PREREQUISITES FOR THIS COURSE:**

MAT 0028 or MAT 0057 or MAT 0058 (all with a minimum grade of “C”) or Testing or SB 1720 Exemption

**CO-REQUISITES FOR THIS COURSE:** None

1. **GENERAL COURSE INFORMATION:** Topic Outline.

• Factoring

• Algebraic fractions

• Radicals and rational exponents

• Complex numbers

• Quadratic equations

• Rational equations

• Linear equations and inequalities in two variables and their graphs

• Systems of linear equations and inequalities

• Introduction to functions

• Applications of the above topics

1. **All courses at Florida SouthWestern State College contribute to the general education program by meeting one or more of the following general education competencies:**

**C**ommunicate clearly in a variety of modes and media.

**R**esearch and examine academic and non-academic information, resources, and evidence.

**E**valuate and utilize mathematical principles, technology, scientific and quantitative data.

**A**nalyze and create individual and collaborative works of art, literature, and performance.

**T**hink critically about questions to yield meaning and value.

**I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge.

**V**isualize and engage the world from different historical, social, religious, and cultural approaches.

**E**ngage meanings of active citizenship in one’s community, nation, and the world.

**A.**  **General Education Competencies and Course Outcomes**

1. Listed here are the outcomes/objectives assessed in this course which play an integral part in the student’s general education along with the general education competency they support.

  General Education Competency: **Evaluate**

Course Outcomes or Objectives Supporting the General Education Competency Selected:

* Select and apply an appropriate technique for solving quadratic equations
* Select and apply an appropriate technique for solving systems of linear equations

**B.** **Other Course Objectives/Standards**

* Factor polynomials using methods such as factoring greatest common factors, factoring by grouping, trial and error, the AC method, difference of squares, and substitution
* Perform operations with and simplify rational expressions
* Simplify complex rational expressions
* Divide polynomials using long division
* Perform operations with and simplify radial expressions
* Rationalize denominators
* Express radicals using rational exponents and vice versa
* Apply the properties of exponents to expressions involving rational exponents
* Solve radical equations
* Identify characteristics of complex numbers and be able to express a complex number in “a + bi” form
* Perform arithmetic operations on complex numbers
* Select and apply an appropriate technique for solving quadratic equations utilizing factoring, the square root property, completing the square, and the quadratic formula
* Solve rational equations.
* Graph linear equations in a coordinate plane using techniques such as tables of values, intercepts, and point slope form of an equation of a line.
* Graph linear inequalities in a coordinate plane
* Use a variety of techniques to determine the slope of a line
* Determine whether the equations of lines are those that are parallel, perpendicular, or neither
* Demonstrate an understanding of the concept of slope as being a rate of change
* Write equations of lines using forms such as point-slope, slope-intercept, vertical line form, horizontal line form, and standard form
* Solve systems of linear equations in two variables using the techniques of graphing, substitution, and elimination (as referred to as addition or linear combination)
* Solve systems of linear inequalities using a graphical approach
* State the domain and range of a given relation using appropriate set notation, such as set-builder and interval notation
* Identify relations that are also functions
* Evaluate functions for specified domain values by referring to a graph, the equation, or a set of ordered pairs that define the function
* Solve for a specified variable in literal equations
* Select and apply an appropriate technique to solve application problems involving algebraic concepts contained in the scope of this course

1. **DISTRICT-WIDE POLICIES:**

**Programs for Students with Disabilities**

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College’s guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <http://www.fsw.edu/adaptiveservices>.

**REPORTING TITLE IX VIOLATIONS**

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct.  Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at [equity@fsw.edu](mailto:equity@fsw.edu).  Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online.  Additional information and resources can be found on the College’s website at <http://www.fsw.edu/sexualassault>.

1. **REQUIREMENTS FOR THE STUDENTS:**

List specific course assessments such as class participation, tests, homework assignments, make-up procedures, etc.

1. **ATTENDANCE POLICY:**

The professor’s specific policy concerning absence. (The College policy on attendance is in the Catalog, and defers to the professor.)

1. **GRADING POLICY:**

Include numerical ranges for letter grades; the following is a range commonly used by many faculty:

90 - 100 = A

80 - 89 = B

70 - 79 = C

60 - 69 = D

Below 60 = F

(Note: The “incomplete” grade [“I”] should be given only when unusual circumstances warrant. An “incomplete” is not a substitute for a “D,” “F,” or “W.” Refer to the policy on “incomplete grades.)

1. **REQUIRED COURSE MATERIALS:**

(In correct bibliographic format.)

1. **RESERVED MATERIALS FOR THE COURSE:**

Other special learning resources.

1. **CLASS SCHEDULE:**

This section includes assignments for each class meeting or unit, along with scheduled Library activities and other scheduled support, including scheduled tests.

1. **ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:**

(Which would be useful to the students in the class.)