

PELLISSIPPI STATE COMMUNITY COLLEGE  
MASTER SYLLABUS

**COLLEGE MATHEMATICS PRINCIPLES W/LAB  
MATH 0030**

**Class Hours: 2.0**

**Credit Hours: 3.0**

**Laboratory Hours: 2.0**

**Date Revised: Fall 2016**

**Catalog Course Description:**

A co-requisite course for MATH 1030, Introduction to College Mathematics, this course consists of mastering pre-requisite mathematical skills needed for success in the college-level course MATH 1030, and supervised lab time in a designated academic support area each week to complete assignments covering topics from both MATH 0030 and MATH 1030. The topics include basic rules of algebra, order of operations, linear equations, linear inequalities, linear equations in two variables, graphing linear equations in two variables, scientific notation.

**Corequisites:**

MATH 1030, Introduction to College Mathematics

**Textbook(s) and Other Reference Materials Basic to the Course:**

Textbook:

“Introductory and Intermediate Algebra for College Students” by Robert Blitzer. Custom 4<sup>th</sup> Edition of Chapters 1-11.

Technology Requirements:

Accompanying MyMathLab software support as determined by the instructor.

Personal Equipment:

A non-symbolic graphing calculator is required; the TI-84 Plus is preferred.

## I. Week/Unit/Topic Basis:

| Week   | Topic   |
|--------|---|
| 1      | <b>Introduction to Algebra, Fractions in Algebra, Real Numbers, Basic Rules of Algebra, Addition and Subtraction of Real Numbers. (1.1 – 1.6)</b>                 |
| 2      | <b>Multiplication and Division of Real Numbers, Exponents and Order of Operations, Review, Exam 1. (1.7, 1.8)</b>   |
| 3      | <b>Addition and Multiplication Property of Equality, Solving Linear Equations, Formulas and Percents, Introduction to Problem Solving. (2.1 – 2.5)</b>            |
| 4      | <b>Problem Solving in Geometry, Solving Linear Inequalities, Review, Exam 2. (2.6, 2.7, 9.1)</b>  |
| 5      | <b>Graphing Linear Equations in Two Variables, Graphing Linear Equations Using Intercepts, Slope, Slope Intercept Form of the Equation of a Line. (3.1 – 3.4)</b> |
| 6      | <b>The Point Slope Form of the Equation of a Line, Linear Inequalities in Two Variables, Review, Exam 3. (3.5, 9.4)</b>   |
| 7 - 15 | <b>Begin MATH 1030 Topics. Refer to MATH 1030 Master Syllabus</b>   |

## II. Course Goals\*:

As a co-requisite supporting course for MATH 1030, Introduction to College Algebra, MATH 0030 will provide students with the algebraic skills essential for success in MATH 1030 and subsequent college-level mathematics courses required to achieve their educational goals. Students will be introduced to various representations of algebraic relationships.

The course will:

- A. Extend student knowledge of the basic definitions and terms used when describing algebraic and mathematical concepts and procedures. VI.1,4
- B. Build on the mathematical and algebraic skills needed to be successful in subsequent courses of mathematics and other courses where mathematical concepts and applications are taught. VI.1,2,3,4,5,6
- C. Enhance and expand student knowledge of the appropriate use of the graphing calculator and other technologies. VI.1,5
- D. Guide students towards a better understanding of underlying algebraic concepts when those concepts are applied to a variety of real-world applications and models. VI.1,2,3,4,5,6
- E. Develop and expand the problem solving skills of students when interpreting and modeling situations, choosing among many different strategies of solution, and presenting the solution to the problem using clear and concise language. VI.1,2,3,4,5,6

\*Roman numerals after course goals reference the General Education Goals of the Mathematics program.

### **III. Expected Student Learning Outcomes\*:**

Students will be able to:

1. Add, subtract, multiply and divide fractions, decimals and integers and state the answer in simplest form. A,B,C,D,E
2. Use algebraic properties to combine like terms and simplify algebraic expressions. B
3. Evaluate exponential and algebraic expressions by using the order of operations. A, B
4. Understand number relationships on a number line using inequality symbols and the meaning of absolute value. A, B
5. Solve linear equations using the addition and/or the multiplication properties. A, B
6. Solve linear equations containing fractions, decimals and identifying equations with no solution or infinitely many solutions. A, B
7. Solve literal equations, equations with percents, and equations in geometry. A, B, D
8. Solve linear inequalities and graph the solutions on a number line and representing solutions using interval and set-builder notation. A, B, C
9. Determine whether a value or ordered pair is a solution to a given equation. A, B, C
10. Plot ordered pairs in the rectangular coordinate system and graph linear equations using a table of values, using x and y-intercepts, and slope-intercept form. A, B, C, D
11. Determine slope using formula, graph and equation. A, B, C, D
12. Understand graphs of horizontal and vertical lines and the basic relationships between parallel and perpendicular lines. A, B, C, D
13. Find equation of a line using slope-intercept or point-slope form. A, B, C, D, E
14. Graph linear inequalities in two variables. A, B, C, D

\*Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

### **IV. Evaluation:**

#### **A. Testing Procedures: 70 – 80% of grade**

There will be a minimum of 3 chapter exams administered in class on the scheduled exam date. Students scoring below 80% on the first attempt of an exam will be required to do additional work and then be allowed a second attempt. All retake exams will be administered in the testing center at the students designated campus. A test authorization

issued by the instructor of record will be required for the retake of the exam. Your final recorded score will be determined by your instructor.

### **B. Laboratory Expectations: 10% of grade**

Students are expected to attend each scheduled weekly class hour. Completion of the additional supervised 2 lab hours may be done at the students' convenience in the designated academic support centers on each campus. These hours will be tracked via scanning of the students PSCC ID card.

### **C. Other Expectations: 10 – 20% of grade**

As determined by instructor.

### **D. Grading Scale:**

|   |           |
|---|-----------|
| A | 94 – 100% |
| B | 87 – 93%  |
| C | 80 – 86%  |
| F | Below 80% |

### **V. Policies:**

#### Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

#### Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Mississippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

Accommodations for disabilities:

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. [Disability Services](#) (<http://www.pstcc.edu/sswd/>) may be contacted via [email](#) or by visiting Alexander 130

Other Policies:

Make Up Work: Instructor discretion about make-up tests and/or assignments.

Cell Phones: Cell phones are to be either turned off or put on vibration mode while in class. Instructor discretion as to penalty.