PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

INTRODUCTION TO SURVEYING
CET 0100

Class Hours: 3.0  Credit Hours: 3.0
Lab Hours: 0.0  Revised: Spring 2011

Catalog Course Description:

This course covers both fundamental and advanced concepts in algebra, geometry and trigonometry. Surveying as a career and basic terminology are also discussed.

Entry Level Standards:

Students enrolling in this course should possess basic math skills.

Prerequisites:

None

Textbook(s) and Other Course Materials:

Text:

Other:
Scientific Calculator
Paper
Pencil

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction - Fractions</td>
</tr>
<tr>
<td>2</td>
<td>Working with decimals and misc math.</td>
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<tr>
<td>3</td>
<td>Geometric concepts and Weights and Measures. EXAM 1</td>
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<tr>
<td>4</td>
<td>Perimeter, Circumference, Area and Volume.</td>
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<tr>
<td>5</td>
<td>Dimensional Equations and Signed Numbers. EXAM 2</td>
</tr>
<tr>
<td>6</td>
<td>Working with Monomials and Exponents.</td>
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<tr>
<td>7</td>
<td>Working with Exponents. EXAM 3</td>
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<tr>
<td>8</td>
<td>Working with Polynomials.</td>
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II. Course Goals*:

The course will:

A. Solve the arithmetic, algebraic, and trigonometric exercises necessary for success in Surveying I and II. I, II, IV

B. Apply and interpret function notation and concepts. I, II, IV

C. Apply the elementary trigonometric functions in solving right and oblique triangle problems. I, II, IV

D. Apply triangle laws to the solution of vector problems. I, II, IV

E. Translate verbal situations into an algebraic or trigonometric equation. I, II, IV

*Letters after course objectives reference Goals of the Engineering Technology program.

III. Expected Student Learning Outcomes*:

The student will be able to:

1. Solve elementary algebraic equations and literal formulas. A & B

2. Translate verbal situations into algebraic linear equations. E

3. Operate a scientific calculator. A, C, & D

4. Define and use the sine, cosine, and tangent ratios. C & D

5. Apply the trigonometric ratios to right triangle problems from geometry and surveying. A, C & D

6. Solve 2 x 2 linear systems by addition and substitution. A & B

7. Solve quadratic and fractional equation applications. A

8. Evaluate trigonometric and inverse trigonometric functional values for any angle measured in degrees or radians. C & D

9. Add vectors algebraically and geometrically. A & B
10. Solve oblique triangles using the law of sines and/or cosines to solve. C & D

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

IV. Evaluation:

A. Testing Procedures:

Five examinations are scheduled. They will be problem-solving of appropriately selected problems. Students may make up one exam due to absences. Examinations will normally be given as scheduled. Should a student have a planned vacation, operation, etc. during a scheduled exam, every effort should be made to take the exam prior to the scheduled absence. When a student misses an exam due to illness, he must contact the instructor immediately upon return and make-up the exam within one week.

B. Laboratory Expectations:

N/A

C. Field Work:

N/A

D. Other Evaluation Methods:

Quizzes:
Quizzes may be given by the instructor. Most quizzes will be unscheduled and randomly given. They cover the previous session’s material or the reading assignment for that day. There is no make-up or extra credit given for quizzes missed.

Homework:
Students may also be required to hand in answers to select questions at the end of each chapter or other appropriate homework at the instructor's discretion. All written assignments must be handed in on 8 1/2 x 11" engineering notepad paper, paper with smooth edges, or forms provided by your instructor.
All written assignments will be assessed a 10% penalty for each school day it is late.
All student work submitted for evaluation may be retained by the instructor.

A subjective evaluation based on attendance, classroom participation and attitude may be included.

E. Grading Scale:

Final grades will be computed from the grades obtained on homework, quizzes, and examinations as follows:
Quizzes and homework = 10 - 30%
Examinations = 60 - 80%
Attendance/Participation = 0 - 10%

Grades are based on the following:
90 - 100 A
85 - 89 B+
80 - 84 B
70 - 74 C
60 - 69 D
Below 60 F
V. Policies:

A. 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 the Learning Division, 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 the Learning Division.

B. Academic and Classroom Misconduct:

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.

C. Accommodations for Disabilities:

Students who 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 Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.