

PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE

**SECURITY SYSTEMS II  
SEAT-2400**

**Class Hours: 3.0**

**Credit Hours: 4.0**

**Laboratory Hours: 3.0**

**Revised: Spring 2006**

**Catalog Course Description:**

This course emphasizes specialized security system applications such as closed circuit television (CCTV), sound-triggered movement detection technology and related sensing systems, and card access systems. Students gain a sound knowledge of system components related to the security alarm industry.

**Entry Level Standards:**

The student must have college level standing in mathematics.

**Prerequisites:**

SEAT 1400 or approval of the instructor

**Textbook(s) and Other Course Materials:**

*The complete book of Electronic Security*, Bill Phillips McGraw Hill, New York, NY 2002

**I. Week/Unit/Topic Basis:**

The following is intended as a guide to the instructor. The material covered in the course may be changed by the instructor depending upon the progress, etc., of the class.

<b>Week</b>	<b>Topic</b>
1	Security Systems Overview
2	Security System Integration
3	Security System Integration
4	Biometric Technology
5	Biometric Technology
6	Intrusion Control System Applications

- 7 Intrusion Control System Applications
- 8 Access Control Systems Applications
- 9 Access Control Systems Applications
- 10 Access Control Systems Applications
- 11 Surveillance Applications
- 12 Surveillance Applications
- 13 Surveillance Applications
- 14 Surveillance Applications
- 15 Review and final exam.

## II. Course Objectives:

- A. Understand the basic features of a Security System. I, II
- B. Understand the methods of security system integration. I, II
- C. Identify various biometric technology available. I, II
- D. Understand the operation and application of an Access Control System. I, II
- E. Develop Access Control Solutions. I, II
- F. Understand the operation of a surveillance system. I, II
- G. Develop surveillance solutions.
- H. Demonstrate, as an individual and as a team member, library/information skills, time management skills, problem-solving skills, material management skills, and communication skills. I, II, III, IV, IX, X

## III. Instructional Processes:

Students will:

1. Participate in classroom discussions which challenge their abilities to think creatively and visualize complex spatial and mathematical relationships to solve problems. *Mathematics Outcome*
2. Work in teams to conduct laboratory experiments and also to solve special problem assignments. These activities are designed to foster interpersonal skills in teamwork and develop and enhance leadership skills, students' abilities to express ideas, and students' abilities to reach consensus solutions for the team through negotiation. *Communication Outcome; Mathematics Outcome; Active Learning Strategy*

3. Use electronic test equipment to test electrical circuits constructed from schematics in the laboratory and acquire data. Use computers with applications software to simulate, analyze, and predict the behavior of electrical circuits. Compare expected responses to experimental responses of electrical circuits. Use the Internet for special assignments such as locating data sheets on electronic components. Use computers with word processing software to prepare reports. *Communication Outcome; Mathematics Outcome; Technological Literacy Outcome*
4. Prepare reports on laboratory experiments which include methodology, mathematical analyses of electrical circuit models, a comprehensive comparison of calculated results with experimental results, and conclusions. *Communication Outcome; Mathematics Outcome; Technological Literacy Outcome*
5. Discuss the importance of personal qualities such as personal responsibility, time management principles, self-esteem, sociability, self-management, integrity and honesty in school and in the workplace, and dynamics of change in the workplace. *Social and Behavioral Science Outcome; Transition Strategy*

#### **IV. Expectations for Student Performance\*:**

Upon successful completion of this course, the student should be able to:

1. Identify different control system configurations. A, B, C, D, F
2. Identify various biometric technologies available. A, C
3. Understand the basic operation of an intrusion control system. A, B
4. Configure an intrusion controller. C, D
5. Understand the basic operation of an access control system. A, B, D, E
6. Interface door locks and sensors with an access control system. D, E
7. Configure an access controller with two doors. D, E
8. Profile a group of users for an access controller. D, E
9. Integrate an alarm monitoring system with an access controller. D, E
10. Develop Access Control Solutions. D, E
11. Explain the basic operation of a Closed Circuit TV system. A, B, F, G
12. Identify different methods of triggering the recording for a CCTV system. F, G
13. Develop CCTV solutions. F, G
14. CCTV Pattern Recognition. F, G

\*Letters after performance expectations reference the course objectives listed above.

#### **V. Evaluation:**

A. Testing Procedures: 60% of grade

The evaluation in the classroom grade will be determined by a combination of tests, homework, and a final exam. Pop quizzes may also be used at the discretion of the instructor. The percentage that each of these factors count and the frequency of quizzes, tests and homework is left to the discretion of the instructor, but the following is offered as a guide:

Tests:	40%
Final Exam:	20%

B. Laboratory Expectations: 40%

The laboratory structure is project oriented. The Student will be assigned a variety of access control projects and surveillance projects. The laboratory grade will be determined by a combination of project performance and the degree of comprehension demonstrated in the project report.

Access Control Project	50%
Surveillance Project	50%

C. Field Work:

N/A

D. Other Evaluation Methods:

N/A

E. Grading Scale:

93 - 100	A
88 - 92	B+
83 - 87	B
78 - 82	C+
70 - 77	C
60 - 69	D
Below 60	F

**VI. Policies:**

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all 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 and Student Affairs, may have requirements that are more stringent.

Unexcused absences and class or lab work not made up in a timely manner may very well result in a reduced grade for the course or in failure of the course. It is the student's responsibility to be present when the instructor informs the class of attendance and work requirements, or otherwise the student must contact the instructor for this information.

Attendance is required to all lab sessions unless excused by the instructor. Students missing more than four unexcused sessions will receive an "F" and no credit will be received. Students tardy past half an hour will be considered absent.

## B. Student Conduct:

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. In addition to other possible disciplinary sanctions that may be imposed as a result of academic misconduct, the instructor has the authority to assign either (1) an F or zero for the assignment or (2) an F for the course.