INTRODUCTION TO COMPUTER SCIENCE TECHNOLOGY
CST 1110

Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Date Revised: Spring 2000

NOTE: This course is not intended for transfer credit.

Catalog Course Description:

A first course in computer science providing a comprehensive overview of machine architecture, the human/machine interface, data organization, and potential of algorithmic machines. The course includes an introduction to browsers and the Internet, e-mail, personal computing, word processing, spreadsheets, DOS, Windows, Open VMS, and UNIX.

Entry Level Standards:

The entry level student is not expected to have familiarity with computers. The student should be able to use a standard keyboard and maintain 23 words per minute error-free typing rate. The student must have math, writing, verbal and English language skills at the college entry level.

Prerequisites/Corequisites: None

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

Understanding Computers Today and Tomorrow, by Charles S. Parker, Dryden Exact, 98 Edition.
Bundled Set:
Introduction to Windows 95, by Shelly & Cashman, Course Technology.
Word 97, by Shelly & Cashman, Course Technology.
Excel 97, by Shelly & Cashman, Course Technology.

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 to the World of Computers, The Central Processing Unit, Open VMS, E-mail and Simeon</td>
</tr>
<tr>
<td>2</td>
<td>CPU Internals, Client Access, DOS, Directories, E-mail, Internet, WWW</td>
</tr>
<tr>
<td>3</td>
<td>ALU, Computer Math, Windows, Client Access and Menus</td>
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<tr>
<td>4</td>
<td>Computer Math, Managing Files and Folders in My Computer</td>
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<tr>
<td>5</td>
<td>Memory, Secondary Storage, Using Windows Explorer</td>
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II. Course Objectives*

A. Develop a working understanding of the terminology and hardware devices associated with computer science, programming and data processing. III, II, V, X

B. Demonstrate basic fundamentals of Microsoft Windows concepts. III

C. Demonstrate basic fundamentals of spreadsheet and word processing. III

D. Exhibit a knowledge of MS-DOS operating system and PC microcomputer equipment. II, IX

E. Exhibit a knowledge of a minicomputer operating system (Open VMS and AS/400 Operations) commands and E-mail. II, IX

F. Develop an understanding of the UNIX operating system (Solaris) commands. II, IX

*Roman numerals after course objectives reference goals of the Business and Computer Technologies department.

III. Instructional Processes*

Students will:

1. Use operating systems commands and utilities to perform practical tasks for personal computing. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy, Active Learning Strategy

2. Solve problems in computer mathematics. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Numerical Literacy Outcome

3. Use professionally accepted methods and materials in completion of applications. Technological Literacy Outcome, Personal Development Outcome, Transitional Strategy

4. Use the Internet as a medium for obtaining documentation and instruction. Communication Outcome, Technological Literacy Outcome, Transitional Strategy, Information Literacy Outcome
5. Use the Computer-Based Training for obtaining instruction. *Communication Outcome, Information Literacy Outcome, Technological Literacy Outcome, Transitional Strategy*

6. Prepare, review, and study documents for distribution to all class members via E-mail. *Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome*

7. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. *Personal Development Outcome*

*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

**IV. Expectations for Student Performance*: 

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

1. Use terminology associated with computer science, programming and data processing fields. A,B,C,D,E,F
2. Use keyboard, diskette, CPU hardware, DOS. A,B,C,D,E
3. Log-on/boot-up, operate, communicate, and use lab system. A,B,D,E,F
4. Use internal and external DOS commands. D
5. Prove DOS proficiency in the creation of prompts, sub-directories, formatted disks, batch files and utilize pipes and redirection. D
6. Load and run software products and facilities available on the system. A,B,C,D,E,F
7. Transfer data files to/from one storage device to another and use the printing facilities available on the system. A,B,C,D,E,F
8. Produce a document using computer software products and media resources. B,C,D,E
9. Use the PC style keyboard in accessing files, entering data, keying commands and utilizing the microcomputer and minicomputers. B,C,D,E,F
10. Illustrate an understanding of algorithms, storage concepts, binary systems, program storage and execution. A
11. Illustrate an understanding of system architecture, I/O devices, networking and telecommunications devices, time-sharing, data correctness, language types, software concepts and techniques. A

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

**V. Evaluation:**

A. Testing Procedures:

Students are evaluated primarily on the basis of tests and laboratory assignments. Each instructor must provide full details the first week of class via a syllabus supplement. A minimum of three tests is recommended. Tests will cover material presented in class. Tests are not to be missed without a valid excuse.
B. Laboratory Expectations:

Lab attendance is required. Assignments will be given and must be completed and handed in at the designated date and time.

C. Other Evaluation Methods:

Class participation, quizzes and homework will also comprise the final grade for the course.

D. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>92 - 100</td>
<td>A</td>
</tr>
<tr>
<td>82 - 91</td>
<td>B</td>
</tr>
<tr>
<td>70 - 81</td>
<td>C</td>
</tr>
<tr>
<td>60 - 69</td>
<td>D</td>
</tr>
<tr>
<td>Below 60</td>
<td>F</td>
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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. Students are expected to promptly attend all lecture and lab classes as assigned. If a class is missed, students must make up all work and get notes and/or handouts.

B. Academic Dishonesty:

Plagiarism, cheating, software piracy, non-educational use of computer systems and other forms of academic dishonesty are strictly prohibited.