PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

INTRODUCTION TO COMPUTERS AND COMPUTING
CSIT 1000

Class Hours: 2.0                      Credit Hours: 3.0
Laboratory Hours: 3.0                 Revised: Spring 05

Catalog Course Description:

This course covers the basic concepts of computer hardware and software, microcomputer systems and workstations, networking and the Internet, and the interdisciplinary science of computing. This course is intended for University Parallel students not majoring in computer science.

Entry Level Standards:

The student must have writing, verbal and English language skills at the college entry level.

Prerequisites:

n/a

Corequisites:

n/a

Textbook(s) and Other Course Materials:

The Computer Continuum, by Kurt F.; Lauckner and Mildred D. Lintner, Prentice Hall

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 Computer Science</td>
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<tr>
<td>2</td>
<td>Algorithm discovery and design</td>
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<td>3</td>
<td>Efficiency of algorithms</td>
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<td>4</td>
<td>Binary numbers, Boolean logic</td>
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<td>5</td>
<td>Computer system organization</td>
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<td>6</td>
<td>System software and virtual machines</td>
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<tr>
<td>7</td>
<td>Introduction to high-level programming</td>
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<tr>
<td>8</td>
<td>Programming languages</td>
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<tr>
<td>9</td>
<td>Compilers and language translation</td>
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<tr>
<td>10</td>
<td>Models of computation</td>
</tr>
<tr>
<td>11</td>
<td>Using and managing data</td>
</tr>
<tr>
<td>12</td>
<td>Networks</td>
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</tbody>
</table>
II. Course Objectives*:

A. Demonstrate understanding of fundamental concepts of computer science. I, III, XI
B. Use basic computer architecture terminology correctly. I, III, XI
C. Calculate logical/relational comparison results. V, VI, XI
D. Execute code examples and explain their output. V, VI, XI
E. Step through algorithms and explain their results. V, VI, XI
F. Design and implement computer programs. V, VI, XI
G. Demonstrate knowledge of the intellectual and practical effects that computer science has in most of the sciences and humanities. III, X, XI
H. Understand social, legal and ethical issues as they pertain to computer usage. III, X, XI
I. Create electronic documents using computer applications such as electronic spreadsheets and databases. I, II, III, IV, IX, XI
J. Use a web browser to search the Internet. II, III, IV, IX, XI
K. Demonstrate knowledge of memory addressing. I, III, XI
L. Demonstrate knowledge of networking issues. I, III, XI
M. Utilize computer etiquette in electronic communications. I, III, X, XI
N. Demonstrate individual and/or teamwork standards to accomplish given tasks within established timeframes. X, XI, XII
O. Use the computer as a tool to communicate information. I, III, IV, IX, XI

*Roman numerals after course objectives reference goals of the CSIT program.

III. Instructional Processes*:

Students will:

1. Produce electronic documents that meet written requirements. Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy
2. Use current software tools to produce electronic documents. Personal Development Outcome, Technological Literacy Outcome, Transitional Strategy
3. Use problem-solving skills to design, implement and execute algorithms. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome
4. Use the Internet to do research from which to draw conclusions. Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy
5. Produce a fully working, multiple-document end-product as part of an individual or
collaborative effort for sharing information. Communication Outcome, Transitional Strategy, Active Learning Strategy

6. Use software applications and documents to communicate. Communication Outcome, Technological Literacy Outcome, Transitional Strategy

7. Develop a computer-related vocabulary including an understanding of data representation. Numerical Literacy Goal, Transitional Strategy

8. Practice computer etiquette and computer ethics. Cultural Diversity and Social Adaptation Outcome, Personal Development Outcome

9. 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 TBR's goals for strengthening general education knowledge and skills, connecting course work 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. Explain how data is represented in a computer. F
2. Demonstrate knowledge of computer hardware and software. B, C, D, E, G
3. Demonstrate knowledge of computer networks. G
4. Create web pages. C
5. Design, implement and execute algorithms. B, C, D, E, F, G
6. Explain social, ethical and legal issues arising from the use of computers. H
7. Discuss future uses of computers. A
8. Discuss computer usage in interdisciplinary fields. A
9. Demonstrate knowledge of software applications such as electronic spreadsheets and databases. C
10. Use a web browser to search the Internet. F
11. Use computer terminology in written documents and oral communication. C, F, H, K
12. Use computer etiquette in electronic communications. H, K
13. Use communication tools effectively. K
14. Produce documents in a timely, well-organized manner. J

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

V. Evaluation:

A. Testing Procedures:

At least 1 exam(s) will be given and the last exam will be comprehensive. Exams may only be made up for excused absences. An excused absence is one that can be verified by supporting documentation. Failure to make a passing test average will result in a grade of F for the course.

There will be at least 5 quizzes given during the course of the semester.
There will be at least 5 homework assignments during the course of the semester.

B. Laboratory Expectations:

There will be at least 7 labs. In addition, there will be one final lab project made up of multiple documents utilizing multiple software products.

C. Field Work:

n/a

D. Other Evaluation Methods:

n/a

E. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93 - 100</td>
<td>A</td>
</tr>
<tr>
<td>88 – 92</td>
<td>B+</td>
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<tr>
<td>83 - 87</td>
<td>B</td>
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<tr>
<td>78 – 82</td>
<td>C+</td>
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<tr>
<td>73 - 78</td>
<td>C</td>
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<tr>
<td>65 - 72</td>
<td>D</td>
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<tr>
<td>0 - 64</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. [NOTE: No differentiation is noted for excused/unexcused absences. These will be treated as an absence.] (Pellissippi State, 2004-2006 Catalog, page 83)

B. Academic Dishonesty:

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions which may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (Pellissippi State, 2004-2006 Catalog, pages 62-63)

C. Accommodations for disabilities:

If you need accommodation because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Privately after class or in the instructor's office.

To request accommodations students must register with Services for Students with Disabilities: Goins 127 or 131, Phone: (865) 539-7153 or (865) 694-6751 Voice/TDD.

D. Other Policies:

Computer Usage Guidelines:

College-owned or -operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State’s computing resources in an effective, efficient, ethical and lawful manner. (Pellissippi State, 2004-2006 Catalog, pages 67-70)
In the event that you have an emergency beyond your control, you must notify the instructor as soon as possible.