PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

APPLICATION DEVELOPMENT PERFORMANCE PROGRAMMING
CST 2870

Class Hours: 3.0
Laboratory Hours: 3.0

Credit Hours: 4.0

Date Revised: Fall 00

Catalog Course Description:

A project-oriented course in high performance application development for the AS/400 programmer. This course provides in-depth coverage of control language techniques, interactive application development, screen and printer output enhancement, and RPG performance programming techniques for the midrange system developer/programmer.

Entry Level Standards:

Student must have reading, writing, and math skills at the college level.

Prerequisite:

CST 1670 or department approval

Corequisite:

CST 2670 or department approval.

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

CL Programming for the IBM AS/400, by Veal, Cozzi Research, 1994
Using Query/400 by Gapen and Stoughton, Duke Press, 1995
Performance Programming, by Dawson, Duke Press, 1999

Optional:
CL by Example, by Green, CAS Books, 1995

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>CL Conventions, Syntax and Usage</td>
</tr>
<tr>
<td>2</td>
<td>Programming in CL, Commands</td>
</tr>
<tr>
<td>3</td>
<td>Query/400 Concepts</td>
</tr>
<tr>
<td>4-5</td>
<td>Display/Screen programming techniques</td>
</tr>
<tr>
<td>6-7</td>
<td>Enhanced printer programming techniques</td>
</tr>
<tr>
<td>8</td>
<td>Review, Midterm</td>
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</tbody>
</table>
II. Course Objectives*:

A. Analyze problems and then spec, design, code and enhance business application products designed to solve the original problem, then test and debug to real-world standards. II, III, IV, VII, VIII, IX, XI, XII

B. Demonstrate a working knowledge of the products and tools associated with client-based end-product development. II, III, VI, VII, VIII, IX, XI, XII


D. Demonstrate problem solving skills and individual and team-oriented programming work ethic skills. I, III, VI, VII, IX, X, XI

E. Develop Client-based Interactive applications, modules, programs and end-products. II, III, IV, VI, VII, VIII, IX, X, XI, XII

*Roman numerals after course objectives reference goals of the Computer Science Technology program.

III. Instructional Processes*:

Students will:

1. Develop working products and applications compliant with required expectations. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Active Learning Strategy

2. Produce performance enhanced working programs. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Transitional Strategy, Active Learning Strategy

3. Demonstrate effective use of CL, DDS and PDM methods and protocols. Problem Solving and Decision Making Outcome, Transitional Strategy

4. Use a wide array of professional tools, security measures, data management techniques and work management measures to produce desired outcomes. Technological Literacy Outcome, Problem Solving and Decision Making Outcome, Personal Development Outcome, Transitional Strategy, Active Learning Strategy

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

6. Use existing utilities, system performance tools, professional methods and materials in completion of program development. Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy

*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. Effectively use terminology associated with the computer system, DDS, CL, RPG, Query, editors, utilities, OS/400 operating system and related system languages and applications. A,B,C,D,E
2. Develop I/O, data storage and retrieval, work and job management outcomes matching outcomes expected by businesses today. A,B,C,D,E
3. Produce required real-time on-demand interactive programs. A,B,C,D,E
4. Produce required external documentation. A,B,C,D,E
5. Correctly design integrated applications which work efficiently with testing procedures to insure speed, accuracy and secure data transmission. A,B,C,D,E
6. Write programs that meet or exceed client expectations. A,B,C,D,E
7. Develop professional level programs with well designed screens, good utilization of resources, error handling techniques and security of the data. A,B,C,D,E
8. Effectively apply good work ethics, teamwork, professionalism and quality standards. A,B,C,D,E

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

V. Evaluation:

A. Testing Procedures:

A midterm test which will count 200 points. There will be a final comprehensive test consisting of a project, producing a working program and written test, which will count 300 points. Tests may consist of multiple choice, matching, fill-in-the-blank, code development or short answer questions. There will be no make-up tests unless prior arrangements are made with the instructor.

B. Laboratory Expectations:

Lab attendance is required. Assignments will be given and must be completed and handed in at the expected date and time. All assignments turned in late will be reduced by 5 points per day. No assignment will be accepted more than one week late unless approved in advance by the lab instructor. The lab assignments will count 300 points total.

C. Field Work:

N/A

D. Other Evaluation Methods:

Pop-quizzes, reading assignments and "outside-class" take-home assignments will be given which will total 200 points.
E. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>850 - 1000 pts.</td>
<td>A</td>
</tr>
<tr>
<td>750 - 849 pts.</td>
<td>B</td>
</tr>
<tr>
<td>650 - 749 pts.</td>
<td>C</td>
</tr>
<tr>
<td>550 - 649 pts.</td>
<td>D</td>
</tr>
<tr>
<td>0 - 49 pts.</td>
<td>F</td>
</tr>
</tbody>
</table>

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.

B. Academic Dishonesty:

Plagiarism, cheating, software piracy, non-educational use of the computer systems and other forms of academic dishonesty are strictly prohibited. A student caught cheating or infracting specific rules will be given a grade of "F" for the course.

C. Other Policies:

Students are expected to promptly attend all lecture and lab classes as assigned. If a class is missed, students are encouraged to make-up all work and get notes and/or handouts.