PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

INTRODUCTION TO PROGRAMMING USING RPG
CST 1670

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

Catalog Course Description:

An introductory course in programming concepts for the AS/400 midrange environment. The course covers syntax, program logic, coding specifications, documentation standards, input structures, data extrapolation, storage concepts and output coding development.

Entry Level Standards:

Students must have college level reading and math ability.

Corequisite:

CST 1110

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

Optional: AS/IV RPG Language Guide(s) - Online access.

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1-2</td>
<td>Introduction, History, Specifications, Editor System</td>
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<tr>
<td>3-4</td>
<td>Programming Concepts and Arithmetic Operations</td>
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<tr>
<td>5-7</td>
<td>Top-Down Structured Program Design</td>
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<tr>
<td>8</td>
<td>Review, Midterm, Project Set 1 due</td>
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<tr>
<td>9-11</td>
<td>Files and data storage concepts, database access</td>
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<tr>
<td>12-14</td>
<td>Record Manipulation, Interactive Applications</td>
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<tr>
<td>15</td>
<td>Project Set 2 due, Review</td>
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<td>16</td>
<td>Final Test</td>
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II. Course Objectives*:

A. Analyze problems and then design, code and debug RPG business application products
designed to solve the original assigned problem. II, III, IV, VII, VIII, IX, XI, XII

B. Demonstrate a working knowledge of the RPG/screen/form set, indicators and codes associated with writing efficient programs. II, III, IX, VI, VII, VIII, IX, XI, XII

C. Demonstrate a working knowledge of the Peripheral I/O and storage facilities and the system environment running the language. I, II, III, IV, VI, VII, VIII, IX, X, XI, XIII

D. Demonstrate problem solving skills using the RPG language. I, III, VI, VI, VII, IX, X, XI

E. Demonstrate proficiency and knowledge in using the editor. II, III, IV, VI, VII, VIII, IX, X, XI, XII

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

III. Instructional Processes*:

Students will:

1. Develop coding compliant with each RPG required expectation. Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome

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

3. Participate in a software development team. Communication Outcome, Problem Solving and Decision Making Outcome, Transitional Strategy, Active Learning Strategy

4. Use professional tools (PDM, SEU, Testing and Debugging) to produce software components and documentation. Technological Literacy Outcome, Transitional Strategy, Personal Development Outcome

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

6. Use professional methods and materials in completion of program development. Technological Literacy Outcome, Personal Development Outcome, Transitional Strategy, Active Learning 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, the RPG language, utilities and the editor. B,C,E

2. Develop forms/screens used to produce RPG code. A,B,C,D,E

3. Produce required input code. A,B,C,D,E

4. Produce required output code. A,B,C,D,E
5. Correctly design calculation parameters which yield specific correct results. A,B,C,D,E
6. Write programs that use decision branching, file and I/O coding structures. A,B,C,D,E
7. Develop fully functional and working programs. A,B,C,D,E
8. Correctly use the AS/400 system and its editor(s)/compiler(s). A,C,E
9. Load and run programs, and enter verified data and have the program check for data errors. A,B,C,D,E
10. 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 100 points. There will be a final comprehensive test consisting of a project, producing a working program and written test, which will count 200 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 is incorporated as part of each Lecture. 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 20% per class. No assignment will be accepted more than one week late unless approved in advance by the lab instructor.

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:

   90 - 100  A
   87 - 89   B+
   80 - 86   B
   77 - 79   C+
   70 - 76   C
   60 - 69   D
   Below 60  F
   (grades expressed as a % of total possible points)

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