PELLEPISSPI STATE COMMUNITY COLLEGE  
MASTER SYLLABUS  

SYSTEMS ANALYSIS & DESIGN  
CSIT 2840 (formerly CSIT 2810)  

Class Hours: 2.0  
Credit Hours: 3.0  
Laboratory Hours: 2.0  
Revised: Fall 2012  

NOTE: This course is not intended for transfer credit.  

Catalog Course Description:  

This course examines established and evolving methodologies for the analysis, design and development of a business information system. Students practice software engineering principles and documentation techniques through team projects. Emphasis is placed on business systems characteristics, prototyping, CASE tools and SDLC phases.  

Entry Level Standards:  

The entering student is expected to have a working knowledge of database concepts and should have adequate programming abilities in at least one high-level language. Problem solving skills will be essential. Knowledge of Visual programming as well as object-oriented programming is preferred.  

Prerequisites:  

CSIT 1520, CSIT 1810, and ENGL 1010  

Textbook(s) and Other Course Materials:  

Required Textbook:  


b. Customized Project Management  

Suggested Reading Materials:  

b. UML, A Beginner’s Guide, by Jason Roff  
c. Software Engineering, by Ian Sommerville  
d. Object-Oriented Systems Analysis and Design, by George, Batra, Valacich, and Hoffer  
e. Software Project Management, by Joel Henry  
f. Introduction to Java Programming, 9th Ed., by Y. Daniel Liang, Pearson/Prentice Hall  
g. Oracle Database 11 g SQL, by Jason Price, McGraw-Hill, 2008
### I. Week/Unit/Topic Basis:

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<tr>
<th>Week</th>
<th>Chapter</th>
<th>Topic</th>
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<td>Chapter 1</td>
<td>Information Systems</td>
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<td>Chapter 2</td>
<td>The Concept of Object Orientation</td>
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<td>Chapter 3</td>
<td>Methodology, Understanding Projects and Project Management</td>
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<td>Chapter 4</td>
<td>Gathering Requirements, Using MS Project as a planning tool</td>
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<td>Chapter 5</td>
<td>Domain Analysis</td>
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<td>Chapter 6</td>
<td>Behavioral Modeling I: Use Cases: The basics</td>
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<td>Chapter 7</td>
<td>Behavioral Modeling II: Developing Use Cases</td>
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<td>Chapter 10</td>
<td>The Design Challenge</td>
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<td>Chapter 11</td>
<td>Application Design I: Flow &amp; Control</td>
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<td>Chapter 12</td>
<td>Application Design II: The User Interface</td>
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<td>Chapter 13</td>
<td>Application Design III: Database &amp; Persistence</td>
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<td>Patterns</td>
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<td>Chapter 16</td>
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<td>Implementation</td>
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<td>15</td>
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<td>Final Exam</td>
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### II. Course Goals*:

The course will:

- **A.** Build the skills to analyze, design and develop a well-documented project based on end-user request. I, II, III, IV, V
- **B.** Demonstrate through group discussion how to approach a problem and come up
with different solutions. I, V

C. Enhance effective use of professionally accepted methods and materials in completion of projects. I, II, III, IV, V

D. Require students to practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. I

E. Develop students’ critical thinking, problem solving, goal setting, and planning skills through the performance of course assignments such as case analysis, and team case studies. I, V

F. Allow opportunities for students to practice and learn various methods, tools and techniques used by the systems analyst at each phase within the systems development cycle. I, II, III, IV, V

G. Develop the student’s ability to manage time and efforts as a team to achieve the project goal. I

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

III. Expected Student Learning Outcomes*

The student will be able to:

1. Demonstrate an overview of general concepts of system analysis and design. (A, D)

2. Construct a plan by using Project Management tools for system study through teamwork and cooperation. (A, B, C, D)

3. Develop an understanding of the system's life cycle and the tools and techniques available to the analyst. (A, C,D,E)

4. Develop an understanding of different alternative solutions to a given problem. (A,B,C,D)

5. Create Requirement Definition Document based on client request. (A, B, C, D, E)

6. Create Use Cases, and other UML models using modeling tools. (C, F)

7. Develop software solution after a complete system study using various case studies. (A, F, G)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures: about 70% of grade

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

B. Laboratory Expectations: about 20% of grade
Lab exercises will be given using MS Project, as well as various UML modeling tools.

C. Field Work:

Students are required to read all library materials/handouts assigned in class.

D. Other Evaluation Methods: about 10% of grade

Students are expected to do in-class group discussion on various cases/projects. Class participation, group work and homework will also comprise the final grade for the course. Each instructor must provide full details the first week of class via a syllabus supplement.

E. Grading Scale:

- 93 - 100 A
- 88 - 92 B+
- 83 - 87 B
- 78 - 82 C+
- 73 - 77 C
- 65 - 72 D
- Below 65 F

V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning 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 Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

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.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one’s own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.
Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at http://www.pstcc.edu/sswd/.

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.

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