

**Computer Technology Department**  
**Business/Public Service Division**  
**GREENVILLE TECHNICAL COLLEGE**

**COURSE SYLLABUS**

**Course Title:** Systems and Procedures

**Course Number:** CPT 264

**READ THIS SYLLABUS CAREFULLY**

You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The following information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment 1:

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

Attachment 2:

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."

Attachment 3:

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."

**Approved by:**

 8-14-14

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**Approved by:**

  
Joel D. Welch, Ph.D., PE  
Dean, Technology Division

**Date:**

9/17/14

*This syllabus will remain in effect until revised or reviewed no later than August 2015.*

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**Course Title:** Systems and Procedures

**Course Number:** CPT 264

**Lecture hours per week:** 3.0

**Lab/Clinic Hours:**

**Semester credit hours:** 3.0

**Prerequisites:** CPT 186 and IST 272, Co-requisite: SPC 205. Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

**Catalog Course Description:** This course covers the techniques of systems analysis, design, development, and implementation.

**Purpose of the Course:** To train the student in the techniques and the methodology employed by a Systems Analyst during the study, design, and implementation of a business information system.

**Required text(s) and other materials:**

1. ***Systems Analysis and Design***, Rosenblatt, 10<sup>th</sup> edition, Course Technology, ISBN: 9781285171340
2. NOTE: Students in traditional classes must access Blackboard for course-related information. Students in hybrid and online classes will access their online content through Blackboard.

**COLLEGE-WIDE STUDENT LEARNING OUTCOMES**

1. Communication – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.
2. Information Technology and Technological Literacy – Students will demonstrate competency in using computer technology within a field of study.
3. Critical Thinking/Reasoning – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.
4. Professional and Personal Responsibility – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.
5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

*Revised December 31, 2012*

## COMPUTER TECHNOLOGY PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the Computer Technology Degree students will be able to:

1. Install computer and network hardware.
2. Install computer operating systems and application software.
3. Design, create and test computer programming solutions.
4. Demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer assignments.
5. Analyze, troubleshoot, and correct computer related technical problems.

*Revised August 2012*

## CPT 264 COURSE OUTCOMES

Students who successfully complete this course will have demonstrated the skills required to accomplish the following objectives with a minimum competence level of 70 percent.

1. Students will be able to describe the phases and objectives of the development life cycle and what takes place in each phase.
2. Students will be able to analyze and describe the different development methodologies such as agile, Waterfall, iterative, and the implication of using no methodology.
3. Students will be able to explain how and why systems projects are initiated and evaluated.
4. Students will be able to describe documentation methods used by different development methodologies.
5. Students will be able to describe development strategies using tools such as joint application development (JAD), rapid application development (RAD), and prototyping in building business projects.
6. Students will be able to describe object-oriented systems development and discuss how this approach differs from non-object-oriented systems development.
7. Students will be able to design and develop a set of data flow diagrams for a Management Information System for a business process.
8. Students will be able to demonstrate the use of common techniques such as system flowcharts, entity relationship diagrams (ERD), UML diagrams, cost-benefit and payback analysis for the design of a management information system.
9. Students will be able to describe the difference between a top-down design and modular design as it relates to application development.
10. Students will be able to analyze, design, and document a proposed solution to a business process by completing a team project.

*The objectives of the CPT 264 course are intended to meet the CPT level student learning outcomes.*

**PLAN OF INSTRUCTION:**

**TEXT**

<b><u>CHAPTER</u></b>	<b><u>MAJOR TOPICS</u></b>
Chapter 1	<ul style="list-style-type: none"> <li>Introduction to Systems Analysis and Design</li> <li>The Impact of Information Technology</li> <li>Information System Components</li> <li>Understanding the Business</li> <li>Impact of the Internet</li> <li>How Business Uses Information System</li> <li>Information System Users and Their Needs</li> <li>System Development Tools and Techniques</li> <li>Systems Development Methods</li> <li>Planning and Modeling a Systems Development Project</li> <li>Systems Development Guidelines</li> <li>Information Technology Department and the Systems Analyst Position</li> </ul>
Toolkit Part A -	<ul style="list-style-type: none"> <li>Communications Tools</li> <li>Successful Communications Strategies</li> <li>Written Communications</li> <li>Oral Communications</li> </ul>
Chapter 2	<ul style="list-style-type: none"> <li>Analyzing the Business Case</li> <li>The Strategic Planning Process</li> <li>Information Systems Projects</li> <li>Evaluation of Systems Requests</li> <li>Overview of Feasibility</li> <li>Evaluating Feasibility</li> <li>Preliminary Investigation Overview</li> </ul>
ToolKit Part B-	<ul style="list-style-type: none"> <li>Case Tools</li> <li>Overview of CASE Tools</li> <li>CASE Terms and Concepts</li> <li>Integrated Development Environments</li> <li>CASE Tool Examples</li> <li>Future Trends</li> </ul>
Chapter 3	<ul style="list-style-type: none"> <li>Managing Systems Projects</li> <li>Gantt Charts</li> <li>Pert/CPM</li> <li>Risk Management</li> </ul>
Chapter 4	<ul style="list-style-type: none"> <li>Requirements Modeling</li> <li>JAD</li> <li>RAD</li> <li>Agile</li> </ul>
Chapter 5	<ul style="list-style-type: none"> <li>Data and Process Modeling</li> <li>DFD</li> </ul>

	Data Dictionary Process Description Tools Logical Versus Physical Models Ethics
Chapter 6	Object Modeling Terms Concepts Relationships
ToolKit Part C	Financial Analysis Tools Describing Costs and Benefits Cost-Benefit Analysis
ToolKit Part D	Internet Resources Search Engines Subject Directories Communication
Chapter 7	Development Strategies Internet Impact Outsourcing In-house options Systems Analyst Role Prototyping
Chapter 8	User Interface Design Types of output User Interface Design Input Design
Chapter 9	Data Design Data Design Concepts DBMS Components Web-Based Database Design Data Design Terminology Entity-Relationship Diagrams Normalization Data modeling Data storage and access Data Control
Chapter 10	System Architecture Planning the Architecture Servers Clients Internet-Based Architecture Process Modeling Network Models Wireless Networks

Chapter 11     Managing System Implementation  
                  Software Quality Assurance  
                  Application Development  
                  Structured Application Development  
                  Object-Oriented Application Development  
                  Agile Application Development  
                  Coding  
                  Testing the system  
                  Documentation  
                  Training  
                  Data Conversion  
                  System Change Over

Chapter 12     Managing Systems Support and Security  
                  Maintenance  
                  Performance  
                  Security  
                  Backup and Recovery  
                  System Obsolescence

***The instructor reserves the right to modify the Plan of Instruction by changing the sequence of text material or testing content.***

<b>CPT 264 – COURSE SPECIFIC REQUIREMENTS</b>
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There are no specific course requirements other than attachment 1.

<b>CPT 264 – EVALUATION AND GRADING INFORMATION</b>
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**GRADING POLICY**

Emphasis will be placed on tests, assignments, group projects, and a cumulative final exam with the following weights:

**Fifteen (15) percent** of the final grade will be based on successful completion of assignments related to techniques and methodology employed by a Systems Analyst during the implementation of a business information system and a two-page paper that discusses topics related to a software product or tool that might affect the analyst's choices when developing a new system, etc.

**Twenty (20) percent** of the final grade will be based on one group project.

**Forty-five (45) percent** of the final grade will be based on test grade averages.

**Twenty (20) percent** of the final grade will be based on the comprehensive final examination.

All assignments (i.e., labs, projects, research papers, etc.) for this course must be completed and submitted to the instructor by the due date established in order to receive credit for the assignment.

**Note: ALL TESTS AND EXAMS ARE RETAINED BY THE INSTRUCTOR.**

Final letter grades will be issued as follows:

A	=	90 - 100
B	=	80 - 89
C	=	70 - 79
D	=	60 - 69
F	=	0 - 59