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

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: _____

Phillip Cluley, Department Head for Computer Technology~~Beau Sanders, Department Head, Computer Technology Department~~

~~beau.sanders@gvltec.edu~~Phillip.Cluley@gvltec.edu, (864) 250-~~8314~~8655, Barton Campus, Building 103/30911

| Field Code Changed |

Approved by: _____ Date: _____

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

*This syllabus will remain in effect until revised or reviewed no later than August 201*6.5.

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COURSE SYLLABUS

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 <u>or CPT 230</u>~~and IST 272~~, Co-requisite: <u>IST 272 and </u>SPC 205<u> or SPC 209</u>. 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. ***<u>Systems Analysis and Design</u>***, Rosenblatt, 10th edition, Course Technology, ISBN: 9781285171340
2. NOTE: <u>Students in traditional classes</u> must access Blackboard for course-related information. <u>Students in hybrid and online classes</u> will access their online content through Blackboard.

COLLEGE-WIDE STUDENT LEARNING OUTCOMES

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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.

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.

CPT 264 – MAIN TOPICS

PLAN OF INSTRUCTION:

 TEXT
CHAPTER   **MAJOR TOPICS**

Chapter 1   Introduction to Systems Analysis and Design
                 The Impact of Information Technology
                 Information System Components
                 Understanding the Business
                 Impact of the Internet
                 How Business Uses Information System
                 Information System Users and Their Needs
                 System Development Tools and Techniques
                 Systems Development Methods
                 Planning and Modeling a Systems Development Project
                 Systems Development Guidelines
                 Information Technology Department and the Systems Analyst Position

Toolkit Part A - Communications Tools
                 Successful Communications Strategies
                 Written Communications
                 Oral Communications

Chapter 2   Analyzing the Business Case
                 The Strategic Planning Process
                 Information Systems Projects
                 Evaluation of Systems Requests
                 Overview of Feasibility
                 Evaluating Feasibility
                 Preliminary Investigation Overview

ToolKit Part B-   Case Tools
                 Overview of CASE Tools
                 CASE Terms and Concepts
                 Integrated Development Environments
                 CASE Tool Examples
                 Future Trends

Chapter 3   Managing Systems Projects
                 Gannt Charts
                 Pert/CPM
                 Risk Management

Chapter 4   Requirements Modeling
                 JAD
                 RAD
                 Agile

Chapter 5   Data and Process Modeling
                 DFD

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.

CPT 264 – COURSE SPECIFIC REQUIREMENTS

There are no specific course requirements other than attachment 1.

CPT 264 – EVALUATION AND GRADING INFORMATION

GRADING POLICY

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

Twenty~~Fifteen~~ (20~~15~~) percent of the final grade will be based on successful completion of assignments related to the role of a Systems Analyst and 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.~~

Thirty
~~Twenty~~ **(3~~2~~0) percent** of the final grade will be based on one group project.

Fifty~~Forty-five~~ (50~~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