GREENVILLE TECHNICAL COLLEGE

School of Business and Computer Technology
Computer Technology
Course Syllabus
Systems and Procedures CPT 264
Fall 2019

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Credit/Contact Hours:
3.0

Prerequisite:
CPT 186 or CPT 230, Co-requisite: IST 272 and SPC 205 or SPC 209. Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:
NONE

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

Purpose of 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.

CPT 264 – MAIN TOPICS

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
> 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.

Required Texts:
Systems Analysis and Design,

    Rosenblatt, 11th edition, Course Technology, Via a Cengage Unlimited subscription. The ISBN for this item is: 9780357700044 at the Greenville Tech Book Store. Note that a single purchase of a Cengage Unlimited one year subscription will give you access to the Cengage materials for this course and other courses for a whole year. You only need to purchase one copy of it every twelve months during any given time in which you need access to Cengage course materials.

NOTE:

    Students will access course content through Blackboard and Cengage. You must have a Cengage Unlimited subscription to complete some of the assignments in the course. A physical copy of the Systems Analysis and Design book does not suffice, you must have a Cengage Unlimited subscription.

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Additional Materials, Supplies, Equipment, and Technology (i.e. Webcams):
There are no specific course requirements

Instructional Agreement:
This syllabus is an agreement between the student and instructor concerning course objectives, course content, grading, and other policies and procedures particular to the course as well as any posted program, departmental, and divisional policies. It is also the student's responsibility to become familiar with the Student Handbook/College Catalog found in the Student Resources area of Blackboard.

Grading Scale:
Emphasis will be placed on tests, assignments, and the group projects with the following weights:

> **Twenty (20) 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.

> **Thirty (30) percent** of the final grade will be based on one group project.

> **Fifty (50) percent** of the final grade will be based on test grade averages.

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

Pass/Non-Pass Course Grade Option:
This course may be eligible for the Pass/Non-Pass Course Grade Option. A student must request this option prior to the withdrawal date of this course. If approved for this option, a grade of P will be assigned if the student earns a grade of C or higher. A grade of NP will be assigned for earning a D or F. Students are encouraged to talk with their instructor and meet with an advisor prior to requesting this option. Additional information may be found in the college catalog.

Instructional Continuity:
In the event of a disruption to the normal class schedule or planned activities for this course, alternate learning activities that may include other methods of instruction or locations may be implemented. If disruption occurs, your instructor will communicate through your GTC email (Gmail) account. Additionally, please make sure your contact information is accurate in GTC's emergency alert system (accessible in GTC4Me/Quick Access/GTC2me – Emergency Messaging).

Verification of Student in Online Classes:
Greenville Technical College is committed to student learning and the academic integrity of all courses. All GTC online courses are required to have at least one proctored learning activity that constitutes a significant percentage of the course grade, which may include a test, midterm, final exam, presentation or other assignment. Proctored is defined as an experience where an approved person ensures the identity of the student and monitors the learning activity. The proctored learning activity will be determined by the course instructor. The method of proctoring and any additional requirements, such as costs for students and/or trips to campus or approved testing center, will be explained in the course schedule/plan of instruction.

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.

Program 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

Communication Core Competency: Students will demonstrate effective written and oral communication skills to convey information, ideas, or opinions.

- Written Communication: Students will demonstrate effective written communication skills to convey information, ideas, or opinions.
- Oral Communication: Students will demonstrate effective oral communication skills to convey information, ideas, or opinions.

Critical Thinking Core Competency: Students will demonstrate effective reasoning, problem solving, or quantitative skills to develop an opinion or conclusion.

- Critical Reasoning: Students will employ inquiry, analysis, and synthesis of information to formulate and/or evaluate an opinion or conclusion.

- Problem Reasoning: Students will design and formulate a strategy to answer a question or achieve a desired goal.
- Quantitative Reasoning: Students will be able to analyze numerical information or observable facts resulting in informed conclusions.

Information Literacy Core Competency: Students will be able to locate, evaluate, and use information effectively from diverse sources.

Professionalism Core Competency: Students will demonstrate conduct and etiquette appropriate to the community and chosen career.

- Professionalism: Students will display professional conduct and work habits.
- Teamwork: Students will collaborate with others to accomplish a shared goal.

Assessment of Student Learning:
Greenville Technical College is committed to continuous improvement of teaching and learning. Tests, assignments, and/or projects required in this course may be shared with college faculty and used for assessment purposes. Also, student input is necessary for improving instruction and is requested through course evaluations. Students will be notified when evaluations are available.

Administrative Withdrawals:
Students may be administratively withdrawn from this course for the following reasons:

- Not attending a course during the drop/add period including failure to meet the attendance criteria in an online course. In this case, a grade of WA will be assigned. This WA will not count as an attempt and will not affect GPA.
- For recorded absences exceeding 15% of the course contact hours prior to the withdrawal date. A grade of W will be assigned. For students who receive financial aid, this W will count as a course attempt but will not affect GPA.
- For non-attendance for 14 consecutive calendar days during any time in a semester (including non-class days, holidays, and weekends). A grade of FA (Failure due to Absences) will be assigned. For students who receive financial aid, this FA will count as a course attempt and will affect GPA. The college will use a grade point of zero for each credit hour to calculate the student's GPA.

Course Policies:
Click here to enter text.

Students with Disabilities:
Students with disabilities, including those who were served in Special Education (resource or tutorial), should contact Student Disability Services (SDS) to discuss their

need for services and accommodations. ***This must be done each term***. The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113.

Students may reach staff by phone at (864) 250-8202 or via email to DisabilityServices@gvltec.edu. Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services. Visit http://gvltec.edu/disability-services for more information.

The college is committed to providing materials that are accessible to all students. However, if you experience any difficulty accessing materials, please notify your instructor immediately so that we can provide a solution. You may also contact Student Disability Services directly at (864) 250-8202 or by email at DisabilityServices@gvltec.edu.

Students who need a PDF reader to access course documents presented in PDF formats may download Adobe Reader from https://get.adobe.com/reader.

Blackboard Ally

Blackboard Ally is a tool to improve students' experiences within online courses. It enables students to convert files in a course to more accessible formats such as HTML, electronic braille, audio and more. For more information, refer to Blackboard Ally for Students located in Student Resources in the course menu.

Technology Statement:
Greenville Technical College is not responsible for personal technology or internet access. Problems with computers, devices, or internet access are not acceptable for late work. When completing gradable coursework online, be sure to access a secure, reliable internet connection (preferably hardwired).

All technical questions should be directed to technical support. For details, visit https://www.gvltec.edu/about_greenvilletech/tech_support.

Students can access due dates for all assignments and quizzes/tests on the Course Schedule/Plan of Instruction. All graded work is time-stamped when submitted, so your instructor can check the time of submission. In addition, you will receive a confirmation email message when you submit assignments via Blackboard. You must provide this confirmation information in case of any dispute regarding the submission.

Computer labs are available at multiple campus locations and offer various hours as well as staff who are available for assistance. For more information, please visit https://www.gvltec.edu/student_resources/computer_labs.

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Student should use Microsoft Office programs or PDF format for submitting assignments in Blackboard. Students can access http://portal.office.com, log in with their <username>@my.gvltec.edu email address and Blackboard/GTC4me password, then follow the prompts to install Microsoft Office free of charge.

Starfish:
We care about your success! Greenville Technical College is proud to offer Starfish, a software tool designed to promote student success through coordination and communication between students, instructors, and support staff. The link to Starfish is located in Blackboard.

Inside Starfish, you will find your Student Success Team with your instructor, advisor, academic coach, and others you may be directly connected with at the college. Setting up your Starfish profile and completing the Starfish Intake form will provide your Success Team with valuable information to guide your success.

Throughout the semester, you may receive emails regarding your attendance, academic performance, or course grades. Additionally, faculty and staff may send kudos celebrating successes. It is important that you check your Greenville Technical College Gmail regularly for Starfish alerts and kudos.

FERPA Policy:
Because Greenville Technical College abides by FERPA privacy guidelines, personal email accounts may not be used for any College-related communication. Faculty and students must use the college Gmail system only.

Start, Stay, Succeed!