# School of Business and Computer Technology Computer Technology Course Syllabus Systems and Procedures CPT 264 Fall 2020

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Co-requisite

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**Non-discrimination Policy** 

Title IX Policy

**Assistance with Food and Housing** 

#### **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

## **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.

#### **Required Texts:**

Cengage Unlimited Subscription - The ISBN for this item is: 9780357700044 at the Greenville Tech Book Store. Note that a single purchase of a 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.

Additional Materials, Supplies, Equipment, and Technology (i.e. Webcams): Tutoring is now available in the Business Division Student Lab located on the Barton Campus in the Engineering Building (#103), Room 113. The hours for tutoring are posted in the lab (ET 113); no appointment is necessary. There are no fees required for this service.

A webcam is required for this course for test proctoring. Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your own home. You DO NOT need to create an account, download software, or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable Internet connection.

To get started, you will need Google Chrome and the Honorlock Chrome Extension. You can download the extension at <a href="https://www.honorlock.com/extension/install">www.honorlock.com/extension/install</a>.

When you are ready to test, log into Blackboard, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your

room. Honorlock will be recording your exam session by webcam, as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device

## **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 project with the following weights:

**Thirty (30)** 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.

**Ten (10)** percent of the final grade will be based on the final group project presentation.

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

**Thirty (30)** 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. Click on this link or additional information: Pass/Non-Pass

## **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.

#### Honorlock:

Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You **DO NOT** need to create an account, download software or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable Internet connection. For additional information on using Honorlock, click here.

#### **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.

#### **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:

- NIC (Never in Class) 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.
- **14-Day Rule:** At any time during the semester and regardless of a student's use of financial aid benefits, the college will withdraw a student who is not in attendance

for 14 consecutive calendar days including weekends, holidays, college breaks, and cancelled class sessions.

- Prior to the course withdrawal date, the college policy is to assign a
  grade of W (Withdrawal). The student will earn no credits or grade points,
  and the W will not affect GPA. For students receiving financial aid, the
  course will count as an attempt and may affect future aid.
- After the course withdrawal date, the college will assign a grade of WF for the course which will negatively affect GPA calculation. The student will be responsible for course payment and will not be eligible for a refund. The college will notify the student of the administrative withdrawal via official college email address. For students receiving financial aid, the course will be recorded as an attempt and may affect future financial aid awards.

Students may request a reinstatement. Reinstatements must be approved by the course instructor.

#### **Course Policies:**

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

### 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 A

**Communications Tools** 

Successful Communications Strategies

Written Communications
Oral Communications

## Chapter 3

Managing Systems Projects

Gannt Charts Pert/CPM

Risk Management

## ToolKit Part C

Financial Analysis Tools

**Describing Costs and Benefits** 

Cost-Benefit Analysis

# Chapter 4

Requirements Modeling

JAD RAD Agile

## Chapter 5

Data and Process Modeling

DFD

**Data Dictionary** 

Process Description Tools Logical Versus Physical Models

**Ethics** 

#### ToolKit Part B

Case Tools

Overview of CASE Tools CASE Terms and Concepts

Integrated Development Environments

**CASE Tool Examples** 

**Future Trends** 

#### Chapter 6

**Object Modeling** 

Terms
Concepts
Relationships

#### 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.

#### 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 <a href="DisabilityServices@gvltec.edu">DisabilityServices@gvltec.edu</a>. Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services. Visit <a href="http://gvltec.edu/disability-services">http://gvltec.edu/disability-services</a> 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 <a href="mailto:DisabilityServices@gvltec.edu">DisabilityServices@gvltec.edu</a>.

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 <a href="Blackboard Ally for Students">Blackboard Ally for Students</a> 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 <a href="https://www.gvltec.edu/about\_greenvilletech/tech\_support">https://www.gvltec.edu/about\_greenvilletech/tech\_support</a>.

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 <a href="https://www.gvltec.edu/student\_resources/computer\_labs">https://www.gvltec.edu/student\_resources/computer\_labs</a>.

Student should use Microsoft Office programs or PDF format for submitting assignments in Blackboard. Students can access <a href="http://portal.office.com">http://portal.office.com</a>, 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.

#### **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!