

PROGRAMMING LOGIC AND DESIGN

ITSE-1329

DEPARTMENT OF COMPUTER INFORMATION SYSTEMS

TECHNICAL EDUCATION DIVISION

LEVELLAND CAMPUS

SOUTH PLAINS COLLEGE

2015 - 2016

SCANS COMPETENCIES

RESOURCES: Identifies, organizes, plans and allocates resources.

- C-1 TIME--Selects goal--relevant activities, ranks them, allocates time, and prepares and follows schedules.
- C-2 MONEY--Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives
- C-3 MATERIALS & FACILITIES- Acquires, stores, allocates, and uses materials or space efficiently.
- C-4 HUMAN RESOURCES--Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

INFORMATION--Acquires and Uses Information

- C-5 Acquires and evaluates information.
- C-6 Organizes and maintains information.
- C-7 Interprets and communicates information.
- C-8 Uses computers to Process information.

INTERPERSONAL--Works With Others

- C-9 Participates as members of a team and contributes to group effort.
- C-10 Teaches others new skills.
- C-11 Serves clients/customers--works to satisfy customer's expectations.
- C-12 Exercises leadership--communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
- C-13 Negotiates-Works toward agreements involving exchanges of resources resolves divergent interests.
- C-14 Works with Diversity-Works well with men and women from diverse backgrounds.

SYSTEMS--Understands Complex Interrelationships

- C-15 Understands Systems--Knows how social, organizational, and technological systems work and operates effectively with them
- C-16 Monitors and Correct Performance-Distinguishes trends, predicts impacts on system operations, diagnoses systems' performance and corrects malfunctions.
- C-17 Improves or Designs Systems-Suggests modifications to existing systems and develops new or alternative systems to improve performance.

TECHNOLOGY--Works with a variety of technologies

- C-18 Selects Technology--Chooses procedures, tools, or equipment including computers and related technologies.
- C-19 Applies Technology to Task-Understands overall intent and proper procedures for setup and operation of equipment.
- C-20 Maintains and Troubleshoots Equipment-Prevents, identifies, or solves problems with equipment, including computers and other technologies.

FOUNDATION SKILLS

BASIC SKILLS--Reads, writes, performs arithmetic and mathematical operations, listens and speaks

- F-1 Reading--locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
- F-2 Writing--Communicates thoughts, ideas, information and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
- F-3 Arithmetic--Performs basic computations; uses basic numerical concepts such as whole numbers, etc.
- F-4 Mathematics--Approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- F-5 Listening--Receives, attends to, interprets, and responds to verbal messages and other cues.
- F-6 Speaking--Organizes ideas and communicates orally.

THINKING SKILLS--Thinks creatively, makes decisions, solves problems, visualizes, and knows how to learn and reason

- F-7 Creative Thinking--Generates new ideas.
- F-8 Decision-Making--Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
- F-9 Problem Solving--Recognizes problems and devises and implements plan of action.
- F-10 Seeing Things in the Mind's Eye--Organizes and processes symbols, pictures, graphs, objects, and other information.
- F-11 Knowing How to Learn--Uses efficient learning techniques to acquire and apply new knowledge and skills.
- F-12 Reasoning--Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

PERSONAL QUALITIES--Displays responsibility, self-esteem, sociability, self-management, integrity and honesty

- F-13 Responsibility--Exerts a high level of effort and preservers towards goal attainment.
- F-14 Self-Esteem--Believes in own self-worth and maintains a positive view of self.
- F-15 Sociability--Demonstrates understanding, friendliness, adaptability, empathy, and politeness in-group settings.
- F-16 Self-Management--Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- F-17 Integrity/Honesty--Chooses ethical courses of action.

COURSE SYLLABUS

COURSE TITLE: ITSE-1329- Programming Logic and Design
INSTRUCTOR: Jesse Day
OFFICE LOCATION: TC 207
PHONE: (806) 716- 2255
E-MAIL: jday@southplainscollege.edu
OFFICE HOURS: T R 01:30 PM - 04:00 PM
Friday 09:15 AM -12:15PM (By Appointment)

SOUTH PLAINS COLLEGE IMPROVES EACH STUDENT'S LIFE

WECM Course Description: Introduction to computer programming including design, development, testing, implementation, and documentation.

WECM End-of-Course Outcomes: Design, write, test, and document computer programs.

Course Competencies: This course introduces students to structured computer programming concepts, enforcing good style and logical thinking while incorporating a programming language.

Domain 1: Computer Programming Logic and Structure

- 1.1 Identify and manage elements of the computer programming development process.
- 1.2 Identify standards of programming design and structure.
- 1.3 Identify the necessary documentation relevant to programming design.

Domain 2: Computer Programming Models

- 2.1 Use programming design principles to make comparative decisions.
- 2.2 Use programming design principles to repeat a process.
- 2.3 Use programming design principles to organize a contiguous series of variables.

Domain 3: Computer Programming Procedures

- 3.1 Use modularity in the computer programming development process.
- 3.2 Create methods for functional cohesion in programming design and structure.
- 3.3 Identify principles of programming in an applied focus of data and/or methods.

Domain 4: Computer Programming Language

- 4.1 Use a programming language to apply programming design and structure.
- 4.2 Use a programming language to apply programming models and procedures.
- 4.3 Create computer programs to complete tasks and desired outcomes.

Textbooks and Supplements: SPC Bundle: 9781285576831

Just Enough Programming Logic and Design, Farrell, Course Technology
Just Enough Java, Farrell, Course Technology
Visual Logic (Access Code), Course Technology

Attendance Policy: You are expected to regularly participate in class activities. Points are deducted from your Class Participation grade each time a student does not complete an activity. Students will be dropped for continual non-participation in class.

Assignment Policy: Assignments will be given over each topic of discussion and are due as assigned. You are responsible for keeping up to date and prepared. Lost computer files are not a valid excuse for missing work.

Lab: You are responsible for completing assignments either by working in the open lab, a computer at home, or another means.

Examination Policy: There will be a major exam and a final after each unit. There will be **NO** makeup exam given after it is given to the class.

Grading Policy: Your grade will consist of lab assignments, class participation, unit exams and a final. Below is the manner of computing your average:

40% - Exams
40% - Lab Assignments
10% - Class Discussions
10% - Class Participation
100% - Final Grade

ACCOMMODATIONS

Electronic Assignments: This class will involve the use of the Internet and some access to discussion groups, forums, bulletin boards, and e-mail programs and/or chat rooms in order to complete the objectives for this class. Topics assigned by the instructor will be relevant to the objectives of this course.

Disclaimer: “This is to notify you that the materials you may be accessing in chat rooms, bulletin boards or unofficial web pages are not officially sponsored by South Plains College. The United States Constitution rights of free speech apply to all members of our community regardless of the medium used. We disclaim all liability for data, information or opinions expressed in these forums.”

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

ADA Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office through the Guidance and Counseling Centers at Reese Center (Building 8) 716-4606, or Levelland (Student Services Building) 716-2577.