

Soft-Train



*At Soft-Train
Technology Works*

System Analysis and Design (5 Days) ST45006

COURSE GOAL: Upon completion, the student will have a basic concept of analyzing and designing systems.

PREREQUISITES: None.

LEARNING OBJECTIVES:

Upon completion of this course, the student will be able to:

- Analyze, Design and Plan network systems.
- Understand the requirements required to design systems.
- Follow a set process in the development and analyzing of systems including troubleshooting and testing.

KEY TOPICS:

I. The Systems Analyst and Information System Development

- A. The Systems Analyst
- B. They Systems Development Life Cycle
- C. Project Identification and Initiation
- D. Feasibility Analysis

II. Project Selection and Management

- A. Project Selection
- B. Creating the Project Plan
- C. Staffing the Project
- D. Managing and Controlling the Project
- E. Applying the Concepts at Tune Source

III. Requirements Determination

- A. Requirements Determination
- B. Requirements Analysis Techniques
- C. Requirements-Gathering Techniques
- D. Applying the Concepts at Tune Source

IV. Use Case Analysis

- A. Use Cases
- B. Elements of a Use Case
- C. Building Use Cases
- D. Applying the Concepts at Tune Source

V. Process Modeling

- A. Data Flow Diagrams
- B. Creating Data Flow Diagrams
- C. Applying the Concepts at Tune Source

D. Creating the Context Diagrams

VI. Data Modeling

- A.** The Entity Relationship Diagram
- B.** Creating an Entity Relationship Diagram
- C.** Validating an ERD
- D.** Design Guidelines

VII. Moving Into Design

- A.** Transition from Requirements to Design
- B.** System Acquisition Strategies
- C.** Influences on the Acquisition Strategy
- D.** Selecting an Acquisition Strategy

VIII. Architecture Design

- A.** Elements of an Architecture Design
- B.** Creating an Architecture Design
- C.** Hardware and Software Specification
- D.** Applying the Concepts at Tune Source

IX. User Interface Design

- A.** Principles for User Interface Design
- B.** User Interface Design process
- C.** Navigation Design
- D.** Input Design
- E.** Output Design
- F.** Applying the Concepts at Tune Source

X. Program Design

- A.** Moving from Logical to Physical Process Models
- B.** Designing Programs
- C.** Structure Chart
- D.** Program Specification

XI. Data Storage Design

- A.** Data Storage Formats
- B.** Moving from Logical to Physical Data Models
- C.** Optimizing Data Storage
- D.** Estimating Storage Size

XII. Moving Into Implementation

- A.** Managing the Programming Process
- B.** Testing Developing Documentation
- C.** Applying the Concepts at Tune Source
- D.** Managing Programming

XIII. Transitioning To The New System

- A.** Making the Transition to the New System
- B.** The Migrating Plan
- C.** Post Implementation Activities
- D.** Applying the Concepts at Tune Source

XIV. The Movement to Objects

- A.** Basic Characteristics of Object Oriented Systems
- B.** Object Oriented Systems Analysis Design
- C.** Unified Modeling Language
- D.** Use Case Diagram
- E.** Class Diagram
- F.** Sequence Diagram
- G.** Behavioral State Machine Diagram