Structured System Design

CDT810

This course helps students understand how to build physical system specifications including database design and logical and physical data flow diagramming. Writing program specifications, unit, integration, system and acceptance testing and the steps in the installation/conversion process are also covered. Students complete several individual and group exercises.

Audience

- Systems Analysts
- Programmer Analysts
- Project Leaders
- End Users

Prerequisites

- Systems Analysis workshop

Course Length

- Three Days

Learning Objectives

- Understand how to determine a workable file/database structure
- Gain the ability to write a system physical specifications
- Learn how to compose a structured program specification
- Gain skills in monitoring project implementation phases

Teaching Methods

- A combination of lecture and hands-on exercises are used to define and simulate a real-life system design situation. Participants work in teams to define a realistic system design based on a functional specification provided as a starting point. Exercises involve individual and group work, and a presentation.

Course Outline

JC2

Starting with the functional specification

- Evaluation of alternatives
- Cost benefit analysis
- The system recommendation

File/Database Structures

- Using the data dictionary to define data stores
- Concepts of data normalization
- Logical DFD of the new system
- Testing the data store design

The Physical Specification

- Partitioning interactive vs batch functions
- Program logical hierarchy
- Transforming the DFD into modules
- Structured design heuristics

System Controls

- Input/Output controls
- Processing controls
- Use of “OOK” records and control files
- Recovery considerations

Structured Specifications

- What is in a structured spec?
- Using action diagrams to define processing
- Using decision tables in spec
- Specs include testing criteria!

Testing and Delivery

- Types and relevance of testing
- Planning for conversion
- Types of documentation and audiences