SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: DATA BASE MANAGEMENT I

Code No.: BDP215-5

Program: BUSINESS DATA PROCESSING

Semester: FOUR

Date: 1986 01

Author: DENNIS OCHOSKI

New: _____ Revision: X

APPROVED: _____ Date: 85-06-07

Chairperson

DATA BASE MANAGEMENT I

EDP215-5

Length of Course: 5 periods per week for one semester

Texts : Database Processing - David Kroenke
SEED A.D.S. (Application Development System) Pocket Guide
SEED D.S.O. (Decision Support Option) Pocket Guide

Other References : Principles of Data-Base Management - James Martin
SEED KERNEL User Guide
SEED BLOOM User Guide
SEED HARVEST User Guide

Purpose :

This is an introductory course in Database Management systems.

The course begins with a study of the necessary terminology and concepts to gain an appreciation of what a data base management system is. Data base design skills are developed by defining and writing schemas, sub-schemas and set relationships, and also by the drawing of Bachman diagrams.

Practical skills are developed through the study and use of SEED, a CODASYL data base, including its data manipulation language, online inquiry, and report generator.

Objectives :

This course extends the concepts of structured analysis and design to include the data base environment. At the conclusion of the course, the student, having analysed a business application will be able to accomplish the following :

a) the definition of a data base and its purpose,

b) establish relationships between a given set of data attributes,

c) document the logical views of the data structures required by the application,

d) synthesize the logical views of the data structures into an overall logical SCHEMA,

e) code the logical views of the data structures (SUB-SCHEMA) and the SCHEMA, for a data base system,

Objectives cont'd :

f) implement a database on a computer,

g) develop and implement COBOL programs that use a database,

h) use a Query language against the database,

i) use a Report Generator language.

Student Evaluation :

The student's final grade will consist of the following components :

Tests (3 x 20)	60%
Assignment #1	10%
Assignment #2	25%
Participation	5%
	100%

Grading : A -- 85 to 100%
B -- 70 to 84
C -- 60 to 69
R -- 0 to 59

Note : a student who has achieved an average grade of 75% or better on the first two tests will be exempt from writing the third test. In this case each test will be worth 30% of the semester's grade.

Assignment Deadlines : each assignment must be handed in ON TIME, otherwise they are subject to a 10% deduction per day late.

Note : A student will be allowed to do a re-write if:

(1) he/she has a passing final grade and wishes to better that grade,

(2) he/she does not have a passing final grade and that grade is 50% or better, and,

(3) he/she has completed all assignments.

Material to be covered :

PART A:

REFERENCE	TOPIC	DESCRIPTION
Kroenke Chapter 1	1	Introduction - database processing - advantages and disadvantages - components of a Business Database System
Kroenke Chapter 3	2	File Organization - sequential file processing - indexed sequential files - direct file organization
Kroenke Chapter 4	3	Data Structures - flat files - logical record relationships - tree, simple, and complex relationships - physical representation - secondary keys
Kroenke Chapter 5	4	Database Design - generalization and aggregation - logical database design - physical database design
Kroenke Chapter 9,10	5	CODASYL Data Bases - overview - architecture of a CODASYL database - data definition - data manipulation - schema and sub-schema descriptions

REFERENCE	TOPIC	DESCRIPTION
Kroenke Chapter 11	6	Functions of a Database Management System - responsibility for functions - concurrent processing - database recovery - security and privacy

PART B : the following topics pertain specifically to the SEED Database Management System and will be discussed concurrently with the theoretical concepts in PART A.

Lecture Notes SEED User Guides	1	Data Definition Language - schemas and sub-schemas
Lecture Notes SEED User Guides	2	Accessing and Updating the Database with COBOL - Identification Division format - Environment Division format - Data Division format - Procedure Division format - SEED Data Manipulation Language - retrieving, storing, deleting, and changing records
Lecture Notes SEED User Guides	3	SEED Utilities - the use of HARVEST to provide easy access to the database - BLOOM Report Writer