SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: DATA BASE MANAGEMENT I

Code No.: EDP215-5

Program: BUSINESS DATA PROCESSING

Semester: FOUR

Date: 1985 01

Author: DENNIS OCHOSKI

New: _____ Revision: X

APPROVED: _____ Date: 85.01.25
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,

Obectives cont'd :

f) implement a data base on a computer,

g) develop and implement COBOL programs that use a data base,

h) use a Query language against the data base,

i) use a Report Generator language,

j) establish and implement data access and controls on the data base.

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%

Assignment Deadlines : each assignment must be handed in ON TIME, otherwise they are subject to a 5% deduction per day late. This will be enforced.

All assignments must be handed in, otherwise the student has not fully completed the course and is subject to receiving an "R" grade.

Grading :

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

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.

Material to be covered :

REFERENCE	TOPIC	DESCRIPTION
Kroenke Chapter 1	1	Introduction - data base processing - advantages and disadvantages - components of a Business Database System
Kroenke Chapter 2	2	The Database Development Process - overview - specification stage - evaluation stage - design and implementation
Kroenke Chapter 3	3	File Organization - sequential file processing - indexed sequential file organization - file indexes - direct file organization
Kroenke Chapter 4	4	Data Structures - flat files - logical record relationships - tree (hierarchical) relationships - record addressing - simple and complex networks - secondary keys
Kroenke Chapter 5	5	Data Base Design - logical database design - physical database design - database models
Kroenke Chapter 6	6	Logical Database Design - logical design primitives - example logical design

Kroenke
Chapter 9,10

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CODASYL Data Bases

- overview
- architecture of a CODASYL data base
- data definition
- data manipulation
- schema and sub-schema descriptions

Kroenke
Chapter 11

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Functions of Database Management Systems

- responsibility for functions
- concurrent processing
- database recovery and responsibility
- security and privacy