

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: DATA BASE MANAGEMENT I
CODE NO. EDP215
PROGRAM COMPUTER PROGRAMMER
SEMESTER FOUR
DATE JANUARY, 1993
AUTHOR FRAN DEW

NEW _____ REVISION X

APPROVED _____


CHAIRPERSON

93-01-07

DATE

DATA BASE MANAGEMENT I
COURSE NAME

EDP 215
CODE NO.

Total credit time: 75 hours

Prerequisites:

I PHILOSOPHY/GOALS:

This is an introductory course in database management systems and database design. The necessary terminology and concepts are studied to gain an appreciation of databases and database management systems. Database design skills are developed by defining and creating object diagrams, logical relationships, schemas, and subschemas using relational Bachman diagrams.

Practical skills are developed through the study and use of Sybase, a relational database management system. Case studies will be used to illustrate the analysis, design and implementation of a database system.

II STUDENT PERFORMANCE OBJECTIVES:

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

- 1 Understand Database Processing and its components
- 2 Understand File Organizations
- 3 Develop a Database
- 4 Design a Database and a Database Application
- 5 Set up data structures for Database Processing
- 6 Use SQL, Structured Query Language
- 7 Understand and use the CODASYL DBTG (Conference of Data Systems Languages Database Task Group) Data Model

DATA BASE MANAGEMENT I
COURSE NAME

EDP 215
CODE NO.

III TOPICS TO BE COVERED

IV LEARNING ACTIVITIES

1. (Ch 1) Overview of Database Processing

Upon successful completion of this unit, the student will:

- a. Gain insight into Database Processing

2. (Appendix A) File Organization

Upon successful completion of this unit, the student will:

- a. understand direct access storage formats

3. (Ch 2) Components of Database Processing Systems

Upon successful completion of this unit, the student will:

- a. understand the components of a Database Processing System
- b. know schema, subschema and internal view

4. (Ch 3) Database Development

Upon successful completion of this unit, the student will:

- a. understand the database development process

5. (Ch 4) Entity-Relationship Model

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

- a. define and use entity-relationship models

6. (Ch 5) Semantic Object Model

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

- a. define and use semantic object model

DATA BASE MANAGEMENT I
COURSE NAME

EDP 215
CODE NO.

7. (Ch 6) Relational Model and Normalization

Upon successful completion of this unit, the student will:

- a. understand the relational model
- b. understand the normalization process

8. (Ch 7) Database Design

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

- a. translate entity-relationship models and semantic object models into database designs
- b. create data structure diagrams

9. (Appendix B) Data Structures for Database Processing

Upon successful completion of this unit, the student will:

- a. understand the concept of flat files
- b. understand binary relationships

10. (Ch 8) Database Application Design

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

- a. design application components

11. (Ch 9) Implementing Relational Databases

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

- a. define and manipulate relational data
- b. perform relational algebra

12. (Ch 10) Structured Query Language - SQL

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

- a. query tables and change data using SQL

13. (Ch 13) CODASYL DBTG Model

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

- a. use the CODASYL DBTG data model

14. (Ch 14) Data Administration and Database Administration

Upon successful completion of this unit, the student will:

- a. comprehend broad management issues
- b. appreciate technical aspects of Data and Database Administration

V EVALUATION METHODS

Tests (3 @ 20%)	60%
Assignments (4 @ 10%)	40%

	100%

Grading:	A+	90 and over
	A	80 and over
	B	70 and over
	C	55 and over
	R	under 55

VI REQUIRED STUDENT RESOURCES

Texts: "Database Processing Fundamentals, Design, Implementation"
by David Kroenke, 4th Edition

"Using SQL"
by James R. Groff and Paul N. Weinberg

available in the Campus Shop

VII ADDITIONAL RESOURCE MATERIALS

assorted computer manuals - available in Software Support

DATA BASE MANAGEMENT I
COURSE NAME

EDP 215
CODE NO.

VIII SPECIAL NOTES

Assignments received after the due date are subject to a zero grade.

Students with special needs, such as physical limitations, visual impairments, hearing impairments, or learning disabilities, are encouraged to discuss required accommodations, confidentially, with the instructor.

Your instructor reserves the right to modify the course as she deems necessary to meet the needs of students.