

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: DATA BASE MANAGEMENT I  
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CODE NO.: EDP 215 SEMESTER: FOUR  
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PROGRAM: COMPUTER PROGRAMMER  
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AUTHOR: FRAN DEW  
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DATE: FEBRUARY 1993  
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PREVIOUS OUTLINE DATED: JANUARY 1993  
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New: \_\_\_\_\_ Revision: X  
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APPROVED: DEAN, SCHOOL OF BUSINESS & HOSPITALITY  
 \_\_\_\_\_ DATE  
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DATA BASE MANAGEMENT I

EDP 215

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COURSE NAME

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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 refining 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

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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 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:

- a. define and use entity-relationship models

6. (Ch 5) Semantic Object Model

Upon successful completion of this unit, the student will:

- a. define and use semantic object model

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COURSE NAME

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COURSE CODE

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:

- a. translate entity-relationship models and semantic object models into data base 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:

- a. design application components

11. (Ch 9) Implementing Relational Databases

Upon successful completion of this unit, the student will:

- 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:

- a. query tables and change data using SQL

13. (Ch 13) CODASYL DBTG Model

Upon successful completion of this unit, the student will:

- a. use the CODASYL DBTG data model

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COURSE NAME

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COURSE CODE

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 METHOD

Tests (3 @ 20%)	60%
Assignments (4 @ 10%)	40%
	<hr/> 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

VI ADDITIONAL RESOURCE MATERIALS

assorted computer manuals - available in Software Support

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 accommodation, confidentially, with the instructor.

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