

OBJECTIVES:

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

1. Make the student aware of the total data processing environment and of the concepts involved in the top-down design system or procedure. Current topics such as distributed data processing, word processing, database management, and query languages are discussed.

2. Material is provided which will help the student understand and do the tasks performed by a programmer/analyst, a programmer/analyst, a programmer, a member of a programming team, or a user.

3. Relate correct procedures and techniques to examples understandable to the student. In doing so, the student is able to relate skills and knowledge obtained in other classes.

4. Emphasize the critical importance of interpersonal communication as it applies to systems analysis and design. The student is involved in all aspects of the investigation, design, implementation and evaluation of the system.

5. To design and present a system case study. Action is taken throughout the course.

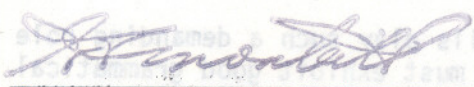
COURSE OUTLINE

Course Title: Systems Analysis & Design
Code No.: EDP108-4
Program: Electronic Data Processing
Semester: III
Date: 1983 03 25
Author: T. June Dicks

STUDENT PERFORMANCE REQUIREMENTS

interspersed throughout the learning modules are checkpoint questions which are assigned and discussed before another module is entered. It is the responsibility of the student to evaluate his or her comprehension of the material and to ensure learning readiness.

New: _____ Revision: _____

APPROVED:  Chairperson
Date: Sept 83

An on-going case study developed around a sales/accounts receivable/inventory subsystem is presented.

The student must recognize this as a major culmination of work to be used in a final presentation to management. Periodically and randomly, sections of the on-going system will be checked by the instructor to ensure an acceptable market quality.

EVALUATION METHOD:

Major project design and presentation:

Design	20%
Presentation	20%

Test and Random Sampling: 40%

Ability and Willingness to Participate: 15%

Attendance: 5%

GRADING:

A	85 - 100%
B	75 - 84%
C	55 - 74%
R	55%

NOTE: A student whose attendance is less than 75% of the designated class time will not be granted permission to present the major project.

INTRODUCTION TO COMPUTER SYSTEMS AND TO SYSTEMS ANALYSIS AND DESIGN

I Introduction

- an overview of the system concept and the steps involved in designing a system
- the role of the analyst
- designing and implementing a system or procedure
- why some systems do not meet their objectives
- a basic understanding of today's technology
- introduction to the case study

(Many of the techniques used to gather data, analyze the data and prepare a meaningful report are discussed. Constraints which might be imposed along with the importance of developing a good oral and written report are stressed. The importance of controls and documentation is emphasized throughout the system.)

DESIGNING SYSTEMS

V General Design Specifications

- introduction, relation and purpose to the total concept
- guidelines for general design specifications
- project organization
- design principles
- preparing the general design phase report
- selecting a computer system
- purchasing vs. leasing a system
- summation
- on-going case study

Some basic guidelines for systems development are provided. The importance of developing a realistic implementation plan (GANTT/PERT) and the need for defining and establishing controls is continued. Some consideration is given to selecting a computer system and determining the software specifications.

VI Detailed Design: Output

- introduction, relation and purpose to the total systems concept
- output considerations
- output media available
- printed reports
- use of report layout forms
- output controls

VIII Detailed Design: Files

- introduction, relation and purpose
- types of media used
- designing files
- types of data
- file security
- file maintenance
- scheduling runs
- on-going case study

A review is made of the available types of media. In-depth coverage is given to the design of the files, types of data stored in files, file security, file management required, and the utility programs usually available for working with files.

IX Detailed Design: Determining Procedures

- introduction, relation and purpose
- segmenting the system into procedures
- factors to consider in segmenting systems
- program specifications
- presentation of the detailed design report to management
- on-going case study

This section discusses how systems are segmented into procedures. The importance of having the support of management and the involvement of the users in developing this phase is stressed as well as ensuring a continued involvement in subsequent phases of the development of the system. An outline for presenting a comprehensive report to management is designed.

IMPLEMENTATION AND EVALUATION

X Implementation: Programming Considerations

- introduction, relation and purpose
- programming

XII Implementation: Documentation and Evaluation

- relation and purpose to the total system
- types of documentation
- evaluating the system
- the formal evaluation
- on-going evaluation
- on-going case study

This section stresses the functions provided by the documentation for the project and the methods used to evaluate the system. The importance of the initial evaluation and the on-going evaluation is emphasized.

STUDENT PRESENTATION OF THE ON-GOING
SALES/ACCOUNTS RECEIVABLE/INVENTORY SUBSYSTEM