SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Outline: SYSTEM PROTOTYPING AND PRESENTATION I

Code No.:   EDP 307-6

Program: COMPUTER PROGRAMMER/ANALYST

Semester: FIVE

Date: SEPTEMBER 1986

Author: WILLEM DEBRUYNE

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                      New: _____   Revision: _____

APPROVED: _____   86-06-01
          Chairperson   Date

SYSTEM PROTOTYING & PRESENTATION   EDP 307-6
_____   _____
            Course Name   Course Number

CURRICULUM OVERVIEW:

Prerequisite: - Introduction to Systems Analysis and Design
                  - Data Base I
                  - Introduction to Fourth Generation Language

****It is important to note that this is a two part course, therefore, the
building, exercising, and implementing of the system in part one will be
dealt with on a theoretical basis and in Part II it will be put into
practice.**

Course Synopsis:

The purpose of the course is to explain what prototyping is and to provide
a methodology for using it. The course should help you whether you are
playing the role of programmer, analyst, manager or vice president.

The student will examine software prototyping, which is an information
system development methodology based on building and using a model of a
system for designing, implementing, testing, and installing the system.

Prototyping is based on building a model of the system to be developed, in
which the initial model should include the major program modules, the data
base, screens, the reports, and all inputs and outputs that the system wil
use.

The course will also focus on the traditional life cycle development cycle
compared to prototyping.

The course will be designed around a real environment in which the student
will interact with end users and Data Processing Managers. The student
will define the prototype, build the prototype and exercise the prototype.

Textbook: The Prototyping Methodology, by Kenneth E. Lantz

MODULE DESCRIPTION:

Module 1: Deals with what prototyping is and why it is valuable. The student will understand prototyping is building a model, how to use the model for designing the system, using the model for testing the system, ar using the model for installing the system. In the module, students will compare the traditional development life cycle to prototyping. Other topics that will be examined are why prototype; advantages and disadvantages of prototyping; what is wrong with current methodologies; what is required in order to prototype.

Module 2: Will focus on establishing a development project, dealing with feasibility studies and service requests. The course will then move towards developing the problem statement, agreeing on the problem statement, considering alternatives and finally establishing priorities. At this point, planning may begin for studying the present system and definin the prototype of the new system.

Module 3: Will establish methods for studying the present system; performing document analysis; drawing schematic diagram; observe current operations; walkthroughs; interviews; data flow diagrams.

Module 4: The students will now be ready to define the prototype, giving logical definitions; reports; screens; information; data dictionary entries; controls. Then, establish physical definitions, database require ments and system flow. Finally, they can plan for building through implementation.

Module 5: Deals with building the prototype, which includes planning to build and monitor progress. Test data will be established, screens will b developed, and reports developed.

Module 6: Exercising the prototype, examining topics such as testing the system, user documentation; strategies for user training; how to go about exercising the prototype; system testing and finally, the prototype become the system.

Module 7: Will examine the implementation of the system and how to enhanc and maintain the system. Covering topics such as volume and parallel testing; system documentation; system acceptance; making changes; responsibility for system changes.

Course Role Within The Program:

It has been stated that two of the most severe problems facing Information Systems today is the increasing backlog of service request and the decline in user confidence. The reasons for these problems stem from the traditional methodologies of developing systems which are not meeting these needs. The students have studied in detail the traditional development life cycle of business information systems, they are, therefore, prepared to study this new methodology of prototyping and its apparent advantages o pleasing users, reducing development costs, decreasing communication problems, and so on. The industry is swinging towards prototyping and using tools such as Fourth Generation Languages which prepares the student to meet these new challenges.

TIME FRAMES

Week 1 - Introduction
- Read Pages 1-23
- Develop Class Notes

Week 2 - Discuss Chapter 1
- Choose System to Work On

Week 3 - Read Pages 27-48
- Develop Class Notes

Week 4 - Discuss Chapter 2
- Review
- **TEST 1 (Chapters 1 & 2)**

WEEK 5 - Take Up Test
- Read Pages 51-79
- Develop Notes

WEEK 6 - Discuss Chapter 3
- Apply Learned Material
- Assignment #1

WEEK 7 - Read Pages 82-103
- Develop Notes

WEEK 8 - Discuss Chapter 4
- Apply Material
- Assignment #2

WEEK 9 - Review
- **TEST #2 (Chapter 3-4)**

WEEK 10 - Take Up Test 2
- Read Pages 106-125
- Assignment #3

WEEK 11 - Discuss Chapter 5
- **ASSIGNMENT #1 DUE**

WEEK 12 - Read Pages 127-161
- **ASSIGNMENT #2 DUE**

WEEK 13 - Discuss Chapter 6
- Review
- **TEST #3**

WEEK 14 - Take Up Test 3
- Read Pages 163-174

WEEK 15 - Discuss Chapter 7
- Read Pages 175-178
- Review

WEEK 16 - **ASSIGNMENT #3 DUE**
- Summary
- **TEST #4**

STUDENT EVALUATION:

a) The student's final grade will be determined from the following
    components:

TESTS (4 @ 15%)	-	60%
ASSIGNMENTS (3 @ 12%)	-	36%
PARTICIPATION/ATTITUDE	-	4%
		100%

b) Grading: "A" = 80-100%
              "B" = 70- 79%
              "C" = 55- 69%
              "R" =   0- 54%

NOTE: Students are expected to attend classes regularly, participate in
class discussion, conduct themselves and treat their peers and instructors
in a professional business-like manner throughout any school dealings.

Late assignments are subject to a zero grade unless the student has prior
permission from the instructor to hand the assignment in at a later date.