

A: Division Instructional Date June 9, 1998

B: Department Science and Technology New Course X

Revision of Course _____

Dated _____

C: CMPT-250 D: Computer Systems Design and Architecture E: 3

Course Number

Descriptive Title

Credits

F: *Calendar Description*

This course introduces computer systems design and architecture. It

Summary of Revisions

N: Textbook and Materials to be Purchased by Students



on-Wesley

- Heuring V.P. and Jordan H.F., Computer Systems Design and Architecture. Addison-Wesley
- Portion for logic design assignments
- Two 3 1/2" high density diskettes

Course Objectives

- demonstrate an understanding of the relationship between the machine language and the computer
- demonstrate an understanding of the complexity of machine and assembly language
- designing and implementing programs in machine and assembly language
- functionally describing architectural support for operating systems and programming
- describing the function of the hardware using a formal description language such as PAL (Programmable Array Logic) or Register Transfer Notation
- virtually simulating the hardware functions using a high level language such as VHDL, Verilog or C++
- using a logic circuit simulator such as LogicWorks to model various architectural components using truth tables, timing diagrams and mathematical functional notation
- understanding number systems and operations
- mathematically defining fixed point and floating point numbers

P: Course Content

1 The General Purpose Computer

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|--|--|
| designer's | Views: programmer's, architect's, hardware c |
| s. Possible (S.A.P.) computer | Review of Simple A |
| Physical Assumptions and the | Relationship |
| Microprogramming a control unit for S.A.P. | |

Method of Instruction

There are three components to the course: lectures, labs, and assignments.

The book is to be used as a close adjunct to the lecture notes and exam
and practical considerations. The book is to be used as a close adjunct to the lecture notes and exam