

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE MARIE, ONTARIO

COURSE OUTLINE

Course Title : Microcomputer Processors and Peripherals

Course No : CST204

Program : COMPUTER SYSTEMS SUPPORT

Semester : FOURTH (4)

Date : JANUARY 1998

Author : MARCEL VANLANDEGHEM

**Previous
Outline Dated :**

APPROVED :

Joseph C. Fructer

DEAN

Jan 7/98
DATE

LENGTH OF COURSE: 4 HOURS PER WEEK

Microprocessors	20%
Hardware Peripherals	65%
Research & Reporting	15%

COURSE NAME**COURSE CODE**

PREREQUISITE (S) : Completion of the first year common and CST201 in the Computer Studies Program

I. COURSE DESCRIPTION :

This course introduces the student to PC system hardware, peripherals, concepts, maintenance and basic troubleshooting. The areas of study include microprocessors, peripherals, busses and common computer subsystems. Theory is reinforced and practical skills are developed with hands on lab exercises which include hardware and software installation, configuration and maintenance of peripheral devices.

II. TOPICS TO BE COVERED

1. MICROPROCESSORS
2. PRICING AND EVALUATING NEW PC's AND SERVERS IN TODAYS MARKET
3. PRINTERS AND PLOTTERS - FEATURES, PRICE COMPARISONS
- INSTALLATION, OPERATION & MAINTENANCE
4. SCANNERS - FEATURES,COMPARISONS, INSTALLATION, OPERATION
AND MAINTENANCE
5. MONITORS - FEATURES,COMPARISONS, INSTALLATION, OPERATION
AND MAINTENANCE
6. INVESTIGATE NEW PERIPHERALS IN TODAYS MARKET

Microcomputer Processors and Peripherals
COURSE NAME

CST204
COURSE CODE

III . LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE :

A . LEARNING OUTCOMES :

- 1 . Demonstrate an understanding of a range of processors such as INTEL , MOTOROLA and RISC based systems.
- 2 . Demonstrate procedures to evaluate, price and compare PC's and servers in the current market.
- 3 . Demonstrate an understanding of how printers and plotters work, and be able to install maintain, use and troubleshoot them.
- 4 . Demonstrate an understanding of how scanners work, and be able to install, maintain use and troubleshoot them.
- 5 . Demonstrate an understanding of how the various types of monitors work, and be able to install, maintain and troubleshoot them.
- 6 . Demonstrate and use newer technology products relating to the PC and Internet environment.

B . LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE :

Upon successful completion of this course, the student will demonstrate the ability to :

- 1 . Demonstrate an understanding of a range of processors such as INTEL, MOTOROLA and RISC based systems.

ELEMENTS OF THE PERFORMANCE

- Learn the basic principals of how a microprocessor works.
- Investigate the evolution of processors 8 bit to 64bit Data-Bus capacity.
- Learn how a Math Coprocessor works and its functionality
- Develop and example of how a typical processor works.
- Investigate and report on the different types of microprocessors such as INTEL, RISC, MOTOROLA and their use in various applications.
- Define parallel processing and investigate future developments.

2. Demonstrate procedures to evaluate, price and compare PC's and servers in the current market environment.

ELEMENTS OF THE PERFORMANCE :

- Investigate current systems and options available
 - Develop procedures to review pricing, performance and maintenance
 - Investigate and report on future developments
3. Demonstrate an understanding of how printers and plotters work, install maintain and troubleshoot.

ELEMENTS OF PERFORMANCE

- Learn the various types of printers and plotters available in the current market
 - Investigate pricing, features and functionality
 - Understand the basic operations of deskjet, inkjet, lasers and plotters
 - Learn to install printer hardware and software drivers
 - Learn basic maintenance and troubleshooting
 - Understand and demonstrate how a parallel interface works
4. Demonstrate and understand how scanners work, install, maintain and troubleshoot.

ELEMENTS OF PERFORMANCE

- Understand the operation of a typical flatbed scanner
- Understand the operation of a SCSI device
- Learn to install a scanner and software device drivers
- Test the operation of a scanner and perform basic troubleshooting and maintenance procedures.

Microcomputer Processors and Peripherals
COURSE NAME

CST204
COURSE CODE

- Evaluate the different types of scanners available in relation to price and performance , investigate future developments.
- Compare SCSI to parallel operation
- 5 . Demonstrate an understanding of how various types of monitors work, install maintain and troubleshoot.

ELEMENTS OF PERFORMANCE

- Learn different types of monitors that are available, review pricing and functionality.
 - Understand the basic operation of a monitor
 - Understand LCD's , CRT and new Flat Panel Architecture
 - Learn to install monitors and software drivers
 - Understand video controllers and memory configurations such as dual-port memory.
- 6 . Demonstrate and use new technology products relating to PC and Internet environment

ELEMENTS OF PERFORMANCE

- Understand and demonstrate Digital Camera technology, investigate new developments
- Understand and demonstrate the use of Zip Drives, investigate new developments
- Understand and demonstrate the use of video conference equipment for the Internet -- Quick Cam
- Demonstrate the use of video capture technology
- Investigate the use of Read/Write CDROM technology
- Understand and demonstrate tape drive technology investigate new developments
- Investigate SMART UPS and features. Install software and drivers.
- Research and report on Point of Sale Technology, investigate new technologies hand held input devices and receipt printers.

IV . EVALUATION METHODS :

The items below represent a tentative marking scheme subject to change by the instructor.

TESTS	60%
ASSIGNMENTS	25%
QUIZES	15%

The grading scheme used will be as follows :

A+	90 - 100%	Outstanding achievement
A	80 - 89%	Excellent achievement
B	70 - 79%	Average achievement
C	55 - 69%	Satisfactory achievement
R	Repeat	
X	Incomplete	

V . SPECIAL NOTES :

- 1 . Assignments must be submitted by the due date according to the specifications of the instructor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the instructor, in cases where there were extenuating circumstances.
- 2 . The instructor reserves the right to modify the assessment process to meet any changing needs of the class. Consultation with the class will be done prior to any changes.
- 3 . The method of upgrading an incomplete grade is at the discretion of the instructor, and may consist of such things as make-up work, rewriting tests, and comprehensive examinations.
- 4 . Students with special needs (e.g. Physical limitations, visual impairments, hearing impairments, learning disabilities are encouraged to discuss required accommodations confidentially with the instructor.
- 5 . Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of the students.

VI . REQUIRED STUDENT RESOURCES :

TEXT

VII . PRIOR LEARNING ASSESSMENT :

Students who wish to apply for advanced credit in the course should consult the instructor.