SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	PC Maintenance		
CODE NO. :	ELN-230	**SEMESTER:**	Three
PROGRAM:	Electrical / Electronics / Instrumentation Technician		
AUTHOR:	R. McTaggart		
DATE:	08-2003	**PREVIOUS OUTLINE DATED:**	05-2002
APPROVED:			

_____   _____
                            DEAN   **DATE**

TOTAL CREDITS:	3
PREREQUISITE(S):	CET-110
HOURS/WEEK:	3

PC Maintenance   ELN-230

I.   COURSE DESCRIPTION:

This lab oriented course will develop students' skills in assembling, configuring and troubleshooting a typical Personal Computer. Students will install and set-up various pieces of hardware typical to a PC, in both command line and Windows environments.

II.   LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1.   Understand and accurately discuss the hardware and software components of a personal computer.

        Potential Elements of the Performance:

        •   Describe and understand the block diagram of a typical PC.
        •   Describe, understand and modify the system BIOS.
        •   Describe details of hardware components.

2.   Install and make operational a typical Desktop PC.

        Potential Elements of the Performance:

        •   Demonstrate the ability to install and make operational, basic components of a PC.
        •   Demonstrate the ability to install operating systems (command line and Windows).
        •   Demonstrate the ability to install and make operational, additional components of a PC such as CD ROM's, Sound Cards, Network Cards etc.

3.   Troubleshoot typical PC problems using available diagnostic tools.

        Potential Elements of the Performance:

        •   Demonstrate logical troubleshooting process to diagnose and correct system faults.
        •   Correctly implement available diagnostic tools.

4.   Accurately select and install PC upgrades

Potential Elements of the Performance:

- Discuss and recommend system upgrades.
- Demonstrate the installation of hardware and software upgrades.

III.   TOPICS:

1. Personal Computer Overview (Block Diagram)
2. Hardware / Software Overview
3. Hardware Details
4. Operating Systems Installation and Configuration
5. Maintenance and Upgrading

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:

- Textbook – Upgrading and Repairing PCs Academic Edition, 14th Edition by Scott Mueller
- 5 - 3.5" 1.44 MB Floppy Disks
- Basic Hand Tools including Needle Nose Pliers and #2 Phillips Screwdriver**.**

V.   EVALUATION PROCESS/GRADING SYSTEM:

The final grade will be derived as follows*;

- 50% - Theory Tests & Quizzes
- 50% - Practical Lab Assignments and/or Testing

* Refer to **all** Special Notes below.

The following semester grades will be assigned to students in postsecondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
F (Fail)	59% or below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field/clinical placement or non-graded subject areas.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject areas.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

VI.   SPECIAL NOTES:

1.   Special Needs:
   If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493 so that support services can be arranged for you.

2.   Retention of course outlines:
   It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

3.   Plagiarism:
     Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

4.   Course outline amendments:
     The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

5.   Substitute course information is available in the Registrar's office.

6.   Attendance to scheduled lab activities is compulsory, unless permission has been granted by the instructor (see note #8). Lab attendance and final grade are directly related.

7.   ***Laboratory Reports*** shall be subject to the handout given at the start of the semester. All Lab Reports are due at the start of the following week's Lab Class unless otherwise stipulated by the instructor. Late submissions will result in deductions up to 100% of allocated marks at the discretion of the instructor (assume the deduction will be 100%).

8.   The student must maintain a minimum 60% average in **both** the **theory** portion **and lab** portion of the class in order to receive a passing grade. If a student misses a test/lab he/she must have a valid reason (i.e. medical or family emergency – documentation may be required). In addition, the instructor **must** be notified **prior** to the theory test or lab sitting. If this procedure is not followed the student will receive a mark of zero on the test/lab with no make-up option.

VII.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII.   DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.