SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE OUTLINE: COMPUTER AIDED DRAFTING

CODE NO.:   ELR 201-3

PROGRAM: ELECTRICAL ENGINEERING TECHNOLOGY

SEMESTER: THREE

DATE: SEPTEMBER 1990

PREVIOUS
OUTLINE DATED: AUGUST 1987

AUTHOR: ENO LUDAVICIUS

NEW:_____ REV.:_____X_____

APPROVED: _____   _____
             COORDINATOR   DATE
                                         Aug 27/90

             _____   _____
             DEAN   DATE
                                         90/08/27

COMPUTER AIDED DRAFTING   ELR 201 - 3
TOTAL CREDIT HOURS: 45

PREREQUISITE(S):   ELR112-3

PHILOSOPHY/GOALS:

THE STUDENT WILL DEVELOP SKILLS IN THE USE OF AUTOCAD,
A COMPUTER AIDED DRAFTING SYSTEM. THESE SKILLS WILL BE
USED IN DRAWING ELECTRICAL AND ELECTRONIC SCHEMATICS.
THIS COURSE WILL PREPARE THE STUDENT FOR THE AUTOMATED
DRAFTING WORK ENVIRONMENT.

STUDENT PERFORMANCE OBJECTIVES:

UPON SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENT
WILL BE ABLE TO:

1) DEFINE AND DISCUSS COMPUTER AIDED DRAFTING AND DESIGN
   TERMINOLOGY AND PRINCIPLES.

2) DISTINGUISH THE HARDWARE AND SOFTWARE COMPONENTS OF A
   COMPUTER AIDED DRAFTING AND DESIGN ENVIRONMENT.

3) UTILIZE AUTOCAD MENU STRUCTURES AND DIFFERENT COMMAND
   ENTRY FORMS.

4) PRODUCE DRAWINGS THAT CAN BE USED EFFECTIVELY IN
   INDUSTRY TO MANUFACTURE, CONSTRUCT AND ASSEMBLE
   PRODUCTS.

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TOPICS TO BE COVERED:

1) INTRODUCTION TO CAD/CADD TERMINOLOGY AND PRINCIPLES.

2) OVERVIEW OF CAD/CADD WORKSTATION HARDWARE & SOFTWARE.

3) INTRODUCTION TO AUTOCAD MENU STRUCTURES UTILIZING

   DIFFERENT COMMAND ENTRY FORMS.

4) INTRODUCTION TO AUTOLISP FUNCTIONS.

LEARNING ACTIVITIES	REQUIRED RESOURCES
1.0 INTRO TO CAD/CADD TERMINOLOGY & PRINCIPLES	
1.1) DEFINE THE TERMS CAD & CADD.	VIDEO: COMING TO A FACTORY NEAR YOU
1.2) DISCUSS CAD/CADD AT SAULT COLLEGE.	
1.3) DISCUSS CAD/CADD APPLICATION.	
1.4) DISTINGUISH THE ADVANT-AGES AND DISADVANTAGES OF USING AUTOCAD.	
2.0) OVERVIEW OF CAD/CADD WORKSTATION HARDWARE & SOFTWARE	
2.1) DISCUSS THE SELECTION OF A CAD/CADD WORKSTATION.	HANDOUTS: CAD PRINCIPLES
2.2) UTILIZE THE CAD/CADD/CAE SURVEY.	
2.3) DISCUSS THE CAD/CADD HARDWARE & SOFTWARE CHECKLIST.	
2.4) DEFINE THE HARDWARE & SOFTWARE COMPONENTS OF CAD/CADD WORKSTATION.	

3.0) <u>INTRODUCTION TO AUTOCAD</u> |
     <u>MAIN MENU & COMMANDS</u> |
                                     |
UPON SUCCESSFUL COMPLETION OF|
THIS UNIT, THE STUDENT WILL |
ABLE TO: |
                                     |
3.1) OUTLINE THE VARIOUS | TEXT:
     AUTOCAD FEATURES | AUTOCAD AND ITS
3.2) DISCUSS THE AUTOCAD | APPLICATIONS
     COMMAND SUMMARY. |
3.3) DESCRIBE THE AUTOCAD |
     MENU STRUCTURE. |
3.4) UTILIZE AUTOCAD TO DRAW.|
                                     |
                                     |
4.0) <u>INTRODUCTION TO AUTOLISP</u>|
                                     |
4.1) DISCUSS THE NATURE OF |
     LISP AND IT'S HISTORY. |
4.2) OUTLINE AUTOLISP INSIDE |
     AUTOCAD. |
4.3) DESCRIBE AUTOLISP |
     BUILDING BLOCKS. |
4.4) DEFINING AUTOLISP |
     FUNCTIONS. |

REQUIRED STUDENT RESOURCES
(INCLUDING TEXTBOOKS & WORKBOOKS)

1) T.SHUMAKER & D.MADSEN, <u>AUTOCAD AND ITS APPLICATIONS</u>
   GOODHEART-WILCOX, 1989

ADDITIONAL RESOURCE MATERIALS

1) J.M. KIRKPATRICK, <u>THE AUTOCAD TEXTBOOK</u>
   TORONTO. MERRILL. 1989

2) J. STEINHART, COMING TO A FACTORY NEAR YOU
   TVONTARIO 1988

3) W.& D. KRAMER, AUTOLISP CONCEPTS
   AUSTIN, TEXAS, 78720, U.S.A. ARIEL COMMUNICATIONS 1989

4) D.RAKER & H.RICE, <u>INSIDE AUTOCAD</u> FIFTH EDITION
   THOUSAND OAKS, CA91360, U.S.A. NEW RIDERS 1989

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METHOD(S) OF EVALUATION

THE FINAL GRADE OF THIS COURSE WILL BE DIVIDED BETWEEN

THE AUTOCAD DRAWINGS (50%), & THE DRAWING THEORY (50%).

EACH UNIT OF THE COURSE WILL BE INDEPENDENTLY ASSESSED,

AND EACH MUST BE SUCCESSFULLY COMPLETED TO COMPLETE THE

COURSE.

THE FINAL GRADE FOR AUTOCAD WILL BE DERIVED FROM THE

RESULTS OF THREE TEACHER ASSIGNED TESTS, AND ASSIGNMENTS

PLUS ONE PROJECT:

TWO TESTS	50%	(25% PER TEST)
ASSIGNMENTS & PROJECT	50%	

                    TOTAL   100%

THE GRADING SYSTEM USED WILL BE AS FOLLOWS:

A+	>= 90%	CONSISTENTLY OUTSTANDING ACHIEVEMENT
A	80-89%	EXCELLENT ACHIEVEMENT
B	70-79%	ABOVE AVERAGE ACHIEVEMENT
C	55-69%	SATISFACTORY ACHIEVEMENT
R		REPEAT
X		INCOMPLETE