## HIGHER TECHNICAL INSTITUTE

### **CIVIL ENGINEERING DEPARTMENT**

### **DIPLOMA PROJECT**

# PRODUCTION OF DRAWINGS WITH THE AID OF A C.A.D. PACKAGE

### **CHARALAMBOUS GEORGE**

C/823

**JUNE 1998** 



#### **SUMMARY**

The purpose of this project is to discuss the applicability of computers in the production of drawings generally, and the applicability of AutoCAD R14 for Windows specifically.

This project was designed to offer a general overview of the AutoCAD R14 for windows, but nevertheless give a detailed guidance for the way some commands can be executed. To achieve this the author in many cases included original figures from the program.

AutoCAD has offered many solutions in technical drawing. Some of its advantages are the following.

- 1. Increased productivity
- 2. Decrease costs
- 3. Creates accurate drawings
- 4. Has no limits in excellence of drawing results

## **CONTENTS**

ACKNOWLEDGEMENTS	
SUMMARY	
INTRODUCTION	1
CHAPTER ONE (GENERAL)	
C.A.D. History	4
Hardware / Software Requirements	4
Screen main components	5
Other CAD packages	6
CHAPTER TWO (NEW DRAWING)	
Creating a new drawing	8
Limits	9
Units	9
Grid	10
Ortho	10
Snap	11
CHAPTER THREE (BASIC DRAWING COMMANDS)	
Line	13
Arc	13
Circle	13
Donut	14
Elipse	14
Polygon	14
Rectangle	14
Pline	15
CHAPTER FOUR (DRAWING AIDS)	
Zoom	17
Zoom Scale	18

	10
Zoom Extents	18
zoom All	19
Zoom Window	19
Zoom Centre	19
Zoom Left Corner	19
Zoom Previous	19
Zoom Dynamic	20
PAN	20
Layer Control	21
Object Snap	21
CHAPTER FIVE (FURTHER COMMAN	DS)
	24
Text	25
Hatch	25
Blocks	27
Erase	27
Redraw	
CHAPTER SIX (SPECIAL COMMANDS	<u>3)</u>
Chamfer	29
Fillet	29
Offset	29
Trim	29
Extend	30
Array	30
Copy	30
Move	31
Mirror	31
Solid	32
Scale	32
Rotate	32
Stretch	32
Outline	

CHAPTER SEVEN (DIMENSIONING)	
introduction	34
Din Command	35
Dimensioning types	35
<sub>Dimensioning</sub> styles	35
Creating a new style	36
CHAPTER EIGHT (UTILITY COMMANDS)	
New	38
Open	38
Save As / Save	38
Rename File	39
Delete	39
Copy	39
Exit AutoCAD	39
CHAPTER NINE (PLOTTING AND PRINTING	<u>3)</u>
General	41
Paper size	41
Scale rotation and origin	42
Plot preview	42
Pen parameters	43
Device and default information	43
CHAPTER TEN (3D DRAWINGS)	
General	45
CONCLUCIONS	47
<u>CONCLUSIONS</u>	47
<u>REFERENCES</u>	

**DRAWINGS**