

Higher Technical Institute
MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

"PREPARATION OF A CAD COURSE IN
DRAWING"

BY
MICHALIS ZANTIS

M/855

JUNE 1999

HIGHER TECHNICAL INSTITUTE

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**“PREPARATION OF A CAD COURSE
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by

Michalis Zantis

Project Report

Submitted to

The Department of Mechanical Engineering

of the HIGHER TECHNICAL INSTITUTE

NICOSIA – CYPRUS

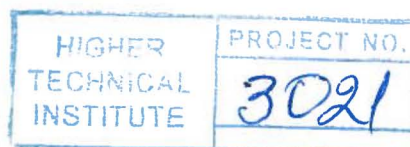
in partial fulfillment of the requirements for the diploma of

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in

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Michalis Zantis:

To those who
believed in me.

ACKNOWLEDGMENTS

The completion of such project requires lot of time, effort and knowledge about AutoCAD. Thus I'd like to thank those people who help me or provide me with all the necessary information so I made this Diploma Project reality.

Heartfelt thanks go to my supervisor, Mr. Nikos Papanastasiou for all his help and advises who made me overcome any difficulties concerning the project.

Also a big thank to Mr. Pambos Constantinou, my teacher of Technical Drawing in the 2nd year at the Limassol Technical School, who introduce me to AutoCAD. He gave me the sufficient knowledge and capabilities to continue by my self to practice, learn and improve my skills as the releases of AutoCAD were updated.

Finally but no less important a great thanks to my parents for all their efforts to ensure that I will have all I need during my study years away from home.

INTRODUCTION

Computer – aided design (CAD) can be define as any activity that involves the effective use of the computer to create, modify, or document an engineering design. CAD is most commonly associated with the use of an interactive computer graphics system, referred to as a CAD system.

There are several important reasons for using a computer – aided design system to support the engineering design function:

- 1. To increase the productivity of the designer.** This is accomplished by helping the designer to conceptualize the product and its components. In turn this helps to reduce the time required to synthesize, analyze, and document the design.
- 2. To improve the quality of the design.** The use of a CAD system with appropriate hardware and software capabilities permits the designer to do a more complicate engineering analysis and to consider a larger number and variety of design alternatives. The quality of the resulting design is thereby improved.
- 3. To improve design documentation.** The graphical output of a CAD system results in better documentation of the design that what is practical with manual drafting. The engineering drawings are superior, and there is more standardization among the drawings, fewer drafting errors, and greater legibility.
- 4. To create a manufacturing data base.** In the process of creating the documentation for the product design (geometric specification of the product, dimensions of the components, materials specifications, bill of materials, etc.), much of the required data base to manufacture the product is also created.

The above reasons can give a clear indication for the importance of learn to use AutoCAD, in the best way possible according to the needs for each designer.

Moreover a great responsibility has also the person who undertook the obligation to learn, either a person or a group of students, how to use effectively the AutoCAD.

The Instructor's Guide, which is included in this project, will give the necessary information required by anyone on how to teach AutoCAD.