HEIGHER TECHNICAL INSTITUTE

MERCHANECAL ENCLINEERING DEPARTMEENT

DIFLOMA PROJECT

DESIGN OF A MODULAR UNDER FLOOR AR COMDITIONING SYSTEM FOR A BLOCK OF OFFICES

M/854

STYLIANOU LOYIZA - CONSTANTINA

JUNE 1999

# DESIGN OF MODULAR UNDER-FLOOR AIR CONDITIONING SYSTEM FOR A BLOCK OF OFFICES

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# STYLIANOU LOUIZA-CONSTANTINA

## 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

#### **TECHNICIAN ENGINEER**

IN

### MECHANICAL ENGINEERING

### JULY 1999



# THIS PROJECT IS DEDICATED

# TO MY PARENTS FOR

# HAVING OFFERED SO

# MUCH TO ME

### ACKNOWLEDGEMENTS

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## SUMMARY

The purpose of this project was the design of a Modular Under-Floor Air Conditioning System for a block of offices. Air Conditioning and ventilation drawings of the building are provided at the end of the report, showing the system selected.

Design conditions were selected from the Meteorological Services Department of Cyprus, Handbook. Energy conservation and flexibility in the office were considered as major factors in the design of the system.

The project has been separated into three major parts.

The first section deals with the introduction, methodology and research/collection of information, production and the analysis of local weather data, together with calculations for cooling and heating loads.