

UNIVERSITI TEKNOLOGI MARA

2002

FINAL REPORT OF DIPLOMA PROJECT

FACULTY OF MECHANICAL  
ENGINEERING



COLD ROOM SYSTEM FOR  
DEWAN MAKAN SISWA UiTM

FAITULMUEN BURHANUDIN

MOHD. RASHID HALIM



**Universiti  
Teknologi  
MARA**

**KAMPUS ARAU**

---

**BAHAGIAN HAL EHWAL AKADEMIK**

---

Rujukan : 100-UiTMCPs (HEA – 30/7B)  
Tarikh : 24 Jun 2002

**KEPADA SESIAPA YANG BERKENAAN**

Tuan/Puan,

**PENGESAHAN SEBAGAI PELAJAR UITM**

**TAJUK PROJEK : CASESTUDY-COLD ROOM INSTALLATION 'DEWAN MAKAN'**  
**PROGRAM : DIPLOMA KEJURUTERAAN MEKANIKAL**  
**KOD PROGRAM : EM110**

Dengan ini disahkan bahawa nama-nama seperti senarai di bawah adalah pelajar Universiti Teknologi MARA Cawangan Perlis, Kampus Arau.

<u>Bil.</u>	<u>Nama Pelajar</u>	<u>No. Kad Pelajar</u>
1.	Mohd Rashid Halim	98134543
2.	Faitulmuen b. Burhanudi n	99041066

Untuk makluman tuan/puan pelajar ini sedang mengikuti program yang tersebut di atas sebagai keperluan program sebelum dianugerahkan Diploma.

Untuk membolehkan pelajar menyiapkan kertas projek tersebut, pelajar memerlukan maklumat atau bahan dari pihak tuan/puan.

Sehubungan dengan itu, sukacita kami sekiranya pihak tuan/puan dapat membekalkan apa-apa maklumat atau bahan yang diperlukan oleh pelajar seperti brosur, risalah dan sebagainya. Sekiranya bahan yang diperlukan oleh pelajar itu merupakan dokumen penting pejabat, ianya bolehlah dibuat salinan fotostat dan kosnya ditanggung oleh pelajar. Maklumat atau bahan yang diperolehi akan digunakan semata-mata untuk tujuan akademik.

Kerjasama pihak tuan/puan dalam hal ini sangat-sangat kami hargai dan didahului dengan ucapan terima kasih. Sekian.

Yang benar,

**PROF. MADYA DR. HJ KHUZZIR HJ ISMAIL**  
Timbalan Pengarah Kampus (Akademik)  
b/p Pengarah Kampus

s.k : Pensyarah - Ir Hj Zulkifli b Rashid B.C.K

**02600 Arau  
Perlis  
MALAYSIA  
Tel : 04-9861001  
Fax : 04-9862233**

## **TABLES OF CONTENT**

	<b><u>PAGE</u></b>
<b>ACKNOWLEDGEMENT</b>	<b>1</b>
<b>PREFACE</b>	
INTRODUCTION	<b>2</b>
<b>PART A</b>	
OBJECTIVE OF THE PROJECT	<b>3</b>
COLD ROOM SYSTEM FOR DEWAN MAKAN SISWA UiTM	<b>4</b>
<b>PART B</b>	
MANUAL DESIGN 1	<b>5-28</b>
MANUAL DESIGN 2	<b>29-38</b>
MANUAL DESIGN 3	<b>39-41</b>
MANUAL DESIGN 4	<b>42-49</b>
<b>PART C</b>	
CALCULATION	<b>50-54</b>
DRAWING	<b>55-60</b>
<b>PART D</b>	
SELECTION OF COLD ROOM	<b>61-62</b>
REQUIREMENT OF EQUIPMENT	<b>63-73</b>
<b>CONCLUSION</b>	<b>74</b>
<b>APPENDIX</b>	<b>75-124</b>
<b>REFERENCE</b>	<b>125</b>

**ACKNOWLEDGEMENT**

Alhamdulillah,

With the help of Allah S.W.T , we finally haved succeed our target in completing this final project paper report. This project paper done with the help from many individuals that have impressed their knowledge and skills to us. We like to express our sincere appreciation to those who haved contributed valueable ideas and constructive criticism during our research study.

To our family, thanks for giving us moral support to complete this report. To our coordinator Ir. Hj. Zulkifly Bin Rashid, thank for your guidance and your commitment to us from the start till the end of our final project. To all our friends thanks for all of things that help us very much during our research study.

And for those who was involved directly or indirectly in helping us to complete this research study we actually appreciate your's help. Without guidance andadvse all of those above we can't finished our project paper like this.

Wassalam.....

**INTRODUCTION**

Our main objective is to study case for cold room at Dewan Makan Siswa UiTM. The main reason that we choose cold room at Dewan Makan Siswa UiTM is because there are many complained about the poor quality meats and vegetables that were served at Dewan Makan Siswa UiTM. From our observations, there are many factors that can caused this problem. The system that use for the cold room is an old version that haved to be upgraded to maintaince the cooling efficiency. The size also not setting well to it compressor and evaporator power that need for the cold room. The other reason is the temperature that need to be adjusted as the types of goods installed in the cold room. There is also no specified cold room for the vegetables and fruits like the chiller cold room.

In this research project report we have tried to solved the problem that happen. We also tried to calculate the suitable size and the temperature for the cold room. This report usually look out the needs for higher food quality at Dewan Makan Siswa UiTM.