

KRISHNASAMY

College of
ENGINEERING & TECHNOLOGY

Approved by AICTE & Affiliated to Anna University
Anand Nagar, Nellikuppam Main Road, S. Kumarapuram, Cuddalore - 607 109, Tamil Nadu.
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DEPARTMENT OF MECHANICAL ENGINEERING

Date: 11.01.2022,

CIRCULAR

Ref.: KCET/MECH/VAC/CIRCULAR/2021-22/02.

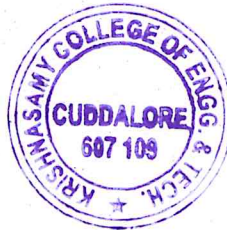
The following Value-Added Course will be conducted during the academic year 2021-2022. The course will be conducted from 18.01.2022 to 22.01.2022. Students are instructed to register their names in the course allotted to them.

Note: Students are instructed to attend the program without fail.

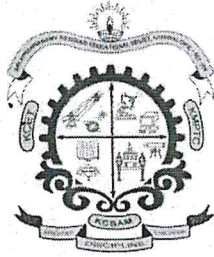
S. No.	Course Code	Name of the Course	Year / Sem	No. of Period	Course Coordinator
1	ME - VAC2101	Fundamentals of Solar Energy Sources	IV	30	Er.G.Senthilvel, Asst.Prof
2	ME - VAC2102	Fundamentals of Refrigeration	II / III	30	Er.P.Prakash, Asst.Prof

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HOD/MECH

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11/11/2022
Vice-Principal



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11/1/22
Principal



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SYLLABUS

COURSE CODE **ME-VAC2102**
COURSE NAME **FUNDAMENTALS OF REFRIGERATION**

COURSE OBJECTIVES

1. To acquire the skills required to model, analyze and design different refrigeration and components.
2. To familiarize the students with refrigeration systems.
3. To understand basic refrigeration processes from a thermodynamic standpoint
4. To understand the basics of psychrometry and practice of applied psychrometrics

Module I : Introduction 6

Introduction to Refrigeration, Types of refrigeration systems, Vapour Compression, Vapour Absorption, Air Cycle, and Miscellaneous Systems.

Module II : VAC & VCS 8

Performance analysis of Vapour Compression Refrigeration System, Design of Vapour Compression Refrigeration System, Fundamentals of Heat Transfer, Vapour Absorption Refrigeration System, Application.

Module III : Components 8

Compressors; Condensers and evaporators; Expansion devices; Vapour-compression-system analysis

Module IV : Refrigerants and Accessories 8

Refrigerants; Multipressure systems; Absorption refrigeration; Heat pumps; Cooling towers and evaporative condensers.

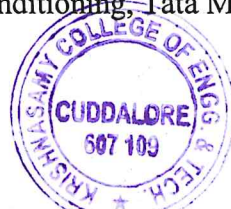
Total No. of Periods 30

COURSE OUTCOMES

Learning the **fundamental** principles and different methods of refrigeration and air conditioning. Study of various refrigeration cycles and evaluate performance, Comparative study of different refrigerants with respect to properties, applications and environmental issues.

REFERENCES

1. W F Stoecker and J W Jones, Refrigeration and Air Conditioning, 2nd ed, McGraw- Hill International Editions, 1982.
2. J L Threkind, Thermal Environmental Engineering, 2nd ed, Prentice Hall Inc, 1970.
3. C P Arora, Refrigeration and Air Conditioning, Tata McGraw-Hill, 1996.



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