KRISHNASAMY
College of
ENGINEERING & TECHNOLOGY
Approved by AICTE & Affiliated to Anna University
Anand Nagar, Nellikuppam Main Road, S. Kumarapuram, Cuddalore - 607 109, Tamil Nadu.
☎ (04142) 285 601 - 604 www.kcet.in info@kcet.in

DEPARTMENT OF EEE

05.07.2023

CIRCULAR

Ref.: KCET/EEE/VAC/CIRCULAR/2022-23/01.

The following Value Added Course will be conducted during the academic year 2022-2023. The course will be conducted from 17.07.2023 to 21.07.2023. 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	No. of Period	Course Coordinator
1	EE-VAC2203	MO DERN CONVERTERS	III	30	Mr.R.Srinivasan ASP/EEE
2	EE-VAC2204	POWER SYSTEM STABILITY	III	30	Dr.D,Periyaazhagar AP/EEE

HOD/EEE
5/7/23

Copy to:

Class Room

Class In charge

Department File

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DEPARTMENT OF EEE

SYLLABUS

Subject Code: EE-VAC2203

Subject Name: MO DERN CONVERTERS

Duration: 30 Hours

OBJECTIVES:

- Switched mode power supplies
- Matrix Converter
- Soft switched converters

MODULE I **POWER SUPPLIES** **8**

Power supplies and Classification with and without isolation, single and multiple outputs; Closed loop control and regulation; Design examples on converter and closed loop performance.

MODULE II **CONVERTERS** **8**

Switched mode AC-DC converters. synchronous rectification - single and three phase topologies - switching techniques - high input power factor . reduced input current harmonic distortion.

MODULE III **INVERTER** **7**

Multi-level Inversion - concept, classification of multilevel inverters, Principle of operation, main features and analysis of Diode clamped, Flying capacitor and cascaded multilevel inverters.

MODULE IV **SWITCHING** **7**

Soft switching techniques. ZVS, ZCS, quasi resonance operation; Performance comparison hard switched and soft switched converters.AC-DC converter, DC-DC converter, DC-AC converter.; Resonant DC power supplies.

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TOTAL:30 PERIODS

COURSE OUTCOMES:

- Ability to suggest converters.
- Ability to acquire knowledge on modern power electronic converters and its applications in electric power utility.
- Ability to acquire knowledge on filters

TEXT BOOKS:

1.Power Electronics Handbook, M.H.Rashid, Academic press, New york, 2000.
2. Advanced DC/DC Converters, Fang Lin Luo and Fang Lin Luo, CRC Press, NewYork, 2004.

REFERENCES:

1. Power Electronic Circuits, Issa Batarseh, John Wiley and Sons, Inc.2004
2. Power Electronics for Modern Wind Turbines, Frede Blaabjerg and Zhe Chen, Morgan & Claypool Publishers series, United States of America, 2006.
3. Krein Philip T, Elements of Power Electronics,Oxford University press, 2008

HOD/EEE
28/6/23

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