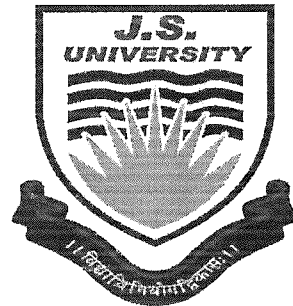


J.S. University, Shikohabad

Established by UP Govt. Act No. 07 of 2015

Recognized by U.G.C. under section 2 (f) of Act-1956




Value Added Course

[VAC-123]

Smart Grid Technologies and Implementation of Energy Management

Faculty of Engineering

Department of Electrical and Electronics Engineering

	J.S. University, Shikohabad Faculty of Engineering	Value Added Course
		AY: 2022-23

Smart Grid Technologies and Implementation of Energy Management

[VAC-123]

Learning Outcome:

This course will add skill set needed to deploy and maintain Smart city electrical grid

Duration: 50 Hours. (Theory and Practical)

Course Outcomes: -

Maximum Exposure has to be given on Practical Oriented

After completion of the course the student shall be able to:-

1. Introduction to Smart Grid and power system stability
2. Concept of Micro-Grid and wide area monitoring and control
3. Power grids: Cyber-physical systems
4. Tools for energy management and renewable integration challenges
5. Smart buildings, communities and cities
6. Green Energy certification



J.S. University, Shikohabad
Faculty of Engineering

Value Added Course

AY: 2022-23

Syllabus Outline

1. Module-1

What is an optimization problem and how can it be applied to power systems?

How can uncertainties be modeled?

2. Module-2

Energy Management System (EMS), Digital substations, Synchronized Measurement Technology, Cyber Security in an EMS This module consists of video lectures and reading material.

3. Module-3


Energy Management System (EMS), Digital substations, Synchronized Measurement Technology, Cyber Security in an EMS This module consists of video lectures and reading material.

4. Module-4

Energy Management System (EMS), Digital substations, Synchronized Measurement Technology, Cyber Security in an EMS This module consists of video lectures and reading material.

5. Module-5

Cyber security risk assessment, Security index computation, Use of RTDS and simulation tools for analyzing the impact of an attack



(Name of Faculty)

Course Coordinator

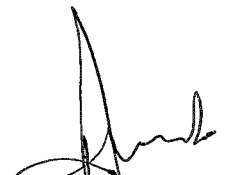
Dr. Divyanshu
Auplet



(Name of Faculty)

Dean Academics

Dr. Akhilesh



(Name of Faculty)

Director/Principle/Dean of
Faculty/Department

Dr. Adnan
Sani