

**AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
(Approved by AICTE, Permanently Affiliated to JNT University

Kakinada,

Accredited By NAAC and Recognized under 2(f) & 12 (b) by UGC,  
New Delhi)

Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113



Certificate Course

on

**MODERN POWER SYSTEMS**

From 2<sup>ND</sup> FEB 2021 TO 6<sup>TH</sup> FEB 2021

Login with the link: <https://meet.google.com/ibu-azvd-ips>



**ORGANIZED BY**

DEPT. OF ELECTRICAL & ELECTRONICS ENGINEERING  
AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY,  
TAMARAM (V), MAKAVARAPALEM (M),  
VISAKHAPATNAM-531113

**AVANTHI EDUCATIONAL SOCIETY**

Avanthi Educational Society under the Leadership of Sri M.Srinivasa Rao garu as chairman was started in the Year 1991. Within a short span of its establishment, the group has made a remarkable stride in the field of education offering various courses at Under Graduate, Post Graduate, Pharmacy & Engineering levels. This milestone is achieved as the institution carved itself to impart quality and career oriented education, countering the challenges of the modern world through planning, dedication, determination, prompt execution and with the innovative ideas of our advisory board. Today, Avanthi Educational Society is proud to have a strength of over 16000 students with 15 institutions under its ambit. It is the path of glory towards the success during the last 19 years. The institution has been adjudged many times as the second best educational institutions in the twin cities and 16th best in all over India through the impartial survey made by the renowned magazine "India Today".

**AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY**

AIET started in the year 1999 and offers various courses at Engineering and PG level. The college is providing with rooms, computer centre, laboratories and seminar hall with audio-visual equipments. Industry Institute interaction is conducted regularly to emphasize on the latest trends in the present market.



It is very near to Narsipatnam. Frequent bus facilities are available both from Visakhapatnam and Narsipatnam. Very safe and secure hostel facility is available for Girl students. These are the additional facilities besides excellent academic atmosphere in the college campus.

## **DEPARTMENT OF ELECTRICAL ANDELECTRONICS ENGINEERING**

The Department of Electrical & Electronics Engineering was established in the year 2001 along with the MECHANICAL, ECE and CSE departments. The department has an intake of 60 students. Commencing the academic year 2011, a post-graduate course in Power Electronics and 2014 in Power Systems was started. The department has full fledged laboratories, workshops and P.G. labs. The department is staffed with qualified, experienced and dedicated members who engage in research activities.. The department with active support from the management is aiming to expand its research activities and industrial consultancies.

### **ABOUT COURSE**

Modern electrical power systems increases the efficiency of electrical power generations, transmission and distribution it also lower carbon footprint for a greener world. It includes the 'green generation' of electricity by means of renewable energy. In addition, the introduction and merits of the Smart Grids and Micro Grids will be discussed in the workshop. The determination and control of fault levels, active power, reactive power, voltage and frequency are essential in a modern electrical power system. Power quality issues will be addressed by modern mitigation

techniques. This GLOMACS Modern Electrical Power Systems will ensure power system stability incorporating the Flexible AC Transmission System (FACTS) which has evolved to a mature technology with high power rating. This technology has wide spread application, became a top rate, most reliable one, based on power electronics. The main purpose of these systems is to supply the network as quickly as possible with inductive or capacitive reactive power that is adapted to its particular requirement, while also improving transmission quality and the efficiency of the power transmission system

### **TOPICS TO BE COVERED**

**Day 1:** Introduction to Modern Power Systems

**Day 2:** Current Operational Problems and System Operations

**Day 3:** Emerging Technologies related to Green Renewable Energy

**Day 4:** Digital Substations, FACTS and HV DC Link

**Day 5:** Numerical Protection Relays and Functionalities; State of the Art Fault Current Limiter

For any further information Contact Mr K NARAYANA RAO, Assistant Professor, EEE, and Smt S SUJATHA DEVI Assistant Professor, EEE

#### **CHIEF PATRON**

Smt.M.Gnaneswari  
President, Avanthi Educational Society

#### **PATRON**

Dr. C P V N J Mohan Rao  
Principal,  
Avanthi Institute Of Engineering And Technology

#### **CHAIRMAN**

Dr. T Srinivasa Rao  
Head of the Department  
Electrical & Electronics Engineering

#### **COORDINATORS**

K Narayana Rao  
Asst. Professor

S Sujatha Devi  
Asst. Professor



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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### CIRCULAR

Date: 31/01/2021

A short term course on “*Modern Power Systems*” for all the IV Year II Semester students of Electrical and Electronics Engineering Department is scheduled from 2<sup>nd</sup> Feb, 2021 to 6<sup>th</sup> Feb, 2021. All the students should attend the course without fail. For further information Contact course coordinators Mr. K. Narayana Rao, & Smt. S. Sujatha Devi, Assistant Professor, EEE.

#### Resource Person Details:

1. Dr. V. V S Bhaskhar Reddy  
Professor,  
Department of EEE  
Andhra University
2. Sri P Anil Kumar,  
Assistant Engineer,  
Hinduja National Power Corporation Limited  
Visakhapatnam

Dr. T Srinivasa Rao

Head of the Department, EEE

Copy to: Principal, AIET

**Head of the Department**  
**Department of Electrical & Electronics Engg.**  
**Avanathi Institute of Engg & Tech.**  
**Makavarapalem, Visakhapatnam - 531113.**



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Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

## MODERN POWER SYSTEMS

Duration: 02-02-2021 to 06-02-2021

### SYLLABUS

DAY-1: Introduction to Modern Power Systems


DAY-2: Current Operation Problems and System Operations

DAY-3: Emerging Technologies related to Green Renewable Energy

DAY-4 : Digital Substations, FACTS and HV DC Link

DAY-5 : Numerical Protection Relays and Functionalities; State of the Art Fault Current Limiter

  
COORDINATOR

  
HOD  
Head of the Department  
Department of Electrical & Electronics Engg.  
Avanthi Institute of Engg & Tech.  
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### MODERN POWER SYSTEMS

Duration: 02-02-2021 to 06-02-2021

#### SCHEDULE

DAY/DATE	Session - 1 09.00 AM to 12Noon	Session - 2 1.00 PM to 4.00 PM
<b>Tuesday</b> 02/02/2021	Overview of a Typical and Modern System covering Generation, Transmission and Distribution and the SMART Grid	Control of Reactive Power & Voltage, Control of Active Power & System Frequency
<b>Wednesday</b> 03/02/2021	Power System and Substation Automation	Increasing Problems of Heavily Loaded Systems
<b>Thursday</b> 04/02/2021	Renewable Energy and the Environment	Non-linear loads – harmonics at PCC - filtering
<b>Friday</b> 05/02/2021	HV-DC Links for Stability Improvement	Optical Cable Temperature Monitoring
<b>Saturday</b> 06/02/2021	Advanced Protection and Control Techniques	Condition Monitoring of Plant

  
COORDINATOR

  
HOD  
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APPLICATIONS OF ARTIFICIAL INTELLIGENCE FOR MODERN POWER SYSTEM


From 15th Nov 2021 TO 19th Nov 2021

3rd &4th Year Students Attendance

SNO	ROLL NUMBER	NAME OF THE STUDENT	15-Nov	16-Nov	17-Nov	18-Nov	19-Nov
1	19811A0201	CHENNA YOGINDRAPRASAD	✓	✓	✓	✓	✓
2	19811A0202	KURAMDASU SRINU	✓	✓	✓	✓	✓
3	19811A0203	MADAGALA VIJAY	✓	✓	✓	✓	✓
4	19811A0204	MOLLI BHOOLAKSHMI	✓	✓	✓	✓	✓
5	19811A0205	MOLLI SAI GANESH	✓	✓	✓	✓	✓
6	19811A0206	NEELAPATI NAGA PRAVEEN	✓	✓	X	✓	✓
7	19811A0207	SARAKAPU SURESH	✓	✓	✓	✓	✓
8	19811A0208	MAJJI SUMANTH	✓	✓	✓	✓	✓
9	19811A0209	ADAPAKA BHANU PRASAD	✓	✓	✓	✓	✓
10	19811A0211	BALIBOINA PAVAN KUMAR	✓	✓	✓	✓	✓
11	19811A0212	BOJJA JAYASRI	✓	✓	✓	✓	✓
12	19811A0213	CHANDAKA ASHOK	✓	✓	✓	✓	✓
13	19811A0214	CHINTHA BHUVAN KUMAR	✓	✓	✓	✓	✓
14	19811A0215	CHINTHALA HARISH	X	✓	✓	✓	✓
15	19811A0217	DADI DINAKAR	✓	✓	✓	✓	✓
16	19811A0218	DANDUPATI SEKHAR	✓	✓	✓	✓	✓
17	19811A0219	DASAMANTHARAO SAI GOUTHAM	✓	✓	✓	✓	✓
18	19811A0220	DEGALA RAJENDRAKUMAR	✓	✓	✓	✓	✓
19	19811A0221	DEVI PRASAD YALLAPU	✓	✓	✓	✓	X
20	19811A0222	EDUBILLI RAVI TEJA	✓	✓	✓	✓	✓
21	19811A0223	ELLA NOOKARAJU	✓	✓	✓	✓	✓
22	19811A0224	GANESH KANDALAM	✓	✓	✓	✓	✓
23	19811A0225	GOLLAVILLI RAMU	✓	✓	✓	✓	✓
24	19811A0226	GUMMADI CHAKRI	✓	✓	✓	✓	✓
25	19811A0227	KALLA BALA MURALI	✓	✓	✓	✓	✓
26	19811A0228	KARRI ANDREWS	✓	✓	✓	✓	✓
27	20815A0222	MOLLI SAGAR KUMAR	✓	X	✓	✓	✓
28	20815A0223	NAGIREDDY GANESH	✓	✓	✓	✓	✓
29	20815A0224	NAKIREDDY JAGADEESH	✓	✓	✓	✓	✓
30	20815A0225	NETTEM SRI HARSHA VAMSI	✓	✓	✓	✓	✓
31	20815A0226	P.A.V.N.S.DEEPAK	✓	✓	✓	✓	✓
32	20815A0227	PERAM SUMANTH	✓	✓	✓	✓	✓
33	20815A0229	PODUGU SAI HEMANTH	✓	✓	✓	✓	✓
34	20815A0230	PRASADULA LAKSHMANA RAO	✓	✓	✓	✓	✓
35	20815A0231	SAMALA SAI RAM	✓	✓	✓	✓	✓
36	20815A0232	SAMOJI ADINARAYANA	✓	✓	✓	✓	✓
37	20815A0233	SANAPATHI NOOKARAJU	✓	✓	✓	X	✓
38	20815A0234	SARIPALLI DEVA PRASAD	✓	✓	✓	✓	✓
39	20815A0235	URIGITI DEVA	✓	✓	✓	✓	✓
40	20815A0236	VASAM JYOTHI PRAKASH	✓	✓	✓	✓	✓
41	20815A0237	VENUKOTI KIRAN	✓	✓	✓	✓	✓
42	20815A0239	YELLAPU SONIKA	✓	✓	✓	✓	✓

43	20815A0240	BHARANIKALA RAM PRASAD	✓	✓	✓	✓	✓
44	20815A0242	KUNDRAPU LAKSHMI NARAYANA	✓	✓	✓	✓	✓
45	20815A0243	NANEPALLI PAVANKUMAR	✓	✓	✓	✓	✓
46	18811A0201	BENIYA GNANESWARA RAO	✓	X	✓	✓	✓
47	18811A0202	CHACHUPATLA ROSHINI	✓	✓	✓	✓	✓
48	18811A0203	KILLI YOGESH	✓	✓	✓	✓	✓
49	18811A0204	KOROPOLU BHAGYARAJU	✓	✓	✓	✓	✓
50	18811A0205	LALAM HEMANTH KUMAR	✓	✓	✓	✓	✓
51	18811A0206	MURUKUTTI PREMAKUMAR	✓	✓	✓	✓	✓
52	18811A0207	PAILA SAIRAM	✓	✓	✓	✓	✓
53	18811A0208	THOTA VASU	✓	✓	✓	✓	✓
54	18811A0209	VEMULAPUDI MAHESH	✓	✓	✓	✓	✓
55	19815A0201	ADDURU SAI KUMAR	✓	✓	X	✓	✓
56	19815A0202	BANDARU HEMANTH KUMAR	✓	✓	✓	✓	✓
57	19815A0204	BANTU LAKSHMANA RAO	✓	✓	✓	✓	✓
58	19815A0205	B A VENKATESWARA RAO	✓	✓	✓	✓	✓
59	19815A0206	BONGU RAVIKUMAR	✓	✓	✓	✓	✓
60	19815A0207	CHALAPAREDDY JAGAN KUMAR	✓	✓	✓	✓	✓
61	19815A0208	CHUKKA SAIRAJ	✓	✓	✓	✓	✓
62	19815A0209	DADI CHINNA	✓	✓	✓	✓	✓
63	19815A0210	DEVAREDDY SRINU	✓	✓	✓	✓	✓
64	19815A0211	GANAGALLA SATISH	✓	✓	✓	✓	✓
65	19815A0212	GATREDDI TEJA	✓	✓	✓	✓	✓
66	19815A0213	GOLLU VENKATA RAMANA	✓	✓	✓	✓	✓
67	19815A0215	KONA SIVA GANESH	✓	✓	✓	✓	✓
68	19815A0216	KONATHALA GOPINADH	✓	✓	✓	✓	✓
69	19815A0217	KOTHAPALLI VEERA SAI	✓	✓	✓	✓	✓
70	19815A0218	KUNDURU RAGA SUDHA	✓	✓	✓	✓	✓
71	19815A0219	L MOHAN SIVA DURGA PRASAD	✓	✓	✓	✓	✓
72	19815A0220	LANKA NAVEEN	X	✓	✓	✓	✓
73	19815A0221	LEKKALA SWARNALATHA	✓	✓	✓	✓	✓
74	19815A0222	LALAM DURGA PRASAD	✓	✓	✓	✓	✓
75	19815A0223	MAMIDI LOKESH	✓	✓	✓	✓	✓
76	19815A0224	MATTURTHI BHARGAVA	✓	✓	✓	✓	✓
77	19815A0225	NADIPALLI PUSHPANJILI	✓	✓	✓	✓	✓
78	19815A0226	NAKKA THARUNKUMAR	✓	✓	✓	✓	✓
79	19815A0227	PATCHARA SIVA KUMAR	✓	✓	X	✓	✓
80	19815A0228	PATNALA DURGA PRASADU	✓	✓	✓	✓	✓
81	19815A0229	P RAM KARUN KUMAR	✓	✓	✓	✓	✓
82	19815A0232	THAMMANA YASWANTH	✓	✓	✓	✓	✓
83	19815A0233	TUMPALA MOHAN MANU	✓	✓	✓	✓	✓
84	19815A0234	VANTEDDU LINGA CHAKRADHAR	✓	✓	✓	✓	✓
85	19815A0235	VARADI LEELA SAI	✓	✓	✓	✓	✓
86	19815A0236	YETTULA KIRAN KUMAR	✓	✓	✓	X	✓
87	19815A0237	ARUGULA APARNA	✓	✓	✓	✓	✓
88	19815A0238	PARAVADA PAVANKUMAR	✓	✓	✓	✓	✓

  
COORDINATOR

  
Head of the Department  
Department of Electrical & Electronics Engg.  
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# AVANTHI

## INSTITUTE OF ENGINEERING AND TECHNOLOGY

Tamaram (V), Makavarapalem (M), Visakhapatnam Dist. 531113.

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### *Certificate of Participation*

This is to certify that Mr./Ms. \_\_\_\_\_  
of \_\_\_\_\_ has participated in the Certificate Course entitled  
on **APPLICATIONS OF ARTIFICIAL INTELLIGENCE FOR MODERN POWER SYSTEM** during  
from 15<sup>th</sup> NOV 2021 to 19<sup>th</sup> NOV 2021 was organised by the Department of  
**ELECTRICAL AND ELECTRONICS ENGINEERING** at Avanathi Institute of  
Engineering and Technology.

**Coordinator**

**HOD**

**Principal**





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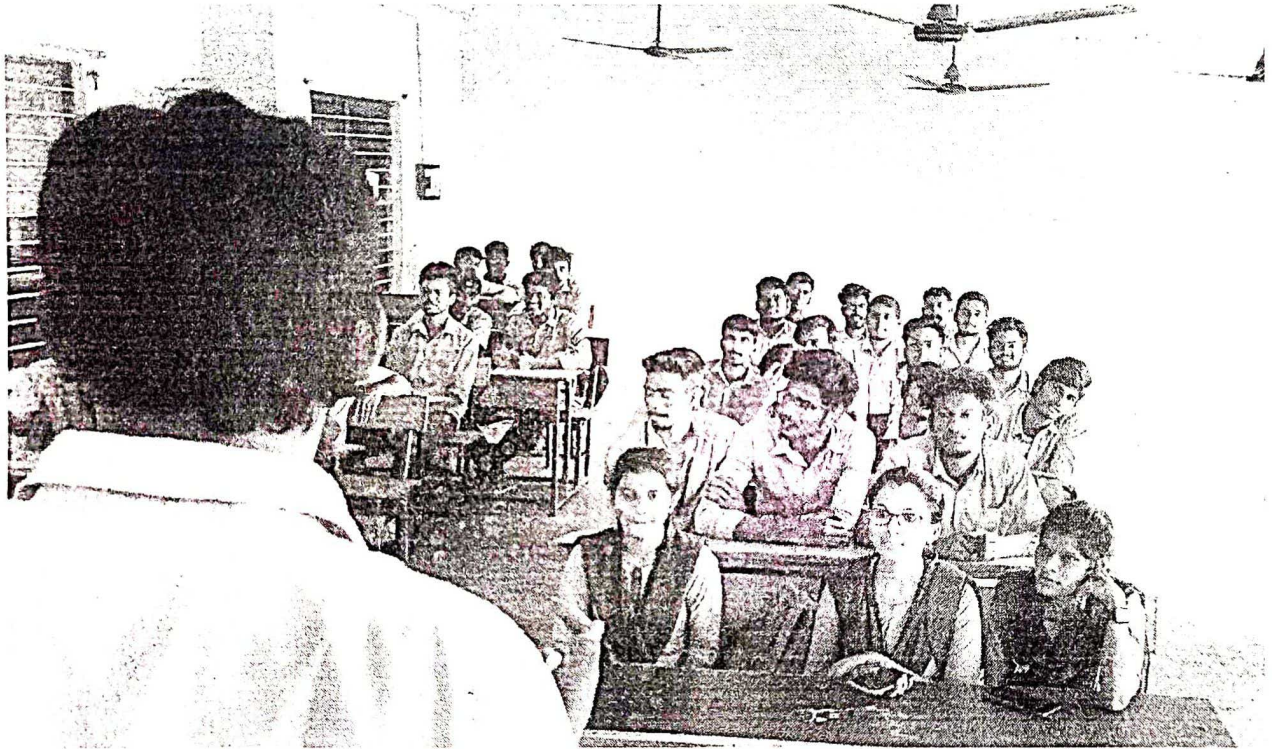
## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

*CERTIFICATE COURSE*

*ON*

**APPLICATIONS OF ARTIFICIAL INTELLIGENCE FOR MODERN POWER SYSTEM**

Dated :15-11-2021 to 19-11-2021



COORDINATOR

HOD

**Head of the Department**  
**Department of Electrical & Electronics Engg.**  
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Department of Electrical and Electronics Engineering

Dt: 11-02-2021


## BRIEF REPORT

Department of Electrical and Electronics Engineering, Avanathi Institute of Engineering and Technology had organized a certificate course on "MODERN POWER SYSTEMS" during 02-02-2021 to 06-02-2021

Dr. V. V. S. Bhaskhar Reddy Professor, EEE Department, Andhra University the speaker had explained the Introduction to modern power systems, interconnected power system, main objective in operation of power systems, structure of Indian power systems, Power Component in static and dynamic modeling, static modeling of transmission lines. He also explained current operation problems, emerging technologies related to green renewable energy.

Sri P Anil Kumar Asst.,Engineer, Hinduja National Power Corporation Ltd, Visakhapatnam explained the DC and AC sensitivity analysis ; Power system stability: equal area criteria, rotor angle and voltage stability, energy function approach towards transient stability prediction; Power system Operation and Control and he also explained numerical protection relays and functionalities, digital substations and HVDC links for stability improvement.

  
Coordinator

  
Head of the Department  
Head of the Department  
Department of Electrical & Electronics Engg.  
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