ADITYA COLLEGE OF ENGINEERING

Approved by AICTE, Permanently Affiliated to JNTUK & Accredited by NAAC
Recognized by UGC under Sections 2(f) and 12(B) of UGC Act, 1956
Aditya Nagar, ADB Road, Surampalem - 533 437, E.G.Dist., Ph: 99631 76662.

1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

As per the University syllabus electives were identified based on the recent trends and students point of view in each department which are given in the following.

PRINCIPAL

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Aditya College of Engineering
SURAMPALEM - 533 437

ADITYA COLLEGE OF ENGINEERING

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Aditya Nagar, ADB Road, Surampalem - 533 437, E.G.Dist., Ph: 99631 76662.

TO WHOMSOEVER IT MAY CONCERN

This is certified that the No of programmes in which elective courses are offered are given as follows.

Program Code	Programme Name	Status of implementation of CBCS / elective course system (Yes/No)
01	B.Tech in Civil Engineering	Yes
02	B.Tech in Electrical & Electronics Engineering	Yes
03	B.Tech in Mechanical Engineering	Yes
04	B.Tech in Electronics & communication Engineering	Yes
05	B.Tech in Computer Science and Engineering	Yes
27	B.Tech in Petroleum Engineering	Yes
42	B.Tech in AIMIL	No
49	B.Tech in IOT	No
00	Master of Business management	Yes
58	M.Tech in Computer Science	Yes
72	M.Tech in VLSI	Yes
55	M.Tech in Embedded Systems	Yes
52	M.Tech in PED	Yes

PRINCIPAL

PRINCIPAL
Aditya College of Engineering
SURAMPALEM - 533 437

CE

COURSE STRUCTURE AND SYLLABUS

For

CIVIL ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

III Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Management Science	4	--	--	3
2	Engineering Geology	4	--	--	3
3	Structural Analysis -II	4	--	--	3
4	Design & Drawing of Reinforced Concrete Structures	4	2	--	3
5	Transportation Engineering - II	4	--	--	3
6	Concrete Technology Lab	--	--	3	2
7	Geology Lab	--	--	3	2
8	Transportation Engineering Lab	--	--	3	2
	Total Credits				**21**

III Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Design & Drawing of Steel Structures	4	2	--	3
2	Geotechnical Engineering - I	4	--	--	3
3	Environmental Engineering -I	4	--	--	3
4	Water Resource Engineering -I	4	--	--	3
5	**OPEN ELECTIVE** i. Electronic Instrumentation ii. Data Base Management Systems iii. Alternative Energy Sources iv. Waste water Management v. Fundamentals of Liquefied Natural Gas vi. Green Fuel Technologies	4	--	--	3
6	Geotechnical Engineering Lab	--	--	3	2
7	Environmental Engineering Lab	--	--	3	2
8	Computer Aided Engineering Lab	--	--	3	2
	Total Credits				**21**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Environmental Engineering - II	4	--	--	3
2	Water Resource Engineering - II	4	--	--	3
3	Geotechnical Engineering - II	4	--	--	3
4	Remote Sensing & GIS Applications	4	--	--	3
5	**Elective I** i. Finite Element Methods ii. Ground Improvement Techniques iii. Air Pollution & Control iv. Urban Hydrology v. Traffic Engineering	4	--	--	3
6	**Elective II** i. Advanced Structural Engineering ii. Advanced Foundation Engineering iii. Environmental Impact Assessment & Management iv. Ground Water Development v. Pavement Analysis and Design	4	--	--	3
7	IPR & Patents	--	2	--	--
8	GIS & CAD Lab	--	--	2	2
9	Irrigation Design & Drawing	--	--	2	2
	Total Credits				**22**

IV Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Estimation Specification & Contracts	4	--	--	3
2	Construction Technology & Management	4	--	--	3
3	Prestressed Concrete	4	--	--	3
4	**Elective III** i. Bridge Engineering ii. Soil Dynamics and Foundations iii. Solid and Hazardous Waste Management iv. Water Resources Systems Planning v. Urban Transportation Planning Engg	4	--	--	3
5	Seminar on Internship Project	--	3	--	2
6	Project	--	--	--	10
	Total Credits				**24**

Total Course Credits = 48+44 + 42 + 46 = 180

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

COURSE STRUCTURE AND SYLLABUS

For

COMPUTER SCIENCE AND ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

III Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Compiler Design	4	--	--	3
2	Unix Programming	4	--	--	3
3	Object Oriented Analysis and Design using UML	4	--	--	3
4	Database Management Systems	4	--	--	3
5	Operating Systems	4	--	--	3
6	Unified Modeling Lab	--	--	3	2
7	Operating System & Linux Programming Lab	--	--	3	2
8	Database Management System Lab	--	--	3	2
MC	Professional Ethics & Human Values	--	3	--	--
	Total Credits				**21**

III Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Computer Networks	4	2	--	3
2	Data Warehousing and Mining	4	--	--	3
3	Design and Analysis of Algorithms	4	--	--	3
4	Software Testing Methodologies	4	--	--	3
5	**Open Elective:** i. Artificial Intelligence ii. Internet of Things iii Cyber Security iv.Digital Signal Processing v.Embbeded Systems vi. Robotics	4	--	--	3
6	Network Programming Lab	--	--	3	2
7	Software Testing Lab	--	--	3	2
8	Data Warehousing and Mining Lab	--	--	3	2
9	IPR & Patents	--	2	--	--
	Total Credits				**21**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Cryptography and Network Security	4	--	--	3
2	Software Architecture & Design Patterns	4	--	--	3
3	Web Technologies	4	--	--	3
4- HS	Managerial Economics and Financial Analysis	4	--	--	3
5	**Elective-I** i. Big Data Analytics ii. Information Retrieval Systems iii. Mobile Computing	4	--	--	3
6	**Elective-II** i. Cloud Computing ii. Software Project Management iii. Scripting Languages	4	--	--	3
7	Software Architecture& Design Patterns Lab	--	--	3	2
8	Web Technologies Lab	--	--	3	2
	Total Credits				**22**

IV Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Distributed Systems	4	--	--	3
2- HS	Management Science	4	--	--	3
3	Machine Learning	4	--	--	3
4	**Elective-III** i.Concurrent and Parallel Programming ii.Artificial Neural Networks iii. Operations Research	4	--	--	3
5	Seminar	--	3	--	2
6	Project	--	--	--	10
	Total Credits				**24**

Total Course Credits = 48+44 + 42 + 46 = 180

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

COURSE STRUCTURE AND SYLLABUS

For

MECHANICAL ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

III Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Dynamics of Machinery	4	--	--	3
2	Metal Cutting & Machine Tools	4	--	--	3
3	Design of Machine Members–II	4	--	--	3
4	Operations Research	4	--	--	3
5	Thermal Engineering -II	4	--	--	3
6	Theory of Machines Lab	--	--	3	2
7	Machine Tools Lab	--	--	3	2
8	Thermal Engineering Lab	--	--	3	2
9	IPR & Patents	--	2	--	--
	Total Credits				**21**

III YEAR - II Semester

S. No.	Subjects	L	T	P	Credits
1	Metrology	4	--	--	3
2	Instrumentation & Control Systems	4	--	--	3
3	Refrigeration & Air-conditioning	4	--	--	3
4	Heat Transfer	4	--	--	3
5	**OPEN ELECTIVE** 1. Entrepreneurship 2. Data Base Management System 3. Waste Water Management 4. Computer Graphics 5. Industrial Robotics 6. Green Engineering Systems	4	--	--	3
6	Heat Transfer Lab	--	--	3	2
7	Metrology & Instrumentation Lab	--	--	3	2
8	Computational Fluid Dynamics Lab	--	--	3	2
9MC	Professional Ethics & Human Values	--	3	--	--
	Total Credits				**21**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV Year - I Semester

S. NO	Subjects	L	T	P	Credits
1	Mechatronics	4	--	--	3
2	CAD/CAM	4	--	--	3
3	Finite Element Methods	4	--	--	3
4	Power Plant Engineering	4	--	--	3
5	**Elective I** 1. Computational Fluid Dynamics 2. Condition Monitoring 3. Additive Manufacturing	4	--	--	3
6	**Elective II** 1. Advanced Materials 2. Design for Manufacture 3. Gas Dynamics & Jet Propulsion	4	--	--	3
7	CAD/CAM Lab	--	--	2	2
8	Mechatronics Lab	--	--	2	2
	Total Credits				**22**

IV Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Production Planning and Control	4	--	--	3
T 2	Unconventional Machining Processes	4	--	--	3
3	Automobile Engineering	4	--	--	3
4	**Elective III** 1. Thermal Equipment Design 2. Non Destructive Evaluation 3. Quality and Reliability Engineering	4	--	--	3
5	Seminar	--	3	--	2
6	Project	--	--	--	10
	Total Credits				**24**

Total Course Credits = 48+44 + 42 + 46 = 180

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

COURSE STRUCTURE AND SYLLABUS
For

PETROLEUM ENGINEERING
(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

III Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Management Science	4	--	--	3
2	Process Dynamics & Control	4	--	--	3
3	Process Instrumentation	4	--	--	3
4	Well Logging & Formation Evaluation	4	--	--	3
5	Drilling Technology	4	--	--	3
6	Mathematical Methods Lab	--	--	3	2
7	Instrumentation, Process Dynamics & Control Lab	--	--	3	2
8	Drilling Fluids Lab	--	--	3	2
9	Industrial Visits	--	--	-	-
MC	Mini Project-I	--	--	--	--
	Total Credits				**21**

III Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Well Completions, Testing & Servicing	4	--	--	3
2	Petroleum Production Engineering	4	--	--	3
3	Petroleum Reservoir Engineering-I	4	--	--	3
4	Petroleum Refinery & Petrochemical Engineering	4	--	--	3
5	**OPEN ELECTIVE** i. Electronic Instrumentation ii. Big Data Analytics iii. Alternative Energy Sources for Automobiles iv. Waste Water Management v. Fundamentals of Liquefied Natural Gas vi. Computational Fluid Dynamics	4	--	--	3
6	Drilling Simulation Lab	--	--	3	2
7	Petroleum Analysis Lab	--	--	3	2
8	Petroleum Reservoir Engineering Lab	--	--	3	2
9	Summer Internship (4-6 weeks)	--	--	--	--
MC	Mini Project-II	--	--	--	--
	Total Credits				**21**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Integrated Asset Management	4	–	–	3
2	Petroleum Reservoir Engineering - II	4	–	–	3
3	Surface Production Operations	4	–	–	3
4	Oil & Gas Processing Plant Design	4	–	–	3
5	**Elective I** i. Natural Gas Hydrates ii. Pipeline Engineering iii. Horizontal Well Technology	4	–	–	3
6	**Elective II** i. Coal Bed Methane Engineering ii. Offshore Engineering iii. Reservoir Stimulation	4	–	–	3
7	IPR & Patents	–	2	–	–
8	Petroleum Equipment Design & Simulation Lab	–	–	2	2
9	Petroleum Reservoir Simulation Lab	–	–	2	2
	Total Credits				**22**

IV Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	EOR Techniques	4	–	–	3
2	HSE & FE in Petroleum Industry	4	–	–	3
3	Petroleum Economics, Policies & Regulations	4	–	–	3
4	**Elective III** i. Shale Gas Reservoir Engineering ii. Subsea Engineering iii. Reservoir Modelling& Simulation	4	–	–	3
5	Seminar (SIP Report Presentation)	–	–	–	2
6	Project	–	–	–	10
	Total Credits				**24**

Total Course Credits = 48+44 + 42 + 46 = 180

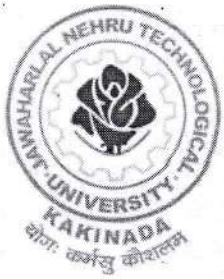
PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

COURSE STRUCTURE AND SYLLABUS

For

ELECTRICAL AND ELECTRONICS ENGINEERING

(Applicable for batches admitted from 2016-2017)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

III Year – I Semester

S. No	Subjects	L	T	P	Credits
1	Power Systems-II	4	--	--	3
2	Renewable Energy Sources	4	--	--	3
3	Signals and Systems	4	--	--	3
4	Pulse & Digital Circuits	4	--	--	3
5	Power Electronics	4	--	--	3
6	Electrical Machines-II Laboratory	--	--	3	2
7	Control Systems Laboratory	--	--	3	2
8	Electrical Measurements Laboratory	--	--	3	2
9-MC	IPR & Patents	--	2	--	--
	Total Credits				**21**

III Year – II Semester

S. No	Subjects	L	T	P	Credits
1	Power Electronic Controllers & Drives	4	--	--	3
2	Power System Analysis	4	--	--	3
3	Micro Processors and Micro controllers	4	--	--	3
4	Data Structures	4	--	--	3
5	Open Elective 1. Unix and Shell Programming 2. OOPS Through JAVA 3. VLSI Design 4. Robotics 5. Neural Networks &Fuzzy Logic 6. Energy Audit and Conservation& Management	4	--	--	3
6	Power Electronics Laboratory	--	--	3	2
7	Microprocessors & Microcontrollers Laboratory	--	--	3	2
8	Data Structures Laboratory	--	--	3	2
9-MC	Professional Ethics & Human Values	--	3	--	--
	Total Credits				**21**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV Year – I Semester

S. No	Subjects	L	T	P	Credits
1	Utilization of Electrical Energy	4	--	--	3
2	Linear IC Applications	4	--	--	3
3	Power System Operation & Control	4	--	--	3
4	Switchgear and Protection	4	--	--	3
5	**Elective – I:** 1. Electrical Machine Modeling and Analysis 2. Advanced Control Systems 3. Programmable Logic Controllers& Applications 4. Instrumentation	4	--	--	3
6	**Elective – II:** 1. Optimization Techniques 2. Electric Power Quality 3. Special Electrical Machines	4	--	--	3
7	Electrical Simulation Laboratory	--	--	2	2
8	Power Systems & Simulation Laboratory	--	--	2	2
	Total Credits				**22**

IV Year - II Semester

S. No	Subjects	L	T	P	Credits
1	Digital Control Systems	4	--	--	3
2	HVDC Transmission	4	--	--	3
3	Electrical Distribution Systems	4	--	--	3
4	**Elective – III:** 1. High Voltage Engineering 2. Flexible Alternating Current Transmission Systems 3. Power System Reforms	4	--	--	3
5	Seminar	--	3	--	2
6	Project	--	--	--	10
	Total Credits				**24**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

COURSE STRUCTURE AND SYLLABUS

For

ELECTRONICS AND COMMUNICATION ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

III Year - I Semester

S.No.	Subjects	L	T	P	Credits
1	Computer Architecture and Organization	4	--	--	3
2	Linear I C Applications	4	--	--	3
3	Digital I C Applications	4	--	--	3
4	Digital Communications	4	--	--	3
5	Antenna and Wave Propagation	4	--	--	3
6	Pulse and Digital Circuits Lab	--	--	3	2
7	Linear I C Applications Lab	--	--	3	2
8	Digital I C Applications Lab	--	--	3	2
MC	Professional Ethics & Human Values	--	3	--	--
	Total Credits				**21**

III Year - II Semester

S.No.	Subjects	L	T	P	Credits
1	Micro Processors & Micro Controllers	4	--	--	3
2	Micro Wave Engineering	4	--	--	3
3	VLSI Design	4	--	--	3
4	Digital Signal Processing	4	--	--	3
5	**OPEN ELECTIVE** 1. OOPs through Java 2. Data Mining 3. Industrial Robotics 4. Power Electronics 5. Bio-Medical Engineering 6.Artificial Neural Networks	4	--	--	3
6	Micro Processors & Micro Controllers Lab	--	--	3	2
7	VLSI Lab	--	--	3	2
8	Digital Communications Lab	--	--	3	2
MC	IPR & Patents	--	2	--	--
	Total Credits				**21**

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV Year - I Semester

S.No.	Subjects	L	T	P	Credits
1	Radar Systems	4	--	--	3
2	Digital Image Processing	4	--	--	3
3	Computer Networks	4	--	--	3
4	Optical Communications	4	--	--	3
5	**Elective I** 1. TV Engineering 2. Electronic Switching Systems 3. System Design through Verilog	4	--	--	3
6	**Elective II** 1.Embedded Systems 2. Analog IC Design 3.Network Security & Cryptography	4	--	--	3
7	Micro Wave Engineering & Optical Lab	--	--	2	2
8	Digital Signal Processing Lab	--	--	2	2
	Total Credits				**22**

IV Year - II Semester

S.No.	Subjects	L	T	P	Credits
1	Cellular Mobile Communications	4	--	--	3
2	Electronic Measurements and Instrumentation	4	--	--	3
3	Satellite Communications	4	--	--	3
4	**Elective III** 1.Wireless sensors & Networks 2. Digital IC Design 3. Operating Systems	4	--	--	3
5	Seminar	--	3	--	2
6	Project	--	--	--	10
	Total Credits				**24**

Total Course Credits = 48+44 + 42 + 46 = 180

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

MBA (Regular)

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

IV SEMESTER

HR

	SUBJECT TITLE
Elective-5	Organizational Development & Change Management
Elective-6	Global HRM
Elective-7	Labor Welfare & Legislation
Elective-8	Management of Industrial Relations

FINANCE

	SUBJECT TITLE
Elective-5	Financial Markets and Services
Elective-6	Global Financial Management
Elective-7	Risk Management
Elective-8	Tax Management

MARKETING

	SUBJECT TITLE
Elective-5	Services Marketing
Elective-6	Promotional Distribution Management
Elective-7	Global Marketing Management
Elective-8	Supply Chain Management

SYSTEMS

	SUBJECT TITLE
Elective-5	Business Intelligence
Elective-6	Enterprise Resource Planning
Elective-7	Cyber Laws & Security
Elective-8	Information Systems Audit

***Mini Project Report**

The student should undergo survey based fieldwork under the guidance of Internal Faculty and submit the report before the completion of II Semester End Examinations.

PRINCIPAL
Aditya College of Engineering
SURAMPALEM-533 437

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE STRUCTURE & SYLLABUS M.Tech CSE for

SOFTWARE ENGINEERING PROGRAMME

(Applicable for batches admitted from 2019-2020)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

PRINCIPAL
Aditya College of Engineering
SURAMPALEM - 533 437

I-SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	MTSE1101	**Program Core-1** Software Engineering	PC	3	0	0	3
2	MTSE1102	**Program Core-2** Advanced Data Structures	PC	3	0	0	3
3	MTSE1103	**Program Elective-1** 1. Software Project and Process Management 2. Machine Learning 3. E-Commerce	PE	3	0	0	3
4	MTSE1104	**Program Elective-2** 1. Software Quality Assurance and Testing 2. Cloud Computing 3. Internet of Things	PE	3	0	0	3
5	MTSE1105	**Research Methodology and IPR**	CC			0	2
6	MTSE1106	**Laboratory-1** Advanced Data Structures Lab	LB	0	0	4	2
7	MTSE1107	**Laboartory-2** SE LAB-I	LB	0	0	4	2
8	MTSE1108	**Audit Course-1***	AC	2	0	0	0
Total Credits							18

*Student has to choose any one audit course listed below.

II-SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	MTSE1201	**Program Core-3** Service Oriented Architecture	PC	3	0	0	3
2	MTSE1202	**Program Core-4** Mathematical Foundations of Computer Science	PC	3	0	0	3
3	MTSE1203	**Program Elective-3** 1. Software Testing Methodologies 2. Agile Software Development 3. ERP & Supply Chain Management	PE	3	0	0	3
4	MTSE1204	**Program Elective-4** 1. Secure Software Engineering 2. Big Data Analytics 3. Design patterns	PE	3	0	0	3
5	MTSE1205	**Laboratory-3** Software Testing Lab	LB	0	0	4	2
6	MTSE1206	**Laboartory-4** SE LAB-II	LB	0	0	4	2
7	MTSE1207	**Mini Project with Seminar**	MP	2	0	0	2
8	MTSE1208	**Audit Course-2 ***	AC	2	0	0	0
Total Credits							18

PRINCIPAL
Aditya College of Engineering
SURAMPALEM - 533 437

III-SEMESTER

*Student has to choose any one audit course listed below.

S.No	Course Code	Courses	Category	L	T	P	C
1	MTSE2101	**Program Elective-5** 1. Object Oriented Software Engineering 2. Artificial Intelligence 3. User Interface Design 4. MOOCS-I(NPTEL/SWAYAM- 12 Week Program related to the programme which is not listed in the course structure	PE	3	0	0	3
2	MTSE2102	**Open Elective** 1. MOOCS-II (NPTEL/SWAYAM- Any 12 Weeks Program-Interdisciplinary Course but not from Parent Department) 2. Courses offered by other departments in the college	OE	3	0	0	3
3	MTSE2103	**Dissertation-I/ Industrial Project#**	PJ	0	0	20	10
		Total Credits					16

Audit Course 1 & 2:

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills

#Students going for Industrial Project/Thesis will complete these courses through MOOCs

IV-SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	MTSE2201	**Dissertation-II**	PJ	0	0	32	16
		Total Credits					16

Open Electives offered to Other Departments

1. Python Programming
2. Artificial Intelligence
3. Machine Learning
4. Deep Learning

PRINCIPAL
Aditya College of Engineering
SURAMPALEM - 533 437

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

EEE

Common for the following Specializations:

Power Electronics
Power Industrial Drives
Power and Industrial Drives
Power Electronics and Electrical Drives
Power Electronics and Drives
Power Electronics and Systems
Electrical Machines and Drives
Power Electronics and Control

COURSE STRUCTURE

M.Tech I YEAR I SEMESTER

S. No.	Subject	L	P	Credits
1	Electrical Machine Modeling & Analysis	4	--	3
2	Analysis of Power Electronic Converters	4	--	3
3	Electric Drives - I	4	--	3
4	Flexible AC Transmission Systems	4	--	3
5	Elective – I i. Modern Control Theory ii. Power Quality iii. Optimization Techniques	4	--	3
6	Elective – II i. Energy Auditing, Conservation and Management ii. Artificial Intelligence Techniques iii. HVDC Transmission	4	--	3
7	Systems Simulation Lab	--	4	2
	Total Credits			**20**

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SURAMPALEM - 533 437

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA - 533 003, Andhra Pradesh, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Common for the following Specializations:

1. **EMBEDDED SYSTEMS &VLSI**
2. **VLSI DESIGN & EMBEDDED SYSTEMS**
3. **EMBEDDED SYSTEMS & VLSI DESIGN**
4. **VLSI & EMBEDDED SYSTEMS**
5. **VLSI & EMBEDDED SYSTEMS DESIGN**

M.Tech I YEAR I SEMESTER

S.NO	Name of the Subject	L	P	C
1	Microcontrollers for Embedded System Design	4	-	3
2	VLSI Technology and Design	4	-	3
3	CMOS Analog IC Design	4	-	3
4	CPLD and FPGA Architectures and Applications	4	-	3
5	**Elective I**			
	Hardware Software Co-Design	4	-	3
	Digital System Design			
	Soft Computing Techniques			
6	**Elective II**			
	Advanced Operating Systems	4	-	3
	CMOS Digital IC Design			
	Network Security and Cryptography.			
7	**Laboratory**			
	VLSI Laboratory	-	3	2

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Common for the following Specialization:

1.VLSI
2. VLSI Design
3.VLSI System Design
4. VLSI & Micro Electronics

M. Tech- I YEAR I SEMESTER

COURSE STRUCTURE

S.NO	Name of the Subject	L	P	C
1	1. VLSI Technology and Design	4	-	3
2	2. CMOS Analog IC Design	4	-	3
3	3. CPLD and FPGA Architectures and Applications	4	-	3
4	4. CMOS Digital IC Design	4	-	3
5	**Elective I**			
	1. Digital System Design	4	-	3
	2. Advanced Operating Systems			
	3 Soft Computing Techniques			
6	**Elective II**			
	1. Digital Design using HDL	4	-	3
	2. Advanced Computer Architecture			
	3. Hardware Software Co-Design			
7	**Laboratory**			
	1. VLSI Laboratory-1	-	3	2

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