



**NARASARAOPETA**  
**ENGINEERING COLLEGE**  
(AUTONOMOUS)

**1.2.1. Number of new courses introduced across all  
programmes offered during the year**

DEPARTMENT OF CIVIL ENGINEERING

II B.Tech I SEMESTER

S.No	Subject	Course Code	Cat.Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Numerical Techniques And Statistical Methods	R23CE2111	BS	30	70	100	3	0	0	3
2	Universal human values- understanding harmony and Ethical human conduct	R23CC2102	HSMC	30	70	100	2	1	0	3
3	Surveying	R23CE2103	ES	30	70	100	3	0	0	3
4	Strength of Materials	R23CE2104	PC	30	70	100	3	0	0	3
5	Fluid Mechanics	R23CE2105	PC	30	70	100	3	0	0	3
6	Surveying Lab	R23CE21L1	PC	30	70	100	0	0	3	1.5
7	Strength of Materials Lab	R23CE21L2	PC	30	70	100	0	0	3	1.5
8	Building Planning and Drawing	R23CE21L3	SC	30	70	100	0	1	2	2
9	Environmental Science	R23CC21MC	Audit Course	30	70	100	2	0	0	-
<b>TOTAL</b>										<b>20</b>



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
**NARASARAOPET - 522 601, Palnadu (Dist.), A.P.**

DEPARTMENT OF CIVIL ENGINEERING

II B.Tech II SEMESTER										
S.No	Subject	Course Code	Cat.Cod e	Internal Marks	Externa l Marks	Total Marks	L	T	P	Credits
1	Managerial Economics and Financial Analysis	R23CC2201	MC-I	30	70	100	2	0	0	2
2	Engineering Geology	R23CE2202	ES/BS	30	70	100	3	0	0	3
3	Concrete Technology	R23CE2203	PC	30	70	100	3	0	0	3
4	Structural Analysis	R23CE2204	PC	30	70	100	3	0	0	3
5	Hydraulics&Hydraulic Machinery	R23CE2205	PC	30	70	100	3	0	0	3
6	Concrete Technology Lab	R23CE22L1	PC	30	70	100	0	0	3	1.5
7	Engineering Geology lab	R23CE22L2	PC	30	70	100	0	0	3	1.5
8	Remote Sensing& Geographical Information Systems	R23CE22L4	SC	30	70	100	0	1	2	2
9	Design Thinking & Innovation	R23CC22L3	ES	30	70	100	1	0	2	2
10	Building materials and Construction	R23CE22MC	MC				3	0	0	-
Mandatory Community Service Project Internship of 08 weeks duration during summer vacation										
<b>TOTAL</b>										<b>21</b>



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

## II B.TECH - I SEMESTER

S. No	Subject	Course Code	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Complex variables and Numerical Methods	R23EE2101	BS	30	70	100	3	0	0	3
2	Universal Human Values– Understanding Harmony & Ethical Human Conduct	R23CC2102	HSMC	30	70	100	2	1	0	3
3	Electromagnetic Field Theory	R23EE2103	ES	30	70	100	3	0	0	3
4	Electrical Circuit Analysis-II	R23EE2104	PC	30	70	100	3	0	0	3
5	DC Machines & Transformers	R23EE2105	PC	30	70	100	3	0	0	3
6	Electrical Circuit Analysis-II and Simulation Lab	R23EE21L1	PC	30	70	100	0	0	3	1.5
7	DC Machines & Transformers Lab	R23EE21L2	PC	30	70	100	0	0	3	1.5
8	Data Structures Lab	R23EE21L3	SC	30	70	100	0	1	2	2
Total							15	2	10	20



**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

II B.TECH - II SEMESTER

S. No	Subject	Course Code	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Managerial Economics & Financial Analysis	R23CC2201	HS	30	70	100	2	0	0	2
2	Analog Circuits	R23EE2202	BS	30	70	100	3	0	0	3
3	Power Systems-I	R23EE2203	PC	30	70	100	3	0	0	3
4	Induction and Synchronous Machines	R23EE2204	PC	30	70	100	3	0	0	3
5	Control Systems	R23EE2205	PC	30	70	100	3	0	0	3
6	Induction and Synchronous Machines Lab	R23EE22L1	PC	30	70	100	0	0	3	1.5
7	Control Systems Lab	R23EE22L2	PC	30	70	100	0	0	3	1.5
8	Python Programming Lab	R23EE22L4	SC	30	70	100	0	1	2	2
9	Design Thinking & Innovation	R23CC22L3	ES	30	70	100	1	0	2	2
10	Environmental Studies	R23CC22MC	MC	30	70	100	2	0	0	-
Total							15	1	10	21
<b>Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation</b>										

  
**IQAC**

  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

## II B.TECH - I SEMESTER

S. No	Subject	Course Code	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Numerical Methods and Transform Techniques	R23CC2110	BS	30	70	100	3	0	0	3
2	Universal Human Values– Understanding Harmony & Ethical Human Conduct	R23CC2102	HSMC	30	70	100	2	1	0	3
3	Thermo dynamics	R23ME2103	ES	30	70	100	2	0	0	2
4	Mechanics of Solids	R23ME2104	PC	30	70	100	3	0	0	3
5	Material Science and Metallurgy	R23ME2105	PC	30	70	100	3	0	0	3
6	Mechanics of Solids and Materials Science Lab	R23ME21L1	PC	30	70	100	0	0	3	1.5
7	Computer-aided Machine Drawing	R23ME21L2	PC	30	70	100	0	0	3	1.5
8	Python programming Lab	R23ME21L3	ES	30	70	100	0	0	2	1.0
9	Embedded Systems & IoT	R23ME21L4	SC	30	70	100	0	1	2	2
10	Environmental Studies	R23CC21MC	MC	30	70	100	2	0	0	-
<b>Total</b>							<b>15</b>	<b>2</b>	<b>10</b>	<b>20</b>



Principal

**NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)**

NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

## II B.TECH - II SEMESTER

S. No	Subject	Course Code	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Industrial Management	R23ME2201	HS	30	70	100	2	0	0	2
2	Complex Variables, Probability and Statistics	R23ME2202	BS	30	70	100	3	0	0	3
3	Manufacturing processes	R23ME2203	PC	30	70	100	3	0	0	3
4	Fluid Mechanics & Hydraulic Machines	R23ME2204	PC	30	70	100	3	0	0	3
5	Theory of Machines	R23ME2205	PC	30	70	100	3	0	0	3
6	Fluid Mechanics & Hydraulic Machines Lab	R23ME22L1	PC	30	70	100	0	0	3	1.5
7	Manufacturing processes Lab	R23ME22L2	PC	30	70	100	0	0	3	1.5
8	Soft Skills	R23ME22L4	SC	30	70	100	0	1	2	2
9	Design Thinking & Innovation	R23CC22L3	ES	30	70	100	1	0	2	2
<b>Total</b>							<b>15</b>	<b>1</b>	<b>10</b>	<b>20</b>
<b>Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation</b>										



Principal  
**NARASARAOPETA ENGINEERING COLLEGE**  
 (AUTONOMOUS)  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

II B.Tech. I SEMESTER

S.No	Subject	Course Code	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Probability theory and stochastic Process	R23EC2101	BS	30	70	100	3	0	0	3
2	Universal Human Values–Understanding Harmony and Ethical Human Conduct	R23CC2102	HSMC	30	70	100	2	1	0	3
3	Signals and Systems	R23EC2103	ES	30	70	100	3	0	0	3
4	Electronic Devices and Circuits	R23EC2104	PC	30	70	100	3	0	0	3
5	Switching Theory and Logic Design	R23EC2105	PC	30	70	100	3	0	0	3
6	Electronic Devices and Circuits Lab	R23EC21L1	PC	30	70	100	0	0	3	1.5
7	Signals and Systems Lab	R23EC21L2	PC	30	70	100	0	0	3	1.5
8	Data Structures using Python	R23EC21L3	SEC	30	70	100	0	1	2	2
<b>Total</b>							<b>14</b>	<b>2</b>	<b>8</b>	<b>20</b>



*Handwritten signature in green ink*

**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.). A.P

II B.Tech. II SEMESTER

S.No	Subject	Course Code	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	Managerial Economics and Financial Analysis	R23CC2201	Management Course-1	30	70	100	2	0	0	2
2	Linear Control Systems	R23EC2202	ES	30	70	100	3	0	0	3
3	Electromagnetic Waves and Transmission Lines	R23EC2203	PC	30	70	100	3	0	0	3
4	Electronic Circuit Analysis	R23EC2204	PC	30	70	100	3	0	0	3
5	Analog Communications	R23EC2205	PC	30	70	100	3	0	0	3
6	Switching Theory and Logic Design Lab	R23EC22L1	PC	30	70	100	0	0	3	1.5
7	Electronic Circuit Analysis lab	R23EC22L2	PC	30	70	100	0	0	3	1.5
8	Soft Skills	R23EC22L4	SEC	30	70	100	0	1	2	2
9	Design Thinking & Innovation	R23EC22L3	ES	30	70	100	1	0	2	2
10	Environmental Studies	R23EC22MC	Audit Course	-	-	-	2	0	0	MC(0)
<b>Total</b>							<b>17</b>	<b>1</b>	<b>10</b>	<b>21</b>
Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation.										



Principal  
 NARASARAOPETA ENGINEERING COLLEGE  
 (AUTONOMOUS)  
 NARASARAOPETA - 522 601, Palnadu (Dist.), A.P.

**B.TECH – II YEAR I SEMESTER**

S.No	Subject Code	Subject	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	R23CC2101	Discrete Mathematics & Graph Theory	BS&H	30	70	100	3	0	0	3
2	R23CC2102	Universal Human Values– Understanding Harmony	BS&H	30	70	100	2	1	0	3
3	R23CC2103	Digital Logic & Computer Organization	ES	30	70	100	3	0	0	3
4	R23CC2104	Advanced Data Structures & Algorithm Analysis	PC	30	70	100	3	0	0	3
5	R23CC2105	Object Oriented Programming Through Java	PC	30	70	100	3	0	0	3
6	R23CC21L1	Advanced Data Structures and Algorithm Analysis Lab	PC	30	70	100	0	0	3	1.5
7	R23CC21L2	Object Oriented Programming Through Java Lab	PC	30	70	100	0	0	3	1.5
8	R23CC21L3	Python Programming	SC	30	70	100	0	1	2	2
9	R23CC21MC	Environmental Studies	AC	30	70	100	2	0	0	-
<b>TOTAL</b>										<b>20</b>



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
**NARASARAOPET - 522 601, Palnadu (Dist.), A.P.**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**II B.TECH - II SEMESTER**

S.No	Subject Code	Subject	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	R23CC2201	Managerial Economics and Financial Analysis	MC	30	70	100	2	0	0	2
2	R23CC2202	Probability & Statistics	ES	30	70	100	3	0	0	3
3	R23CC2203	Operating Systems	PC	30	70	100	3	0	0	3
4	R23CC2204	Database Management Systems	PC	30	70	100	3	0	0	3
5	R23CC2205	Software Engineering	PC	30	70	100	2	1	0	3
6	R23CS22L4	Operating Systems Lab	PC	30	70	100	0	0	3	1.5
7	R23CC22L1	Database Management Systems Lab	PC	30	70	100	0	0	3	1.5
8	R23CC22L2	Full Stack Development -I	SC	30	70	100	0	1	2	2
9	R23CC22L3	Design Thinking & Innovation	BS&H	30	70	100	1	0	2	2
<b>TOTAL</b>										<b>21</b>

Mandatory Community Service Project Internship of 08 weeks duration during summer vacation



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**DEPARTMENT OF CSE(ARTIFICIAL INTELLIGENCE)**

**II B.TECH- I SEMESTER**

S.No	Subject Code	Subject	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	R23CC2101	Discrete Mathematics & Graph Theory	BS&H	30	70	100	3	0	0	3
2	R23CC2102	Universal Human Values-- Understanding Harmony	BS&H	30	70	100	2	1	0	0
3	R23CC2106	Artificial Intelligence	PC	30	70	100	3	0	0	3
4	R23CC2104	Advanced Data Structures & Algorithm Analysis	PC	30	70	100	3	0	0	3
5	R23CC2105	Object Oriented Programming Through Java	PC	30	70	100	3	0	0	3
6	R23CC21L1	Advanced Data Structures and Algorithm Analysis Lab	PC	30	70	100	0	0	3	1.5
7	R23CC21L2	Object Oriented Programming Through Java Lab	PC	30	70	100	0	0	3	1.5
8	R23CC21L3	Python Programming	SC	30	70	100	0	1	2	2
9	R23CC21MC	Environmental Studies	AC	30	70	100	2	0	0	-
<b>TOTAL</b>										<b>20</b>

**DEPARTMENT OF CSE(ARTIFICIAL INTELLIGENCE)**

**II B.TECH - II SEMESTER**

**II B.TECH - II SEMESTER**

S.No	Subject Code	Subject	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	R23CC2208	Optimization Techniques	MC	30	70	100	2	0	0	2
2	R23CC2202	Probability & Statistics	ES	30	70	100	3	0	0	3
3	R23CC2206	Machine Learning	PC	30	70	100	3	0	0	3
4	R23CC2204	Database Management Systems	PC	30	70	100	3	0	0	3
5	R23CC2207	Digital Logic & Computer Organization	ES	30	70	100	2	1	0	3
6	R23AI22L4	AI & ML Lab	PC	30	70	100	0	0	3	1.5
7	R23CC22L1	Database Management Systems Lab	PC	30	70	100	0	0	3	1.5
8	R23CC22L2	Full Stack Development -I	SC	30	70	100	0	1	2	2
9	R23CC22L3	Design Thinking & Innovation	BS&H	30	70	100	1	0	2	2
<b>TOTAL</b>										<b>21</b>
Mandatory Community Service Project Internship of 08 weeks duration during summer vacation										





II YEAR I SEMESTER

S.No.	Subject Code	Category	Title	L	T	P	Credits
1	R23CC2101	BS&H	Discrete Mathematics & Graph Theory	3	0	0	3
2	R23CC2102	BS&H	Universal human values – understanding harmony and Ethical human conduct	2	1	0	3
3	R23CC2106	Engineering Science	Artificial Intelligence	3	0	0	3
4	R23CC2104	Professional Core	Advanced Data Structures & Algorithms Analysis	3	0	0	3
5	R23CC2105	Professional Core	Object Oriented Programming Through Java	3	0	0	3
6	R23CC21L1	Professional Core	Advanced Data Structures and Algorithms Analysis Lab	0	0	3	1.5
7	R23CC21L2	Professional Core	Object Oriented Programming Through Java Lab	0	0	3	1.5
8	R23CC21L3	Skill Enhancement course	Python programming	0	1	2	2
<b>Total</b>				<b>14</b>	<b>2</b>	<b>8</b>	<b>20</b>



**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.



DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



II YEAR II SEMESTER

S.No.	Subject Code	Category	Title	L	T	P	Credits
1	R23CC2208	Management Course- I	Optimization Techniques	2	0	0	2
2	R23CC2202	Engineering Science/ Basic Science	Probability & Statistics	3	0	0	3
3	R23CC2206	Professional Core	Machine Learning	3	0	0	3
4	R23CC2204	Professional Core	Database Management Systems	3	0	0	3
5	R23CC2207	Professional Core	Digital Logic & Computer Organization	3	0	0	3
6	R23AM22L5	Professional Core	AI & ML Lab	0	0	3	1.5
7	R23CC22L1	Professional Core	Database Management Systems Lab	0	0	3	1.5
8	R23CC22L2	Skill Enhancement course	Full Stack Development - 1	0	1	2	2
9	R23CC22L3	BS&H	Design Thinking & Innovation	1	0	2	2
10	R23CC22MC	Audit Course	Environmental Studies	2	0	0	-
<b>Total</b>				<b>17</b>	<b>1</b>	<b>10</b>	<b>21</b>
Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation							

  
**IQAC**

  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.



DEPARTMENT OF CSE (CYBER SECURITY)



II YEAR I SEMESTER

S.No.	Subcode	Category	Title	L	T	P	Credits
1	R23CC2101	BS&H	Discrete Mathematics & Graph Theory	3	0	0	3
2	R23CC2102	BS&H	Universal human values – understanding harmony and Ethical human conduct	2	1	0	3
3	R23CC2103	Engineering Science	Digital Logic and Computer Organization	3	0	0	3
4	R23CC2104	Professional Core	Advanced Data Structures & Algorithms Analysis	3	0	0	3
5	R23CC2105	Professional Core	Object Oriented Programming Through Java	3	0	0	3
6	R23CC21L1	Professional Core	Advanced Data Structures and Algorithms Analysis Lab	0	0	3	1.5
7	R23CC21L2	Professional Core	Object Oriented Programming Through Java Lab	0	0	3	1.5
8	R23CC21L3	Skill Enhancement course	Python programming	0	1	2	2
Total				14	2	8	20



*[Handwritten Signature]*

**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.



DEPARTMENT OF CSE (CYBER SECURITY)



II YEAR II SEMESTER

S.No.	Subcode	Category	Title	L	T	P	Credits
1	R23CC2201	Management Course- I	Managerial Economics And Financial Analysis	2	0	0	2
2	R23CY2202	Engineering Science/ Basic Science	Number Theory & Applications	3	0	0	3
3	R23CC2203	Professional Core	Operating Systems	3	0	0	3
4	R23CC2204	Professional Core	Database Management Systems	3	0	0	3
5	R23CY2205	Professional Core	Computer Networks	3	0	0	3
6	R23CY22L4	Professional Core	Operating Systems & Computer Networks Lab	0	0	3	1.5
7	R23CC22L1	Professional Core	Database Management Systems Lab	0	0	3	1.5
8	R23CC22L2	Skill Enhancement Course	Full Stack Development-1	0	1	2	2
9	R23CC22L3	BS&H	Design Thinking & Innovation	1	0	2	2
10	R23CC22MC	Audit Course	Environmental Studies	2	0	0	-
Total				17	1	10	21
Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation							



*[Handwritten Signature]*

**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.



DEPARTMENT OF CSE (DATA SCIENCE)



II YEAR I SEMESTER

S.No.	Subcode	Category	Title	L	T	P	Credits
1	R23CC2101	BS&H	Discrete Mathematics & Graph Theory	3	0	0	3
2	R23CC2102	BS&H	Universal human values understanding harmony and ethical human conduct	2	1	0	3
3	R23DS2107	Engineering Science	Introduction to Data Science	3	0	0	3
4	R23CC2104	Professional Core	Advanced Data Structures & Algorithms Analysis	3	0	0	3
5	R23CC2105	Professional Core	Object Oriented Programming Through Java	3	0	0	3
6	R23DS21L1	Professional Core	Data Science Lab	0	0	3	1.5
7	R23CC21L2	Professional Core	Object Oriented Programming Through Java Lab	0	0	3	1.5
8	R23CC21L3	Skill Enhancement course	Python programming	0	1	2	2
Total				14	2	8	20



*[Handwritten Signature]*

**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.



DEPARTMENT OF CSE (DATA SCIENCE)



II YEAR II SEMESTER

S.No.	Subcode	Category	Title	L	T	P	Credits
1	R23CC2208	Management Course- I	Optimization Techniques	2	0	0	2
2	R23DS2201	Engineering Science/ Basic Science	Statistical Methods for Data Science	3	0	0	3
3	R23DS2202	Professional Core	Data Engineering	3	0	0	3
4	R23CC2204	Professional Core	Database Management Systems	3	0	0	3
5	R23DS2203	Professional Core	Computer Organization and Architecture	3	0	0	3
6	R23DS22L2	Professional Core	Data Engineering Lab	0	0	3	1.5
7	R23CC22L1	Professional Core	DBMS Lab	0	0	3	1.5
8	R23DS22L4	Skill Enhancement course	Exploratory Data Analysis with Python	0	1	2	2
9	R23CC22L3	BS&H	Design Thinking & Innovation	1	0	2	2
10	R23CC22MC	BS&H	Environmental Studies	2	0	0	-
Total				17	1	10	21
Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation							



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.



**DEPARTMENT OF INFORMATION TECHNOLOGY**

**II B.TECH- I SEMESTER**

S.No	Subject Code	Subject	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	R23CC2101	Discrete Mathematics & Graph Theory	BS&H	30	70	100	3	0	0	3
2	R23CC2102	Universal Human Values– Understanding Harmony	BS&H	30	70	100	2	1	0	3
3	R23CC2103	Digital Logic & Computer Organization	ES	30	70	100	3	0	0	3
4	R23CC2104	Advanced Data Structures & Algorithm Analysis	PC	30	70	100	3	0	0	3
5	R23CC2105	Object Oriented Programming Through Java	PC	30	70	100	3	0	0	3
6	R23CC21L1	Advanced Data Structures and Algorithm Analysis Lab	PC	30	70	100	0	0	3	1.5
7	R23CC21L2	Object Oriented Programming Through Java Lab	PC	30	70	100	0	0	3	1.5
8	R23CC21L3	Python Programming	SC	30	70	100	0	1	2	2
9	R23CC21MC	Environmental Studies	AC	30	70	100	2	0	0	-
<b>TOTAL</b>										<b>20</b>



**IQAC**



**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**II B.TECH - II SEMESTER**

S.No	Subject Code	Subject	Cat. Code	Internal Marks	External Marks	Total Marks	L	T	P	Credits
1	R23CC2208	Optimization Techniques	MC	30	70	100	2	0	0	2
2	R23CC2202	Probability & Statistics	ES	30	70	100	3	0	0	3
3	R23CC2203	Operating Systems	PC	30	70	100	3	0	0	3
4	R23CC2204	Database Management Systems	PC	30	70	100	3	0	0	3
5	R23CC2205	Software Engineering	PC	30	70	100	2	1	0	3
6	R23IT22L4	Operating Systems & Software Engineering Lab	PC	30	70	100	0	0	3	1.5
7	R23CC22L1	Database Management Systems Lab	PC	30	70	100	0	0	3	1.5
8	R23IT22L2	Python with Django	SC	30	70	100	0	1	2	2
9	R23CC22L3	Design Thinking & Innovation	E &H	30	70	100	1	0	2	2
<b>TOTAL</b>										<b>21</b>
Mandatory Community Service Project Internship of 08 weeks duration during summer vacation										




**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.). A.P.



# NARASARAOPETA ENGINEERING COLLEGE

(AUTONOMOUS)

## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

### I SEMESTER

S.No	Course Code	Course Name	Category	L	T	P	Credits
1	R24MCA1101	Data Structures	PC	3	0	0	3
2	R24MCA1102	Computer Organization	PC	3	0	0	3
3	R24MCA1103	Database Management Systems	PC	3	0	0	3
4	R24MCA1104	Operating Systems	PC	3	0	0	3
5	R24MCA1105	Mathematical and Statistical Foundations	BS&H	3	1	0	4
6	R24MCA11L1	Database Management Systems Lab	PC	0	0	3	1.5
7	R24MCA11L2	Data Structures using C Lab	PC	0	0	4	2
8	R24MCA11L3	Operating Systems and Linux Lab	PC	0	0	3	1.5
Total				15	1	10	21

  
**IQAC**

  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
NARASARAOPET - 522 601, Palnadu (Dist.), A P



# NARASARAOPETA ENGINEERING COLLEGE

(AUTONOMOUS)

## DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

### II SEMESTER

S.No	Course Code	Course Name	Category	L	T	P	Credits
1	R24MCA1201	Computer Networks	PC	3	0	0	3
2	R24MCA1202	Network Security and Cyber Security	PC	3	0	0	3
3	R24MCA1203	Object Oriented Programming Using JAVA	PC	3	0	0	3
4	R24MCA1204	Software Engineering	PC	3	0	0	3
5	R24MCA1205	Artificial Intelligence	PC	3	0	0	3
	<b>Program Elective-1</b>						
	R24MCA1206	1. Design and Analysis of Algorithms					
	R24MCA1207	2. Advanced Unix Programming					
6	R24MCA1208	3. Data Warehousing and Data mining	PC/ PE	3	0	0	3
	R24MCA12MC	4. MOOCS-1(NPTEL /SWAYAM) (Recommended 12 week course with 3 credits)					
7	R24MCA12L1	Object Oriented Programming Using JAVA Lab	PC	0	0	3	1.5
8	R24MCA12L2	Networks and Security Lab	PC	0	0	3	1.5
9	R24MCA12MNC	Employability Skills-1 <sup>§</sup>	AC	1	0	0	0
			Total	19	0	6	21

\*This may be conducted in Zero Hour.

<sup>§</sup>Internal Evaluation



  
Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**I Year I Semester**

S.No	Course Code	Courses	M	L	T	P	C
1	R24MBA101	Management and Organizational Behavior	100	4	0	0	4
2	R24MBA102	Managerial Economics	100	4	0	0	4
3	R24MBA103	Accounting for Management	100	4	0	0	4
4	R24MBA104	Quantitative Analysis for Business Decisions	100	4	0	0	4
5	R24MBA105	Entrepreneurship Development	100	4	0	0	4
6	R24MBA106	Business Environment	100	4	0	0	4
7	R24MBA107 R24MBA108 R24MBA109 R24MBA110	A. Information Technology for Business B. Rural Development C. Intellectual Property Rights & Patents D. MOOCs : SWAYAM/NPTEL- (Related to Management Courses other than listed courses in the syllabus)	100	3	0	0	3
8	R24MBA1L1	PACE-UP (Personality Assessment Centre, Enhancement and Upgradation Processes) Programme	50	0	0	4	2
9	R24MBA1L2	Tally Lab	50	0	0	4	2
10	R24MBA1EP	Entrepreneur Project -I Identifying the area of interest, interacting with successful business and submission of ground report.	50	0	0	4	2
<b>Total</b>			<b>850</b>	<b>27</b>	<b>0</b>	<b>12</b>	<b>33</b>

The Entrepreneur Project can be done either individually or forming a group (limited to maximum of 4 members)



*[Handwritten Signature]*

**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)**  
NARASARAOPETA - 522 601, Palnadu (Dist.), A.P.

**DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION (MBA)**

**I Year II Semester**

S.No	Course Code	Courses	M	L	T	P	C
1	R24MBA201	Financial Management	100	4	0	0	4
2	R24MBA202	Human Resource Management	100	4	0	0	4
3	R24MBA203	Operations Management	100	4	0	0	4
4	R24MBA204	Marketing Management	100	4	0	0	4
5	R24MBA205	Research Methods for Business Decisions	100	4	0	0	4
	R24MBA206	Business Analytics	100	4	0	0	4
6	R24MBA207 R24MBA208 R24MBA209 R24MBA210	A. Cross Cultural management B. Project Management C. Lean Management D. Database Management System	100	3	0	0	3
7	R24MBA2L1	R-Programming Lab	50	0	0	4	2
8	R24MBA2L2	IT Lab (Spread sheets and SQL)	50	0	0	4	2
9	R24MBA2EP	Entrepreneur Project –II Study on different loan approaches of State and Central Govt. Prepare the Business Development plan.	50	0	0	4	2
<b>Total</b>			<b>850</b>	<b>27</b>	<b>0</b>	<b>12</b>	<b>33</b>



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**I - Semester**

S.No	CourseName	Category	L	T	P	C	Marks
1	Theory of Elasticity	Core	3	0	--	3	100
2	Structural Dynamics	Core	3	0	--	3	100
3	Elective I	Elective	3	0	--	3	100
	a) Matrix Analysis of Structures						
	b) Analytical & Numerical Methods for Structural Engineering						
	c) Design of RCC Foundations						
	d) Advanced structural engineering						
4	Program Elective II	Elective	3	0	--	3	100
	a) Bridge Engineering						
	b) Repair and Rehabilitation of Structures						
	c) Advanced Reinforced Concrete Design		2	0	0	2	
	d) Design of tall structures						
5	Research Methodology & IPR		-	-	0	2	100
6	Advanced Concrete Technology Laboratory	Lab	-	--	4	2	100
7	Advanced Structural Engineering Laboratory	Lab	-	--	4	2	100
8	Audit Course -1(Disaster Management)	Audit	2	0	0	0	100
<b>Total Credits /Marks</b>						<b>18</b>	<b>800</b>

**II – Semester**

S.No.	Course Name	Category	L	T	P	C	Marks
1	Finite Element Methods in Structural Engineering	Core	3	0	--	3	100
2	Theory of Plates and Shells	Core	3	0	--	3	100
3	Elective III	Elective	3	0	--	3	100
	a) Stability of Structures						
	b) Advanced Steel Design						
	c) Analysis of Offshore Structures						
	d) Building information modeling						
4	Elective IV	Elective					
	a) Earthquake Resistant Design of Buildings		3	0	--	3	100
	b) Precast and Prefabricated Structures						
	c) Earth Retaining Structures						
	d) Plastic structural analysis						
5	Computer Aided Design Laboratory		--	--	4	2	100
6	Structural Design laboratory	Lab	--	--	4	2	100
7	Mini Project with Seminar		0	0	4	2	100
8	Audit Course -2(Value Education)	Audit	2	0	0	0	100
<b>Total Credits / Marks</b>						<b>18</b>	<b>800</b>



**III – Semester**

S.No.	Course Name	Category	L	T	P	C	Marks
1	Elective 5: Program Elective /MOOCS**	Elective					
	a) Design of Prestressed Concrete structures		3	0	--	3	100
	b) Structural Health Monitoring						
	c) Industrial Structures						
	d) Advanced Foundation Engineering						
2	Open Elective / MOOCS** a) Artificial Intelligence Technique b) Construction Management c) Green Technology d) Ground Improvement Techniques	Elective	3	0	--	3	100
3	Dissertation Phase-I / Industrial Project (To be continued and Evaluated next Semester) *		--	--	20	10	
<b>Total Credits / Marks</b>						<b>16</b>	<b>200</b>

\* Evaluated and displayed in 4<sup>th</sup> Semester marks list

\*\* Students Going for Industrial Project / Thesis will complete these courses through MOOCS. Students can also choose SWAYAM or NPTEL with a 12 weeks' course duration in PG level with 3 credits, but the chosen subject should not be covered in their M. Tech Course

**IV - Semester**

SI No.	Course Name	Category	L	T	P	C	Marks
1	Project / Dissertation Phase II (Continued from III Semester)		0	0	32	16	100
<b>Total Credits / Marks</b>						<b>16</b>	<b>100</b>


**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.

## M. Tech. (CSE) I SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	R24MCS101	<b>Program Core-1</b> Mathematical Foundations of Computer Science	PC	3	0	0	3
2	R24MCS102	<b>Program Core-2</b> Advanced Data Structures & Algorithms	PC	3	0	0	3
3	R24MCS103 R24MCS104 R24MCS105 R24MCS106	<b>Program Elective-1</b> 1. <b>Big Data Analytics</b> 2. Digital Image Processing 3. Advanced Operating Systems 4. Computer Graphics	PE	3	0	0	3
4	R24MCS107 R24MCS108 R24MCS109 R24MCS110	<b>Program Elective-2</b> 1. Advanced Computer Networks 2. <b>Internet of Things</b> 3. Object Oriented Software Engineering 4. Artificial Intelligence	PE	3	0	0	3
5	R24MCS111	<b>Research Methodology and IPR</b>	CC			0	2
6	R24MCS1L1	<b>Laboratory-1</b> Advanced Data Structures & Algorithms Lab	LB	0	0	4	2
7	R24MCS1L2	<b>Laboratory-2</b> Advanced Computing Lab	LB	0	0	4	2
8	R24MCS1NMC	<b>Audit Course-1*</b>	AC	2	0	0	0
<b>Total Credits</b>							18



  
 Principal  
 NARASARAOPETA ENGINEERING COLLEGE  
 (AUTONOMOUS)  
 NARASARAOPETA - 522 601, Palnadu (Dist.), A.P.

## M. Tech. (CSE) II SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	R24MCS201	<b>Program Core-3</b> Machine learning	PC	3	0	0	3
2	R24MCS202	<b>Program Core-4</b> Digital marketing	PC	3	0	0	3
3	R24MCS203 R24MCS204 R24MCS205 R24MCS206	<b>Program Elective-3</b> 1. Databases and Mining 2. Ad Hoc & Sensor Networks 3. Soft Computing 4. <b><u>Cryptography and Network Security</u></b>	PE	3	0	0	3
4	R24MCS207 R24MCS208 R24MCS209 R24MCS210	<b>Program Elective-4</b> 1. Cloud Computing 2. Principles of computer security 3. High Performance Computing 4. <b><u>E-Commerce</u></b>	PE	3	0	0	3
5	R24MCS2L1	<b>Laboratory-3</b> Machine Learning with python lab	LB	0	0	4	2
6	R24MCS2L2	<b>Laboartory-4</b> Tableau and Power BI Lab	LB	0	0	4	2
7	R24MCS2MP	<b>Mini Project with Seminar</b>	MP	2	0	0	2
8	R24MCS2NMC	<b>Audit Course-2 *</b>	AC	2	0	0	0
<b>Total Credits</b>							18

Student has to choose any one audit course listed below.

### **Audit Course 1 & 2:**

- |   |   |
|---|---|
| <p>1. English for Research Paper Writing</p> <p><u>2. Disaster Management</u></p> <p>3. Sanskrit for Technical Knowledge</p> <p><u>4. Value Education</u></p> | <p>5. Constitution of India</p> <p>6. Pedagogy Studies</p> <p>7. Stress Management by Yoga</p> <p>8. Personality Development through Life</p> |
|---|---|



Principal  
Enlightenment Skills  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**

NARASARAOPETA - 522 601, Palnadu (Dist.), A.P.

### M. Tech. (CSE) III SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	R24MCS301 R24MCS302 R24MCS303 R24MCS304	<b>Program Elective-5</b> 1. Deep Learning 2. Social Network Analysis 3. MOOCs (NPTEL/SWAYAM) 4. <u>Human Computer Interaction</u>	PE	3	0	0	3
2	R24MCS304 R24MCS305 R24MCS306	<b>Open Elective</b> 1. <u>Devops</u> 2. Software Testing Methodologies 3. MOOCs (NPTEL/SWAYAM)	OE	3	0	0	3
3	R24MCS3PW	<b>Dissertation-I/ Industrial Project-I #</b>	PJ	0	0	20	10
<b>Total Credits</b>							16

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

### M. Tech. (CSE) IV SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	R24MCS4PW	<b>Project-II</b>	PJ	0	0	32	16
<b>Total Credits</b>							16

#### Open Electives offered by the Department of CSE

1. Python Programming
2. Principles of Cyber Security
3. Internet of Things
4. Machine Learning
5. Digital forensics
6. Next Generation Databases

**R24-COURSE STRUCTURE**  
**M.Tech-POWER & INDUSTRIAL DRIVES**

**M. TECH. - I SEMESTER**

S. No.	Subject	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Electrical Machine Modelling and Analysis	3	-	-	40	60	100	3
2	Analysis of Power Electronic Converters and Inverters	3	-	-	40	60	100	3
3	<b>Program Elective – I</b>	3	-	-	40	60	100	3
	<b>a. Power Semiconductor Devices and protection</b>							
	b. Programmable Logic Controllers & Applications							
	c. Micro controller and its Applications							
4	<b>Program Elective – II</b>	3	-	-	40	60	100	3
	a. Artificial Intelligence Techniques							
	<b>b. Special Machines and Control</b>							
	c. Flexible AC Transmission Systems							
5	d. Applications of Power Converters	2	-	-	40	60	100	2
	Research Methodology and IPR							
6	Power Electronics Simulation Laboratory	-	-	4	40	60	100	2
7	Power Converters Laboratory	-	-	4	40	60	100	2
8	Audit Course – 1	2	-	-	40	60	100	-
	Total	16	-	8	320	480	800	<b>18</b>

L: Lecture  
T: Tutorial  
P: Practical

*Usw*

**M. TECH. - II SEMESTER**

S. No.	Subject	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Control of DC and AC Drives	3	-	-	40	60	100	3
2	Power System Deregulation	3	-	-	40	60	100	3
3	<b>Program Elective – III</b> a. Smart Grid b. Power Quality c. Control & Integration of Renewable Energy Systems d. Reactive power compensation and management	3	-	-	40	60	100	3
4	<b>Program Elective – IV</b> a. Custom Power Devices b. Digital Control Systems c. High Voltage DC Transmission d. Power System Stability	3	-	-	40	60	100	3
5	Electric Drives Simulation Laboratory	-	-	4	40	60	100	2
6	Electric Drives Laboratory	-	-	4	40	60	100	2
7	Mini Project with Seminar	-	-	4	100	-	100	2
8	Audit Course – 2	2	-	-	40	60	100	-
	Total	14	-	12	380	420	800	18


**Principal**
**NARASARAOPETA ENGINEERING COLLEGE**
**(AUTONOMOUS)**

NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**M. TECH. – III SEMESTER**

S. No.	Subject	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	<b>Program Elective – V</b> a. Digital Signal Processor Controlled Drives <b>b. Hybrid Electric Vehicles</b> c. Distributed Generation and Microgrid d. Switched Mode Power Conversion	3	-	-	40	60	100	3
2	<b>Open Elective</b>	3	-	-	40	60	100	3
3	Dissertation Phase - I <b>(to be continued and evaluated next semester)</b>	-	-	20	-	-	-	10
	Total	6	-	20	80	120	200	16

**M. TECH. – IV SEMESTER**

S. No.	Subject	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Dissertation Phase-II <b>(continued from III semester)</b>	-	-	32	40	60	100	16

**Open Electives offered by Department of EEE**

- Energy Audit, Conservation and Management
- Renewable Energy Sources
- Electrical Safety

**Audit course 1 & 2**

- English for Research Paper Writing
- Disaster Management
- Sanskrit for Technical Knowledge
- Value Education
- Constitution of India
- Pedagogy Studies
- Stress Management by Yoga
- Personality Development through Life Enlightenment Skills.

**NARASARAOPETA ENGINEERING COLLEGE (Autonomous)::NARASARAOPET**  
M.Tech. (Machine Design)

**R24 Course Structure**

**COURSE: M.TECH I SEMESTER**

S.NO	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Research Methodology and IPR	4	-	-	40	60	100	3
2	Advanced Mechanics Of Solids	4	-	-	40	60	100	3
3	Mechanical Vibrations	4	-	-	40	60	100	3
4	<b>Programme Elective -I</b>	4	-	-	40	60	100	3
	Theory Of Elasticity and Plasticity							
	Tribology							
	Rotor Dynamics							
5	<b>Programme Elective -II</b>	4	-	-	40	60	100	3
	Gear Engineering							
	Non-Destructive Evaluation							
	Material Technology							
6	Advanced Computer Aided Design	-	-	6	40	60	100	3
	Machine Dynamics Lab							
	<b>TOTAL</b>	<b>20</b>	<b>-</b>	<b>6</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>18</b>

**COURSE: M.TECH II SEMESTER**

S.NO	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Finite Element Methods	4	-	-	40	60	100	3
2	Experimental Stress Analysis	4	-	-	40	60	100	3
3	Fracture Mechanics	4	-	-	40	60	100	3
4	<b>Programme Elective -III</b>	4	-	-	40	60	100	3
	Advanced Optimization Techniques							
	Theory Of Plates & Shells							
	Condition Monitoring							
5	<b>Programme Elective -IV</b>	4	-	-	40	60	100	3
	Industrial Robotics							
	Mechanics of Composite Materials							
	Computer Integrated Manufacturing							
6	Pressure Vessel Design	-	-	6	40	60	100	3
	Advanced Computer Aided Design & Analysis Lab							
	<b>TOTAL</b>	<b>20</b>	<b>-</b>	<b>6</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>18</b>



Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

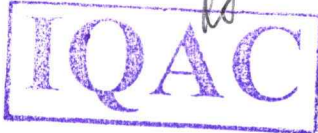
**COURSE: M.TECH III SEMESTER**

S.NO	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	<b>Programme Elective –V*</b>	4	-	-	40	60	100	3
	Analysis and Synthesis of Mechanisms							
	Additive Manufacturing							
	Vehicle Dynamics Mechatronics							
2	<b>Open Elective</b> Should register for courses offered by other department	4	-	-	40	60	100	3
6	Dissertation Phase - I	-	-	-				10
	<b>TOTAL</b>				<b>80</b>	<b>120</b>	<b>200</b>	<b>16</b>

\*Students going for Industrial Project/ Thesis will complete programme elective course and open elective courses through MOOCs

**COURSE: M.TECH IV SEMESTER**

S.NO	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Dissertation Phase - II	-	-	-	-	-	-	16
	<b>TOTAL</b>							<b>16</b>



  
Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION  
ENGINEERING**

**M.TECH COURSE STRUCTURE**

**DIGITAL ELECTRONICS AND COMMUNICATION SYSTEMS (DECS)**

**I M.TECH-I SEMESTER**

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Digital System Design	3	-	-	40	60	100	3
2	Digital Data Communications	3	-	-	40	60	100	3
3 a.	<b>Elective I</b> a). Transform Techniques b). VLSI Technology and Design c). Radar Signal Processing d). Internet Protocols	3	-	-	40	60	100	3
4 a.	<b>Elective II</b> a). Statistical Signal Processing b). Optical Communication Technology c). Network Security & Cryptography d). Software Defined Radio	3	-	-	40	60	100	3
5	System Design Using Verilog HDL Laboratory	-	-	4	40	60	100	2
6	Data Communications Laboratory	-	-	4	40	60	100	2
7	Research Methodology and IPR	2	-	-	40	60	100	2
8	Audit Course 1	2	-	-				0
	<b>TOTAL</b>	16	-	8				18

  
**IQAC**

  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

I M.TECH-II SEMESTER

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Image and Video Processing	3	-	-	40	60	100	3
2	Wireless Communications and Networks	3	-	-	40	60	100	3
3	<b>Elective III</b> a. a). CMOS Analog & Digital IC Design b. b). Advanced Computer Architecture c. c). Soft Computing Techniques d. d). System On Chip Design	3	-	-	40	60	100	3
4	<b>Elective IV</b> a. a). DSP Processors and Architectures b. b). EMI/ EMC c. c). Object Oriented Programming d. d). Embedded Real Time Operating Systems	3	-	-	40	60	100	3
5	Advanced Communications Laboratory	-	-	4	40	60	100	2
6	Advanced digital Image & video processing Laboratory	-	-	4	40	60	100	2
7	Mini Project (with seminar check)	-	-	4	40	60	100	2
8	Audit Course – 2	2	-		-	-		0
	TOTAL	14						18



  
Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

## II M.TECH-I SEMESTERS

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	<b>Elective V</b> a) a). Detection & Estimation Theory b) b). Advanced Digital Signal Processing c). Coding Theory Applications d). Digital Design Using HDL	3	-	-	40	60	100	3
	<b>Open Elective</b> 1. 1. Business Analytics 2 2. Industrial Safety 3. 3. Operations Research 4. 4. Cost Management of Engineering Projects 5. 5. Composite Materials 6. 6. Waste to Energy	3	-	-	40	60	100	3
3	Dissertation Phase -I /Industrial Project (to be continued and evaluated next semester)	-	-	20				10
	<b>TOTAL</b>	6						16

## II M.TECH-II SEMESTERS

Marks: 100

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	Dissertation	Project/ Dissertation Phase-II (continued from III semester)			0	0	32	16
Total								16

### Audit Course 1& 2

English for Research Paper Writing  
Disaster Management  
Sanskrit for Technical Knowledge  
Value Education  
Constitution of India  
Pedagogy Studies  
Stress Management by Yoga  
Personality Development through Life Enlightenment Skills

				INTERNAL	EXTERNAL	TOTAL	
--	--	--	--	----------	----------	-------	--

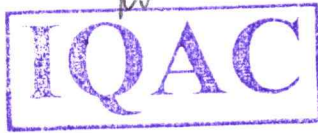


*Principal*  
Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPET - 522 601, Palnadu (Dist.). A P

**COURSE STRUCTURE & SYLLABUS  
FOR  
M. Tech-ECE-DIGITAL SYSTEMS AND COMPUTER ELECTRONICS (DSCE)**

**I M.TECH-I SEMESTER**

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	VLSI Technology and Design	3	-	-	40	60	100	3
2	Digital Data Communications	3	-	-	40	60	100	3
3	<b>Elective I</b> 1. Digital System Design 2. Wireless Communications and Networks 3. Internet Protocols 4. Transform Techniques	3	-	-	40	60	100	3
4	<b>Elective II</b> 1. Software Defined Radio 2. Network Security and Cryptography 3. Image & Video Processing 4. Statistical Signal Processing	3	-	-	40	60	100	3
5	System Design & Data Communications Lab	-	-	4	40	60	100	2
6	VLSI Technology Lab	-	-	4	40	60	100	2
7	Research Methodology and IPR	2	-	-	40	60	100	2
8	Audit Course I	2	-	-				0
	<b>TOTAL</b>	16						18



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**I M.TECH-II SEMESTER**

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Internet Of Things& Applications	3	-	-	40	60	100	3
2	DSP Processors& Architecture	3	-	-	40	60	100	3
3	<b>Elective III</b> 1. System On Chip Design 2. Soft Computing Techniques 3. Cyber Security 4. Detection & Estimation Theory	3	-	-	40	60	100	3
4	<b>Elective IV</b> 1. Embedded Real Time Operating Systems 2. High Speed Networks 3. EMI/EMC 4. Radar Signal Processing	3	-	-	40	60	100	3
5	Advanced Internet Of Things(IOT)Laboratory	-	-	4	40	60	100	2
6	DSP Processors & Architecture Laboratory	-	-	4	40	60	100	2
7	Mini Project	-	-	4	40	60	100	2
8	Audit Course2	2	-		-	-		0
	<b>TOTAL</b>	<b>14</b>						<b>18</b>



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 NARASARAOPET - 522 601, Palnadu (Dist.). A P

## II M.TECH-I SEMESTERS

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	<b>Elective V</b> 1. Digital Design Using HDL 2. CMOS Analog and Digital IC Design 3. Advanced Computer Architecture 4. Object Oriented Programming	3	-	-	40	60	100	3
2	<b>Open Elective</b> 1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy	3	-	-	40	60	100	3
3	Dissertation Phase -I /Industrial Project (to be continued and evaluated next semester)	-	-	20				10
	<b>TOTAL</b>	6						16

## M.TECH-II SEMESTERS


Marks: 100

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	Dissertation	Project/ Dissertation Phase-II (continued from III semester)			0	0	32	16
Total								16

### Audit Course 1 & 2

- English for Research Paper Writing
- Disaster Management



  
 Principal  
 NARASARAOPETA ENGINEERING COLLEGE  
 (AUTONOMOUS)  
 NARASARAOPET - 522 601, Palnadu (Dist.). A P

**COURSE: MTECH I SEMESTER( R24)**

S. No.	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Research Methodology and IPR	3	-	-	40	60	100	3
2	Advanced Thermodynamics	3	-	-	40	60	100	3
3	Advanced Heat & Mass Transfer	3	-	-	40	60	100	3
4	<b>Elective -I</b>							
	Gas Dynamics	3	-	-	40	60	100	3
	Fuels and Combustion							
	Measurements in Thermal Engineering							
5	<b>Elective -II</b>							
	Finite Element Methods for Thermal Engineering	3	-	-	40	60	100	3
	Hydrogen and Fuel Cell Technologies							
	Thermal & Nuclear power plants							
6	Advanced thermal engineering lab	-	-	6	40	60	100	3
	<b>TOTAL</b>	<b>15</b>	<b>-</b>	<b>6</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>18</b>



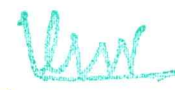
*Principal*

Principal  
 NARASARAOPETA ENGINEERING COLLEGE  
 (AUTONOMOUS)  
 NARASARAOPET - 522 601, Palnadu (Dist.). A.P

**COURSE: MTECH II SEMESTER**

S. No.	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Computational Fluid Dynamics	3	-	-	40	60	100	3
2	Design of Thermal Systems	3	-	-	40	60	100	3
3	Advanced Refrigeration & Air Conditioning	3	-	-	40	60	100	3
4	<b>Elective -III</b>							
	Energy Conservation Management	3	-	-	40	60	100	3
	Solar Energy Technology							
	Renewable Energy Technology							
5	<b>Elective -IV</b>							
	Environmental Pollution and Management	3	-	-	40	60	100	3
	Engine Emission Control							
	Alternate fuels and Analysis							
6	Computational methods lab	-	-	6	40	60	100	3
	<b>TOTAL</b>	15	-	6	240	360	600	18



  
 Principal  
 NARASARAOPETA ENGINEERING COLLEGE  
 (AUTONOMOUS)  
 NARASARAOPET - 522 601, Palnadu (Dist.), A.P.

**COURSE: MTECH III SEMESTER**

S. No.	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	<b>Elective -V</b>							
	Automotive Engineering	3	-	-	40	60	100	3
	Advanced IC Engines							
	Gas Turbines and Jet Propulsion							
2	<b>Open Elective</b>							
	Students are advised to opt for an open elective course of their choice being offered by other Departments of the Institute (OR) MOOCS/NPTEL certification courses duly approved by the Department	3	-	-	40	60	100	3
3	Dissertation Phase-I	-	-	20	-	-	-	10
	<b>TOTAL</b>	6	-	20	80	120	200	16

**COURSE: MTECH IV SEMESTER**

S. No.	SUBJECT NAME	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Dissertation Phase-II	-	-	32	-	-	-	16
	<b>TOTAL</b>	-	-	32	-	-	-	16



*Usw*  
Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPET - 522 601, Palnadu (Dist.). A P

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

M.TECH COURSE STRUCTURE  
VLSI & Embedded Systems (VLSI&ES)

I M.TECH-I SEMESTER

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	RTL Simulation and Synthesis with PLDs	3	-	-	40	60	100	3
2	Microcontrollers and Programmable Digital Signal Processors	3	-	-	40	60	100	3
3	<b>Elective I</b> 1. Digital Signal and Image Processing 2. Parallel Processing 3. VLSI signal processing 4. VLSI Technology and Design	3	-	-	40	60	100	3
4	<b>Elective II</b> 1. Programming Languages for Embedded Systems 2. System Design with Embedded 3. Linux3.CAD of Digital System 4. Statistical Signal Processing	3	-	-	40	60	100	3
5	Research methodology and IPR	-	-	4	40	60	100	2
6	RTL Simulation and Synthesis with PLDs Lab	-	-	4	40	60	100	2
7	Microcontrollers and Programmable Digital Signal Processors Lab	2	-	-	40	60	100	2
8	Audit course-1	2	-	-				0
	TOTAL	16		8				18




*Usw*  
Principal  
NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)  
NARASARAOPETA - 522 601, Palnadu (Dist.), A.P



## I M.TECH-II SEMESTER

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	Analog and Digital CMOS VLSI Design	3	-	-	40	60	100	3
2	Real Time Operating Systems	3	-	-	40	60	100	3
3	<b>Elective III</b> 1. Memory Architectures 2. SoC Design 3. Low power VLSI Design 4. CMOS Analog & Digital IC Design	3	-	-	40	60	100	3
4	<b>Elective IV</b> 1. Communication Buses and Interfaces 2. Network Security and 3. Cryptography 4. Physical design automation	3	-	-	40	60	100	3
5	Analog and Digital CMOS VLSI Design Lab	-	-	4	40	60	100	2
6	Real Time Operating Systems Lab	-	-	4	40	60	100	2
7	Mini Project	-	-	4	40	60	100	2
8	Audit Course – 2	2	-		-	-		0
	<b>TOTAL</b>	14						18



  
**Principal**  
**NARASARAOPETA ENGINEERING COLLEGE**  
**(AUTONOMOUS)**  
 Narasaraopeta - 522 601, Palnadu (Dist) A.P.



## II M.TECH-I SEMESTERS

S.No	Course Name	L	T	P	Internal Marks	External Marks	Total Marks	Credits
1	<b>Elective V</b> 1. IOT and its Applications 2. Hardware Software co-design 3. Artificial Intelligence 4. Digital Design Using HDL	3	-	-	40	60	100	3
2	<b>Open Elective</b> 1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy	3	-	-	40	60	100	3
3	Dissertation Phase -I /Industrial Project (to be continued and evaluated next semester)	-	-	20				10
	<b>TOTAL</b>	6						16

## II M.TECH-II SEMESTERS

Marks: 100

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	Dissertation	Project/ Dissertation Phase-II (continued from III semester)			0	0	32	16
Total								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

Page 7



NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)

*[Signature]*

Principal

NARASARAOPETA ENGINEERING COLLEGE  
(AUTONOMOUS)

NARASARAOPET - 522 601, Palnadu (Dist.) A.P.