ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

CIVIL ENGINEERING

For

B.Tech., FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2013-14)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533003, ANDHRA PRADESH, INDIA.

IV Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Environmental Engineering – II	3+1*	--	3
2	Prestressed Concrete	3+1*	--	3
3	Construction Technology and Management	3+1*	--	3
4	Water Resources Engineering–II	3+1*	--	3
5	Remote Sensing and GIS Applications	3+1*	--	3
6	**ELECTIVE - I**	3+1*	--	3
7	Environmental Engineering Lab	--	3	2
8	GIS & CAD Lab	--	3	2
Total Credits				**22**

IV Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Estimating, Specifications & Contracts	3+1*	--	3
2	**ELECTIVE –II**	3+1*	--	3
3	**ELECTIVE – III**	3+1*	--	3
4	**ELECTIVE – IV**	3+1*	--	3
5	Project Work			9
Total Credits				**21**

OPEN ELECTIVE:

a) Environmental Pollution and Control
b) Disaster Management
c) Industrial Water & Waste Water Management
d) Architecture and Town Planning
e) Finite Element Method
f) Green Technologies

Elective-I:

a) Ground Improvement Techniques
b) Air Pollution and Control
c) Matrix methods of Structural Analysis
d) Urban Hydrology
e) Advanced Surveying
f) Interior Designs and Decorations

Head of The Department
CIVIL ENGINEERING
NRI Institute of Technology
POTHAVARAPPADU.

ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

ELECTRICAL AND ELECTRONICS ENGINEERING

For

B.Tech., FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2013-14)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533003, ANDHRA PRADESH, INDIA.

2	Microprocessors & Microcontrollers	3+1	--	3
3	Utilization of Electrical Energy	3+1	--	3
4	Power System Analysis	3+1	--	3
5	Power Semiconductor Drives	3+1	--	3
6	Management Science	3+1	--	3
7	Power Electronics Lab	--	3	2
8	Electrical Measurements Lab	--	3	2
Total Credits				**22**

IV Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Renewable Energy Sources and Systems	3+1	-	3
2	HVAC & DC Transmission	3+1	-	3
3	Power System Operation & Control	3+1	-	3
4	**Open Elective**	3+1	-	3
5	**Elective – I**	3+1	-	3
6	Microprocessors & Microcontrollers Lab	-	3	2
7	Electrical Simulation Lab	-	3	2
8	Power systems lab		3	2
Total Credits				**21**

IV Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Digital Control Systems	3+1	-	3
2	**Elective – II**	3+1	-	3
3	**Elective – III**	3+1	-	3
4	**Elective – IV**	3+1	-	3
5	Project	-	-	9
Total Credits				**21**

Open Elective:

1. Energy Audit, Conservation and Management
2. Instrumentation
3. Non Conventional Sources of Energy
4. Optimization Techniques

Dr. N. SAMBASIVA RAO
B.Tech, M.Tech, Ph.D, MISTE
Head of the Department & Professor of EEE
NRI INSTITUTE OF TECHNOLOGY (KN)

ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

MECHANICAL ENGINEERING

For

B.Tech., FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2013-14)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

KAKINADA – 533003, ANDHRA PRADESH, INDIA.

R13

III Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Operations Research	3+1*		3
2	Interactive Computer Graphics	3+1*		3
3	Design of Machine Members– II	3+1*		3
4	Robotics	3+1*		3
5	Heat Transfer	3+1*		3
6	Industrial Engineering Management	3+1*		3
7	**Departmental Elective – I**	3+1*		3
8	Heat Transfer Lab		3	2
	Total Credits			23

IV Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Automobile Engineering	3+1*		3
2	CAD/CAM	3+1*		3
3	Finite Element Methods	3+1*		3
4	Unconventional Machining Processes	3+1*		3
5	**Open Elective**	3+1*		3
6	**Departmental Elective – II**	3+1*		3
7	Simulation Lab		3	2
8	Design/Fabrication Project		2	1
	Total Credits			**21**

IV Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Production Planning and Control	3+1*		3
2	Green Engineering Systems	3+1*		3
3	**Departmental Elective – III**	3+1*		3
4	**Departmental Elective – IV**	3+1*		3
5	Project Work			9
	Total Credits			**21**

OPEN ELECTIVE:

1. MEMS
2. Nanotechnology

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Agiripalli (Mdl), Krishna Dist.

ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

ELECTRONICS & COMMUNICATION ENGINEERING

For

B.Tech., FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted from 2013-14)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533003, ANDHRA PRADESH, INDIA.

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IV Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	VLSI Design	3+1	-	3
2	Computer Networks	3+1	-	3
3	Digital Image Processing	3+1	-	3
4	Computer Architecture & Organization	3+1	-	3
5	**Elective – I** 1. Electronic Switching Systems 2. Analog IC Design 3. Object Oriented Programming & O S 4. Radar Systems 5. Advanced Computer Architecture	3+1	-	3
6	**Elective – II** 1. Optical Communication 2. Digital IC Design 3. Speech Processing 4. Artificial Neural Network & Fuzzy Logic 5. Network Security & Cryptography	3+1	-	3
7	V L S I Lab	-	3	2
8	Microwave Engineering Lab	-	3	2
Total Credits				**22**

IV Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	Cellular Mobile Communication	3+1		3
2	Electronic Measurements and Instrumentation	3+1		3
3	**Elective III** 1. Satellite Communication 2. Mixed signal Design 3. Embedded systems 4. RF Circuit Design 5. Cloud Computing	3+1		3
4	**Elective IV** 1.Wireless Sensors and Networks 2.System on Chip 3.Low Power IC Design 4.Bio-Medical Instrumentation 5.EMI/EMC	3+1		3
5	Project & Seminar			9
Total Credits				**21**

Head, ECE Department
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ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

COMPUTER SCIENCE AND ENGINEERING

For

COMPUTER SCIENCE AND ENGINEERING FOUR DEGREE COURSE

(Applicable for batches admitted from 2013-2014)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA - 533 003, Andhra Pradesh, India

IV Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	**Elective – III**	4	-	3
2	**Elective – IV**	4	-	3
3	Distributed Systems	4	-	3
4	Management Science	4	-	3
5	Project	-	-	9
	Total Credits			**21**

Elective – I:
i) Software Testing Methodologies
ii) Simulation Modeling
iii) Information Retrieval Systems
iv) Artificial Intelligence
v) Multimedia Computing
vi) High Performance Computing

Elective – II:
i. Digital Forensics
ii. Hadoop and Big Data
iii. Software Project Management
iv. Machine Learning
v. Advanced Databases

Elective – III:
i) Human Computer Interaction
ii) Advanced Operating Systems
iii) Mobile Adhoc & Sensor Networks
iv) Pattern Recognition
v) Digital Image Processing
vi) Micro processers and Multi Core Systems

Elective-IV:
i) Embedded and Real Time Systems
ii) Neural Networks & Soft Computing
iii) Social Networks and the Semantic Web
iv)Cloud Computing

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Agiripalli (Mdl.), Krishna Dist.

ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

INFORMATION TECHNOLOGY

For

INFORMATION TECHNOLOGY FOUR DEGREE COURSE

(Applicable for batches admitted from 2013-2014)

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KAKINADA - 533 003, Andhra Pradesh, India

IV Year – I SEMESTER

S. No.	Subject	T	P	Credits
1	Cryptography and Network Security	4	-	3
2	UML & Design Patterns	4	-	3
3	Mobile Computing	4	-	3
4	**Elective –I**	4	-	3
5	**Elective – II**	4	-	3
6	UML & Design Patterns Lab	-	3	2
7	Mobile Application Development Lab	-	3	2
8	Software Testing Lab	-	3	2
9	Hadoop & BigData Lab	-	3	2
Total Credits				**23**

IV Year – II SEMESTER

S. No.	Subject	T	P	Credits
1	**Elective – III**	4	-	3
2	Distributed Systems	4	-	3
3	Mathematical Opimization (LP, Scheduling, Simulation, QT, Markov analysis, NLP, PERT CPM Network related problems etc)	4	-	3
4	Management Science	4	-	3
5	Project	-	-	9
Total Credits				**21**

Elective – I:
i) Embedded and Real Time Systems
ii) Information Retrieval Systems
iii) Multimedia Computing

Elective – II:
i. Hadoop and Big Data
ii. Software Project Management
iii. Computer Vision
iv. Advanced Databases

Elective – III:
i) Human Computer Interaction
ii) Advanced Operating Systems
iii)Mobile Adhoc & Sensor Networks
iv)Pattern Recognition

Head, IT Department
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Agiripalli (M), Krishna Dist

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ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

For

CIVIL ENGINEERING

M.Tech. - STRUCTURAL ENGINEERING

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III SEMESTER

1	Seminar	—	—	2
2	Dissertation / Thesis	—	—	18
	Total			**20**

IV SEMESTER

1	Seminar	—	—	2
2	Dissertation / Thesis	—	—	18
	Total			**20**

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ACADEMIC REGULATIONS
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AND
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For
M.Tech: EEE

Common Specializations:

I. Power Electronics
II. Power Industrial Drives
III. Power and Industrial Drives
IV. Power Electronics and Electrical Drives
V. Power Electronics and Drives
VI. Power Electronics and systems
VII. Electrical Machines and Drives

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M.Tech - PED - R13

III SEMESTER

1	Seminar – I	—	—	2
2	Project Work - I	—	—	18
	Total			**20**

IV SEMESTER

1	Seminar – II	—	—	2
2	Project Work - II	—	—	18
	Total			**20**

Dr. N. SAMBASIVA RAO
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Controller of Examinations & Professor of E
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ACADEMIC REGULATIONS
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AND
DETAILED SYLLABUS

For

M.Tech. MECHANICAL BRANCH

Specialization :

THERMAL ENGINEERING

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KAKINADA - 533 003, Andhra Pradesh, India

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R13 M Tech

	ADVANCED AUTOMOBILE ENGG			
6	ELECTIVE- IV THERMAL MEASUREMENTS AND PROCESS CONTROLS CRYOGENIC ENGINEERING JET PROPULSION AND ROCKETRY EQUIPMENT DESIGN FOR THERMAL SYSTEMS	4	0	3
7	THERMAL SYSTEMS DESIGN LAB	0	6	4
	TOTAL			22

III SEMESTER

1	SEMINAR - I	0	3	2
2	COMPREHENSIVE VIVA VOCE			2
3	PROJECT - PART I			14
	TOTAL			18

IV SEMESTER

1	SEMINAR -II	0	3	2
2	PROJECT PART II & VIVA VOCE			18
	TOTAL			20

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NRI Institute of Technology
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Agiripalli (Mdl), Krishna Dist.

ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

For

ECE BRANCH

COMMON FOR

DIGITAL ELECTRONICS AND COMMUNICATION SYSTEMS
ELECTRONICS & COMMUNICATION ENGINEERING
DIGITAL ELECTRONICS AND COMMUNICATION ENGINEERING

JAWAHARLAL NEHRU TECHNOLOGY UNIVERSITY KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Specialization: Communication Systems

COURSE STRUCTURE

I SEMESTER

S.No	Name of the Subject	L	P	C
1	1. Digital System Design	4	-	3
2	2. Detection & Estimation Theory	4	-	3
3	3. Digital Data Communications	4	-	3
4	4. Advanced Digital Signal Processing	4	-	3
5	**Elective I** 1. Transform Techniques 2. VLSI Technology & Design	4	-	3
6	**Elective II** 1. Statistical Signal Processing 2. Optical Communication Technology	4	-	3
7	**Laboratory** 1. Design & Simulation Lab	-	3	2
	TOTAL			**20**

II SEMESTER

1	1. Coding Theory & Applications	4	-	3
2	2. Embedded Real Time Operating Systems	4	-	3
3	3. Image and Video Processing	4	-	3
4	4. Wireless Communications & Networks	4	-	3
5	**Elective III** 1. CMOS Analog & Digital IC Design 2. Advanced Computer Architecture	4	-	3
6	**Elective IV** 1. DSP Processors and Architectures 2. EMI / EMC	4	-	3
7	Laboratory. 1. Advanced Communications Laboratory	-	3	2

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III – SEMESTER

1	Seminar	—	—	2
2	Project	—	—	18
	Total			**20**

IV – SEMESTER

1	Seminar	—	—	2
2	Project (Continued)	—	—	18
	Total			**20**

The project will be evaluated at the end of the IV Semester

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Agiripalli (Mdl), Krishna Dist.

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ACADEMIC REGULATIONS
COURSE STRUCTURE
AND
DETAILED SYLLABUS

For

COMPUTER SCIENCE ENGINEERING BRANCH

COMPUTER SCIENCE

JAWAHARLAL NEHRU TECHNOLOGY UNIVERSITY KAKINADA

KAKINADA - 533 003, Andhra Pradesh, India

III SEMESTER

S.NO.	SUBJECT	L	P	C
1	COMPREHENSIVE VIVA	—	—	2
2	SEMINAR-I	—	—	2
3	PROJECT WORK PART - I	—	—	16
	TOTAL			20

IV SEMESTER

S.NO.	SUBJECT	L	P	C
1	SEMINAR-II	—	—	2
2	PROJECT WORK PART - II	—	—	18
	TOTAL			20

Head,
NRI Inst.
POTHAI
Agiripalli

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

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

SYLLABUS

Head of The Department
CIVIL ENGINEERING
NRI Institute of Technology

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

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**

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B.Tech, M.Tech, Ph.D, MISTE
Head of the Department & Professor of EEE
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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

R16

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

Hod, Mechanical Department
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POTHAVARAPPADU (Vill)
Agiripalli (Md), Krishna Dist.

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

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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

Head, ECE Department
Institute of Technology
POTHAVARAPPADU (Vill)
Agiripalli (Mdl), Krishna Dist.

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NRI INSTITUTE OF TECHNOLOGY

(An Autonomous Institution Permanently Affiliated to JNTUK, Kakinada)(Accredited by NAAC with "A" Grade and ISO 9001:2015 Certified Institution)POTHAVARAPPADU (V), (VIA) NUNNA, AGIRIPALLI (M), PIN – 521 212

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE STRUCTURE FOR FOURTH YEAR B.TECH PROGRAMME

IV YEAR I SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4104401	Microwave Engineering	3	1	-	4	40	60	100	4
2	18A4104402	Optical Communication	3	-	-	3	40	60	100	3
3	18A4104403	Digital Image Processing	3	1	-	4	40	60	100	4
4	18A4104511	Satellite Communications & Radar Engineering	3	-	-	3	40	60	100	3
5	18A4104513	Embedded System Design	3	-	-	3	40	60	100	3
	18A4104522	Operating Systems								
	18A4104521	Data Communications								
6	18A4100803	Indian Constitution	2	-	-	2	40	60	100	0
7	18A4104491	Microwave Engineering & OC Lab	-	-	2	2	40	60	100	1
8	18A4104791	Mini Project	-	-	8	8				4
Total			17	1	14	32	320	480	800	22

IV YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4204511	Wireless Communication Networks	3	-	-	3	40	60	100	3
2	18A4204521	Computer Networks	3	-	-	3	40	60	100	3
	18A4204522	Internet Of Things And Applications								
3	18A4204791	Main Project And Seminar	-	-	16	16	80	120	200	8
		Total	**6**	**-**	**16**	**22**	**160**	**240**	**400**	**14**

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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

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**

Head, CSE Department
NRI Institute of Technology
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COURSE STRUCTURE AND SYLLABUS

FOR

INFORMATION TECHNOLOGY

(Applicable for batches admitted from 2016-2017)

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

IV Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Cryptography and Network Security	4	--	--	3
2	Mobile Computing	4	--	--	3
3	Data Ware Housing and Business Intelligence	4	--	--	3
4- HS	Managerial Economics and Financial Analysis	4	--	--	3
5	**Elective-I** i. Big Data Analytics ii. Information Retrieval Systems iii. Internet of Things iv. Multimedia Programming	4	--	--	3
6	**Elective-II** i. Cloud Computing ii. Software Project Management iii. Machine Learning iv. Decision Support System	4	--	--	3
7	Mobile Computing Lab	--	--	3	2
8	Cryptography and Network Security 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	Management Information System	4	--	--	3
4	**Elective-III** i. Concurrent and Parallel Programming ii. Cyber Security iii. Artificial Neural Networks iv. Software Quality Assurance	4	--	--	3
5	Seminar	--	3	--	2
6	Project	--	--	--	10
	Total credits				**24**

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

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ACADEMIC REGULATIONS & COURSE STRUCTURE

For

STRUCTURAL ENGINEERING

(Applicable for batches admitted from 2016-2017)

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III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	--	--	2
2	Seminar – I	--	--	2
3	Project Work Part - I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

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ACADEMIC REGULATIONS & COURSE STRUCTURE

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POWER AND INDUSTRIAL DRIVES (P&ID)
POWER ELECTRONICS AND ELECTRICALDRIVES (PE &ED)
POWER ELECTRONICS AND DRIVES (PE&D)
POWER ELECTRONICS AND SYSTEMS (PE&S)
ELECTRICAL MACHINES AND DRIVES (EM&D)

(Applicable for batches admitted from 2016-2017)

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III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	--	--	2
2	Seminar – I	--	--	2
3	Project Work Part - I	--	--	16
	Total Credits			**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
	Total Credits			**20**

Dr. N. SAMBASIVA RAO
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SEMESTER-III

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	--	--	2
2	Seminar – I	--	--	2
3	Project Work Part - I	--	--	16
	Total Credits			**20**

SEMESTER-IV

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
	Total Credits			**20**

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ACADEMIC REGULATIONS & COURSE STRUCTURE

For

DECS, ECE, DECE

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ACADEMIC REGULATIONS & COURSE STRUCTURE

For

DECS, ECE, DECE

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I Semester

S. No.	Name of the Subject	L	P	C
1	Digital System Design	4	-	3
2	Detection & Estimation Theory	4	-	3
3	Digital Data Communications	4	-	3
4	Advanced Digital Signal Processing	4	-	3
5	**Elective I** I. Transform Techniques II. VLSI Technology & Design III. Radar Signal Processing	4	-	3
6	**Elective II** I. Statistical Signal Processing II. Optical Communication Technology III. Network Security & Cryptography	4	-	3
7	1. System Design & Data Communications Lab	-	3	2
	Total Credits			**20**

II Semester

S. No.	Name of the Subject	L	P	C
1	Coding Theory & Applications	4	-	3
2	Embedded System Design	4	-	3
3	Image and Video Processing	4	-	3
4	Wireless Communications & Networks	4	-	3
5	**Elective III** I. CMOS Analog & Digital IC Design II. Advanced Computer Architecture III. Soft Computing Techniques IV. Cyber Security	4	-	3
6	**Elective IV** I. DSP Processors and Architectures II. EMI / EMC III. Object Oriented Programming	4	-	3
7	Advanced Communications Laboratory	-	3	2
	Total Credits			**20**

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III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	--	--	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
	Total Credits			**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
	Total Credits			**20**

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ACADEMIC REGULATIONS & COURSE STRUCTURE

For

COMPUTER SCIENCE & ENGINEERING

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I Semester

S.No.	SUBJECT	L	P	C
1	ADVANCED DATA STRUCTURES AND ALGORITHM ANALYSIS	4	--	3
2	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	4	--	3
3	COMPUTER ORGANIZATION AND ARCHITECTURE	4	--	3
4	DATABASE MANAGEMENT SYSTEMS	4	--	3
5	ADVANCED OPERATING SYSTEMS	4	--	3
6	DATA WAREHOUSING AND DATA MINING	4	--	3
7	CSE LAB 1	--	3	2
	Total Credits			**20**

II Semester

S.No.	SUBJECT	L	P	C
1	CYBER SECURITY	4	--	3
2	COMPUTER NETWORKS	4	--	3
3	BIG DATA ANALYTICS	4	--	3
4	ADVANCED UNIX PROGRAMMING	4	--	3
5	**Elective – 1** 1. SOFTWARE ENGINEERING 2. ARTIFICIAL INTELLIGENCE 3. COMPILER DESIGN 4. MACHINE LEARNING	4	--	3
6	**Elective – 2** 1. IMAGE PROCESSING 2. PARALLEL ALGORITHMS 3. CLOUD COMPUTING 4. MOBILE COMPUTING	4	--	3
7	CSE LAB 2	--	3	2
	Total Credits			**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	--	--	2
2	Seminar – I	--	--	2
3	Project Work Part - I	--	--	16
	Total Credits			**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
	Total Credits			**20**

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Chairman BOS
Department of Computer Science & Engineering
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University Updates

ACADEMIC REGULATIONS
(NRIA18)
COURSE STRUCTURE
AND
DETAILED SYLLABUS
(I YEAR)

CIVIL ENGINEERING

For

B.Tech FOUR YEAR DEGREE COURSE

(Applicable from 2018-19 Batches)

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DEPARTMENT OF CIVIL ENGINEERING

COURSE STRUCTURE FOR FOURTH YEAR B.TECH PROGRAMME

IV YEAR I SEMESTER

Sl. No	ourse Code	Title of the Course	Schemeof Instruction (Periods PerWeek)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4101401	Pre-stressed concrete Structures	2	1	0	3	40	60	100	3
2	18A4101402	Design of steel structures	2	1	0	3	40	60	100	3
3	18A4101403	Construction Technology & Project Management	2	0	0	2	40	60	100	2
4	18A4101404	Quantity Surveying & Public works	2	1	0	3	40	60	100	3
5	18A41015111 8A4101512 18A4101513 18A4101514 18A4101515	**Professional Elective -4** Finite Element Methods Advanced FoundationEngineering Environmental ImpactAssessment Traffic Engineering Sustainable WaterResources Development	3	0	0	3	40	60	100	3
6	18A4101607 18A4101608	**Open elective -4** Project management Remote sensing and GIS techniques	3	0	0	3	40	60	100	2
7	18A4101491	Structural Designing and drawing using Software's	0	0	3	3	40	60	100	1.5
8	18A4101492	Environmental Engineering Lab	0	0	3	3	40	60	100	1.5
9	18A4101791	Project – I	0	0	6	6	40	60	100	1.5
10	18A4101792	Summer Internship/ Design Project	0	0	0	0	40	60	100	1.5
11	18A4100801	Entrepreneurship	2	0	0	2	40	60	100	0
Total			**16**	**3**	**12**	**31**	**440**	**660**	**1100**	**23**

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DEPARTMENT OF CIVIL ENGINEERING

COURSE STRUCTURE FOR FOURTH YEAR B.TECH PROGRAMME

IV YEAR IISEMESTER

Sl. No	course Code	Title of the Course	Scheme of Instruction (Period Per Week)				Scheme of Examination (Maximum Marks			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
		Professional Elective -5/MOOCS 1/ Sway am								
	18A4201511	Civil Infrastructure for Smart City Development(Sway am)								
	18A4201512	Geo-techniques for Design of Underground Structures	2	1	0	3	40	60	100	3
	18A4201513	Remote Sensing and GIS								
	18A4201514	Road safety Engineering								
	18A4201515	River Basin Management								
		Professional Elective -6/ MOOCS 2/ Sway am								
	18A4201521	Advanced Structural Design								
	18A4201522	Geo synthetics	2	1	0	3	40	60	100	3
	18A4201523	Environmental Economics								
	18A4201524	Urban Transportation Planning								
	18A4201525	Water Shed Management								
	18A4201791	Project - II	0	0	16	16	40	160	200	14
Total			**4**	**2**	**16**	**22**	**120**	**280**	**400**	**20**

Head of The Department
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ACADEMIC REGULATIONS
(NRIA18)
COURSE STRUCTURE
AND
DETAILED SYLLABUS
(I YEAR)

ELECTRICAL AND ELECTRONICS ENGINEERING

For

B.Tech FOUR YEAR DEGREE COURSE

(Applicable from 2018-19 Batches)

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

COURSE STRUCTURE FOR FOURTH YEAR B.TECH PROGRAMME

IV YEAR I SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4102401	Switch Gear and Protection	3	-	-	3	40	60	100	3
2	18A4102402	Power System Operation and Control	3	-	-	3	40	60	100	3
3	18A4102403	Digital Control Systems	3	-	-	3	40	60	100	3
4	18A4102511 18A4102512	**Professional Elective:** 1) Electrical Distribution Systems 2) Power Quality	3	-	-	3	40	60	100	3
5	18A4102521 18A4102522	**Professional Elective:** 1) HVDC Transmission 2) High Voltage Engineering	3	-	-	3	40	60	100	3
6	18A4104609 18A4104610 18A4104611	**OE-IV:** 1) Linear Integrated Circuit and Applications 2) Digital Image Processing 3) Wireless Communications	3	-	-	3	40	60	100	3
7	18A4102491	Power Systems Lab	-	-	3	3	40	60	100	1.5
8	18A4102492	Electrical Engineering Workshop Lab	-	-	3	3	40	60	100	1.5
9	18A4100802	IPR & Patents	2	-	2	2	40	60	100	-
10	18A4102791	Term Paper	-	-	-	-	40	60	100	1
11	18A4102792	Technical Seminar	-	-	-	-	40	60	100	2
Total			**20**	**-**	**8**	**26**	**440**	**660**	**1100**	**24**

IV YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4202511	**Professional Elective:** 1) FACTS 2) Energy Audit, Conservation & Management	3	-	-	3	40	60	100	3
2	18A4202522	**Professional Elective:** 1) Power System Reforms 2) Special Electrical Machines	3	-	-	3	40	60	100	3
3	18A4202791	Project	-	-	3	3	140	60	200	8
Total			**6**	**-**	**3**	**9**	**200**	**180**	**400**	**14**

L - LECTURE T – TUTORIAL P - PRACTICAL CIA – Continuous Internal Assessment
SEA – Semester End Assessment

Dr. N. SAMBASIVA RAO
B.Tech, M.Tech, Ph.D, MISTE
Head of the Department & Professor of EEE
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ACADEMIC REGULATIONS
(NRIA18)
COURSE STRUCTURE
AND
DETAILED SYLLABUS
(I YEAR)

MECHANICAL ENGINEERING

For

B.Tech FOUR YEAR DEGREE COURSE

(Applicable from 2018-19 Batches)

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IV YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	PE	**Professional Elective – V /MOOCS** 1. Nano Technology 2. Introduction to Robotics 3. Energy Conservation and Management 4. Computer Graphics andGeometrical Modeling	3	0	0	3	40	60	100	3
2	PE	**Professional Elective – VI /MOOCS** 1. Design for Manufacturing 2. Automobile Engineering 3. Metal Forming Process 4. Project Management	3	0	0	3	40	60	100	3
3	PR	Major Project				18	80	120	200	8
Total			6	0	0	24	160	240	400	14

L - LECTURE T – TUTORIAL P - PRACTICAL
CIA – Continuous Internal Assessment SEA – Semester End Assessment

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DEPARTMENT OF MECHANICAL ENGINEERING

COURSE STRUCTURE FOR THIRD YEAR B.TECH PROGRAMME

III YEAR I – SEMESTER

S No	Course Code	Title of the Course	Scheme of Instruction (Periods per Week)			Total Contact Hours	Scheme of Examination (Maximum Marks)			No. of Credits
			Lecture	Tutorial	Practical		CIA	SEA	Total	
1	18A3103601 18A3103602	**Open Elective - II** 1. Introduction to Material Handling Equipment. 2. Introduction to Robotics	3	0	0	3	40	60	100	3
2	18A3103401	Design of Machine Elements–II	3	0	0	3	40	60	100	3
3	18A3103402	Dynamics of Machinery	3	0	0	3	40	60	100	3
4	18A3103403	Manufacturing Technology	3	0	0	3	40	60	100	3
5	18A3103404	Applied Thermodynamics	3	0	0	3	40	60	100	3
6	18A3103511 18A3103512 18A3103513 18A3103514	**Professional Elective - I** 1. Rapid Prototyping 2. Automation in Manufacturing 3. Hydraulic and Pneumatic Systems 4. Electric & Hybrid Vehicles	3	0	0	3	40	60	100	3
7	18A3100801	Indian Constitution	3	0	0	3	40	60	100	
8	18A3103491	Machine Tools Lab	0	0	2	2	40	60	100	1
9	18A3103492	Theory of Machines Lab	0	0	2	2	40	60	100	1
10	18A3103791	Minor Project (Design and Fabrication)	0	0	2	2	40	60	100	
		Total	21	0	8	29	400	600	1000	
		Total credits								21

ACADEMIC REGULATIONS
(NRIA18)
COURSE STRUCTURE
AND
DETAILED SYLLABUS
(I YEAR)

ELECTRONICS AND COMMUNICATION ENGINEERING

For

B.Tech FOUR YEAR DEGREE COURSE

(Applicable from 2018-19 Batches)

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE STRUCTURE FOR FOURTH YEAR B.TECH PROGRAMME

IV YEAR I SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4104401	Microwave Engineering	3	1	-	4	40	60	100	4
2	18A4104402	Optical Communication	3	-	-	3	40	60	100	3
3	18A4104403	Digital Image Processing	3	1	-	4	40	60	100	4
4	18A4104511	Satellite Communications & Radar Engineering	3	-	-	3	40	60	100	3
5	18A4104513	Embedded System Design	3	-	-	3	40	60	100	3
	18A4104522	Operating Systems								
	18A4104521	Data Communications								
6	18A4100803	Indian Constitution	2	-	-	2	40	60	100	0
7	18A4104491	Microwave Engineering & OC Lab	-	-	2	2	40	60	100	1
8	18A4104791	Mini Project	-	-	8	8				4
		Total	17	1	14	32	320	480	800	22

IV YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	18A4204511	Wireless Communication Networks	3	-	-	3	40	60	100	3
2	18A4204521	Computer Networks	3	-	-	3	40	60	100	3
	18A4204522	Internet Of Things And Applications								
3	18A4204791	Main Project And Seminar	-	-	16	16	80	120	200	8
		Total	6	-	16	22	160	240	400	14

Head, ECE Department
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ACADEMIC REGULATIONS
(NRIA18)
COURSE STRUCTURE
AND
DETAILED SYLLABUS
(I YEAR)

COMPUTER SCIENCE ENGINEERING

For

B.Tech FOUR YEAR DEGREE COURSE

(Applicable from 2018-19 Batches)

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IV CSE - II Semester

L - LECTURE T – TUTORIAL P – PRACTICAL CIA – Continuous Internal Assessment SEA – Semester End Assessment

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P/D	Total	CIA	SEA	Total	
1	PE-6	Professional Elective-6	3	0	0	3	40	60	100	3
2	OE-4	Open Elective-4	3	0	0	3	40	60	100	3
3		Major Project (Internal/Industry Internship) dissertation***	0	5	7	12	40	60	100	8
Total			6	5	7	18	120	180	300	14

Code	Professional Elective - 6
	6.1 Deep Learning
	6.2 System Modeling and Simulation
	6.3 Social Networking and Semantics
	6.4 Cyber Forensics

* Professional Elective- 6 and OE-4 is offered through blended learning method. Regular classes as well as online classes will be conducted as per the choice of the students (moocs). However, students will have to write their regular exam at the end semester.

** Internship or Professional certification courses may be opted as self-learning course. Students register and complete the opted course in approved technology platform on or before Last Instruction Day of VIII Semester. They have to submit the certificate before the last Instruction Day of VIII Semester.

Technical Writing/Paper publication in a reputed journal can be done on or before Last Instruction Day of VIII Semester.

H.O.D

Head, CSE Department
NRI Institute of Technology
POTHAVARAPPADU
Agiripalli (Mdl.), Krishna Dist.

ACADEMIC REGULATIONS
(NRIA18)
COURSE STRUCTURE
AND
DETAILED SYLLABUS
(I YEAR)

INFORMATION TECHNOLOGY

For

B.Tech FOUR YEAR DEGREE COURSE

(Applicable from 2018-19 Batches)

NRI INSTITUTE OF TECHNOLOGY

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NRIA18 : ACADEMI CURRICULUM FOR B.TECH (INFORMATION TECHNOLOGY)

IV IT - II Semester

L - LECTURE T – TUTORIAL P – PRACTICAL CIA – Continuous Internal Assessment SEA – Semester End Assessment

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P/D	Total	CIA	SEA	Total	
1	PE-6	**Professional Elective-6**	3	0	0	3	40	60	100	3
2	OE-4	**Open Elective-4**	3	0	0	3	40	60	100	3
3		Major Project (Internal/Industry Internship) dissertation***	0	5	7	12	40	60	100	8
Total			**6**	**5**	**7**	**18**	**120**	**180**	**300**	**14**

Code	Professional Elective - 6
	6.1 Deep Learning
	6.2 System Modeling and Simulation
	6.3 Social Networking and Semantics
	6.4 Cyber Forensics

* Professional Elective- 6 and OE-4 is offered through blended learning method. Regular classes as well as online classes will be conducted as per the choice of the students (moocs). However, students will have to write their regular exam at the end semester.

** Internship or Professional certification courses may be opted as self-learning course. Students register and complete the opted course in approved technology platform on or before Last Instruction Day of VIII Semester. They have to submit the certificate before the last Instruction Day of VIII Semester.

Technical Writing/Paper publication in a reputed journal can be done on or before Last Instruction Day of VIII Semester.

Head, IT Department
NRI Institute of Technology
...NAGAPTADU (V)
Krishna Dist

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URL: www.nriit.edu.in, email: principal@nriit.edu.in, Mobile: +91 8333882444

I - Semester

S.No	Course Name	Category	L	T	P	C	Mar
1	Theory of Elasticity	Core	3	0	--	3	100
2	Structural Dynamics	Core	3	0	--	3	100
3	Elective I a) Matrix Analysis of Structures b) Analytical & Numerical Methods for Structural Engineering c) Design of RCC Foundations	Elective	3	0	--	3	100
4	Program Elective II a) Bridge Engineering b) Repair and Rehabilitation of Structures c) Advanced Reinforced Concrete Design	Elective	3	0	--	3	100
5	Advanced Concrete Technology		2	0	0	2	100
6	Advanced Concrete Technology Laboratory	Lab	-	--	4	2	100
7	Advanced Structural Engineering Laboratory	Lab	-	--	4	2	100
8	Audit Course –I	Audit	2	0	0	0	100
	Total Credits /Marks					**18**	**800**

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 a) Stability of Structures b) Advanced Steel Design c) Analysis of Offshore Structures	Elective	3	0	--	3	100
4	Elective IV a) Earthquake Resistant Design of Buildings b) Precast and Prefabricated Structures c) Earth Retaining Structures	Elective	3	0	--	3	100
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	Audit	2	0	0	0	100
	Total Credits / Marks					**18**	**800**

I – Semester

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

* Evaluated and displayed in 4th 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

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

Audit course 1 & 2

1. English for Research PaperWriting
2. DisasterManagement
3. Sanskrit for TechnicalKnowledge
4. ValueEducation
5. Constitution of India
6. PedagogyStudies
7. Stress Management byYoga
8. Personality Development through Life Enlightenment Skills.

NRI INSTITUTE OF TECHNOLOGY

POTHAVARAPPADU (V), (VIA) NUNNA, AGIRIPALLI (M), PIN – 521 212

POWER ELECTRONICS AND DRIVES

COURSE STRUTURE AND SYLLABUS FOR SECOND YEAR PG PROGRAMME

III SEMESTER

Sl. No.	Course Code	Title of the Course	L	P	Total	Max. Marks	No. of Credits
1	18D2152791	Comprehensive Viva-Voce	--	--	--	50	2
2	18D2152792	Seminar – I	--	--	--	50	2
3	18D2152793	Project Work Part - I	--	--	--	100	16
Total			--	--	--	**200**	**20**

L - LECTURE T – TUTORIAL P - PRACTICAL

IV SEMESTER

Sl. No.	Course Code	Title of the Course	L	P	Total	Max. Marks	No. of Credits
1	18D2252791	Seminar – II	--	--	--	50	2
2	18D2252792	Project Work Part - II	--	--	--	100	18
Total			--	--	--	**150**	**20**

L - LECTURE T – TUTORIAL P - PRACTICAL

Dr. N. SAMBASIVA RAO
B.Tech, M.Tech, Ph.D, MISTE
Head of the Department & Professor of EEE
NRI INSTITUTE OF TECHNOLOGY (KN)

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Pothavarappadu (V), Via Nunna, Agiripalli (M), PIN-521 212.

COURSE STRUCTURE FOR

M.TECH

IN

THERMAL ENGINEERING

.

DEPARTMENT OF MECHANICAL ENGINEERING

SEMESTER-III

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	--	--	2
2	Seminar – I	--	--	2
3	Project Work Part - I	--	--	16
	Total Credits			**20**

SEMESTER-IV

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
	Total Credits			**20**

Mechanical Departm...
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Agiripalli (Mdl), Krishna Dist.

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DIGITALELECTRONICSANDCOMMUNICATIONSYSTEMS

COURSESTRUCTUREFORFIRSTYEARM.TECHPROGRAMME

ISEMESTER

Sl. No	Subject Code	Subject	L	P	Total	Internal Marks	External Marks	Total Marks	Credits
1	18ECDC101	DigitalSystemDesign	4	--	4	40	60	100	3
2	18ECDC102	AdvancedMicrocontrollersandItsApplications	4	--	4	40	60	100	3
3	18ECDC103	DigitalDataCommunications	4	--	4	40	60	100	3
4	18ECDC104	AdvancedDigitalSignalProcessing	4	--	4	40	60	100	3
5	18ECDC105A 18ECDC105B 18ECDC105C	**ElectiveI** I. TransformTechniques II. VLSI Technology&Design III. DetectionandEstimationTheory	4	--	4	40	60	100	3
6	18ECDC106A 18ECDC106B 18ECDC106C	**ElectiveII** I. StatisticalSignalProcessing II. OpticalCommunicationTechnology III. NetworkSecurity&Cryptography	4	--	4	40	60	100	3
7	18ECDC161	DesignandSimulationLab	--	3	3	40	60	100	2
Total Credits			**24**	**3**	**27**	**280**	**420**	**700**	**20**

IISEMESTER

Sl. No	Subject Code	Subject	L	P	Total	Internal Marks	External Marks	Total Marks	Credits
1	18ECDC201	CodingTheory&Applications	4	--	4	40	60	100	3
2	18ECDC202	EmbeddedSystemDesign	4	--	4	40	60	100	3
3	18ECDC203	Imageand Video Processing	4	--	4	40	60	100	3
4	18ECDC204	Wireless Communications &Networks	4	--	4	40	60	100	3
5	18ECDC205A 18ECDC205B 18ECDC205C	**ElectiveIII** I. CMOSAnalog&Digital ICDesign II. AdvancedComputerArchitecture III. DesignofFaultTolerance	4	--	4	40	60	100	3
	18ECDC206A 18ECDC206B 18ECDC206C	ElectiveIV I. DSPProcessors andArchitectures II. EMI/EMC III. ObjectiveOriented Program	4	--	4	40	60	100	3
7	18ECDC261	AdvancedCommunications Laboratory	--	3	3	40	60	100	2
Total Credits			**24**	**3**	**27**	**280**	**420**	**700**	**20**

L- LECTURE P--PRACTICAL

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COURSESTRUCTUREFORSECONDYEARM.TECHPROGRAMME

IIISEMESTER

Sl. No	Subject Code	Subject	L	P	Total	Internal Marks	External Marks	Total Marks	Credits
1	18D2138791	COMPREHENSIVE VIVA	--	--	--	50	--	50	2
2	18D2138792	SEMINAR-I	--	--	--	50	--	50	2
3	18D2138793	RESEARCH PROJECT PART-I	--	--	--	100	--	100	16
Total Credits			--	--	--	**200**	--	**200**	**20**

IVSEMESTER

Sl. No	Subject Code	Subject	L	P	Total	Internal Marks	External Marks	Total Marks	Credits
1	18D2238791	SEMINAR -II	--	--	--	100	--	100	2
2	18D2238792	RESEARCH PROJECT PART-II	--	--	--	40	160	200	18
Total Credits			--	--	--	**140**	**160**	**300**	**20**

L- LECTURE P–PRACTICAL

Head, ECE Department
NRI Institute of Technology
POTHAVARAPPADU
Agiripalli (Md) 521212

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2 M.TECH 2 SEM (NRIA18)

SUBJECT CODES

SL NO	YEAR	SEM	BRANCH	REG	SL ORDER	SUBJECT CODE	SUBJECT NAME	SHORT	EXT PASS	TOT PASS	MAX MARKS	CREDITS	AT	TYPE	C/E
1	2	2	CSE(P.G)	NRIA18	1	18D2158791	SEMINAR -II	SEMINAR-II	0	25	50	2	0	S	C
2	2	2	CSE(P.G)	NRIA18	2	18D2158792	RESEARCH PROJECT PART-II	PROJECT	24	50	100	18	0	P	C

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2 M.TECH 1 SEM (NRIA18)

SUBJECT CODES

SL NO	YEAR	SEM	BRANCH	REG	SL ORDER	SUBJECT CODE	SUBJECT NAME	SHORT	EXT PASS	TOT PASS	MAX MARKS	CREDITS	AT	TYPE	C/E
1	2	1	CSE(P.G)	NRIA18	1	18D2158791	COMPREHENSIVE VIVA	CVIVA	0	25	50	2	0	V	C
2	2	1	CSE(P.G)	NRIA18	2	18D2158792	SEMINAR-I	SEMINAR-1	0	25	50	2	0	S	C
3	2	1	CSE(P.G)	NRIA18	3	18D2158793	RESEARCH PROJECT PART-I	PROJECT	50	50	100	16	0	P	C

Head, CSE Department
NRI Institute of Technology
POTHAVARAPPADU (Vill)
Agiripalli (Mdl.), Krishna Dist.

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Pothavarappadu (V), Via Nunna, Agiripalli (M), PIN-521 212.
Ph : 0866 – 2469666 Website : nrigroupofcolleges.com
DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

COURSE STRUCTURE

For

MBA (Regular)

(Applicable for batches admitted from 2019-2020)

NRIA18

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DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

II MBA IV SEMESTER

Subject	Title	Contact Hrs		Marks			Credits
		L+T	P	I	E	T	
18E2298401	Logistic and Supply Chain Management	4		40	60	100	3
18E2298402	Entrepreneurship Development	4		40	60	100	3
HR							
18E2298511	Organizational Development & Change Management	4		40	60	100	3
18E2298512	Global HRM	4		40	60	100	3
18E2298513	Labor Welfare & Legislation	4		40	60	100	3
18E2298514	Management of Industrial Relations	4		40	60	100	3
FINANCE							
18E2298521	Financial Markets and Services	4		40	60	100	3
18E2298522	Global Financial Management	4		40	60	100	3
18E2298523	Risk Management	4		40	60	100	3
18E2298524	Tax Management	4		40	60	100	3
MARKETING							
18E2298531	Services Marketing	4		40	60	100	3
18E2298532	Promotional Distribution Management	4		40	60	100	3
18E2298533	Global Marketing Management	4		40	60	100	3
18E2298534	Supply Chain Management	4		40	60	100	3
SYSTEMS							
18E2298541	Business Intelligence	4		40	60	100	3
18E2298542	Enterprise Resource Planning	4		40	60	100	3
18E2298543	Cyber Laws & Security	4		40	60	100	3
18E2298544	Information Systems Audit	4		40	60	100	3
18E2298791	Major Project & Comprehensive Viva	....	....			Grade	8
TOTAL MARKS/CREDITS						2700	90

Head, MBA Department
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II MBA – I SEMESTER

S.No.	Course Code	Course Title	L	M	P	C	I	E	T
1	22E2198401	Strategic Management	4	0	0	4	25	75	100
2	22E2198402	Operations Research	4	0	0	4	25	75	100
3	22E219851x	Elective -1 Paper 1	4	0	0	3	25	75	100
4		Elective -1 Paper 2	4	0	0	3	25	75	100
5		Elective -2 Paper 1	4	0	0	3	25	75	100
6		Elective -2 Paper 2	4	0	0	3	25	75	100
7	22E2198791	Industrial Project based on Summer Internship	4	0	0	3	-	100	100
			24	7	-	23	150	550	700

Head, MBA Department
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II MBA – II SEMESTER

S.No.	Course Code	Course Title	L	M	P	C	I	E	T
1	22E2298401	Supply Chain Management And Analytics	4	0	0	4	25	75	100
2	22E2298402	Innovation And Entrepreneurship	4	0	0	4	25	75	100
3		Elective -1 Paper 1	4	0	0	3	25	75	100
4		Elective -1 Paper 2	4	0	0	3	25	75	100
5		Elective -2 Paper 1	4	0	0	3	25	75	100
6		Elective -2 Paper 2	4	0	0	3	25	75	100
7	22E2298791	Comprehensive Viva	0	0	0	3	-	50	50
			23	0	0	23	150	500	650

Dual Electives

The elective papers will be offered in the areas of Marketing, Finance and Human Resources Management and Business Analytics. The students should choose any two of the following elective areas in the beginning of the third and fourth semester of MBA. The students cannot change elective areas which are selected in the third semester and the same should choose in the fourth semester.

Head, MBA Department
NRI Institute of Technology
POTHAVARAPPADU (Vill)
Agiripalli (Mdl), Krishna Dist

III YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	20A3201601	DESIGN AND DRAWING OF STEEL STRUCTURES	3	0	0	3	30	70	100	3
2	20A3201602	WATER RESOURCE ENGINEERING	3	0	0	3	30	70	100	3
3	20A3201603	GEOTECHNICAL ENGINEERING -2	3	0	0	3	30	70	100	3
4	20A3201611 20A3201612 20A3201613 20A3201614	PROFESSIONAL ELECTIVE COURSE –II ADVANCED STRUCTURAL ANALYSIS ARCHITECTURE AND TOWN PLANNING ROAD SAFETY ENGINEERING TRAFFIC ENGINEERING	3	0	0	3	30	70	100	3
5	20A3201621 20A3201622 20A3201623	OPEN ELECTIVE COURSE/JOB ORIENTED ELECTIVE (OE-2) ELEMENTS OF CIVIL ENGINEERING ENVIRONMENTAL ENGINEERING DISASTER MANAGEMENT	3	0	0	3	30	70	100	3
6	20A3101691	PROFESSIONAL CORE COURSES LAB ESTIMATION, COSTING AND CONTRACTS	0	0	3	3	15	35	50	1.5
7	20A3101691	PROFESSIONAL CORE COURSES LAB HIGHWAY DESIGN BY USING MX ROADS AND OPEN ROADS SOFTWARE	0	0	3	3	15	35	50	1.5
8	20A3101692	PROFESSIONAL CORE COURSES LAB CIVIL ENGINEERING PRACTICE : MANUAL DESIGNING OF A RESIDENTIAL BUILDING	1	0	2	3	15	35	50	1.5
9	20A3101693	SKILL ADVANCED COURSE/ SOFT SKILL COURSE: COMPUTATIONAL TOOLS	2	0	0	2	15	35	50	1.5
10	20A3201	EMPLOYABILITY SKILLS	2	0	0	2	30	70	100	0
11	20A3201	INDUSTRIAL/RESEARCH INTERNSHIP (MANDATORY) 2 MONTHS... TO BE EVALUATED IN IV YEAR I SEMESTER					30	70	100	1.5
Total			**20**	**0**	**8**	**28**				22.5

L - LECTURE T – TUTORIAL P - PRACTICAL
CIA – Continuous Internal Assessment SEA – Semester End Assessment

Head of The Department
CIVIL ENGINEERING
NRI Institute of Technology
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NRIA20 Course Structure

III YEAR I SEMESTER

Sl. No	Course Code	Course Category	Title of the Course	L	T	P	Total Credits
1	20A3102401	PCC	Power Systems-II	3	-	-	3
2	20A3102402	PCC	Power Electronics	3	-	-	3
3	20A3102403	PCC	Control Systems	3	-	-	3
4	20A3100601	SC	**Soft Skill Course: Employability Skills** Aptitude and Reasoning	3	-	-	3
5	20A3102511	PEC	**Professional Elective – I:** Utilization of Electrical Energy	3	-	-	3
6	20A3102491	PCC	Control Systems Lab	-	-	3	1.5
7	20A3102492	PCC	Power Electronics Lab	-	-	3	1.5
8	20A3102991	SC	**Skill oriented course :** IoT Lab	-	-	3	2
9	20A3102791	PROJ	Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester)	-	-	-	1.5
							TOTAL CREDITS = 21.5
			Minors Course	4	0	0	4
			Honors Course	4	0	0	4

Category	Credits
Professional Core Courses	12
Professional Elective Courses	3
Skill advanced course/ Soft skill course	5
Summer Internship	1.5
TOTAL CREDITS	**21.5**

Dr. N. SAMBASIVA RAO
B.Tech, M.Tech, Ph.D, MISTE
Head of the Department & Professor of EEE
NRI INSTITUTE OF TECHNOLOGY (KN)

NRIA20

III YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	20A3203401 (PCC)	Heat Transfer	3	0	0	3	30	70	100	3
2	20A3203402 (PCC)	Design of Machine Members-II	3	0	0	3	30	70	100	3
3	20A3203403 (PCC)	CAD/CAM	3	0	0	3	30	70	100	3
4	**PE-II**	1.Automobile Engineering 2.Smart Manufacturing 3.Advanced Mechanics of Solids 4.Statistical Quality Control 5.Industrial Hydraulics and Pneumatics 6.MOOCs (NPTEL/ Swayam) Course (12 Week duration)	3	0	0	3	30	70	100	3
5	**OE-II**	1.Industrial Robotics 2.Essentials of Mechanical Engineering 3.Advanced Materials 4.Introduction to Automobile Engineering	3	0	0	3	30	70	100	3
6	20A3203491 (PCC-L)	Heat Transfer Lab	0	0	3	3	15	35	50	1.5
7	20A3203492 (PCC-L)	CAE&CAM Lab	0	0	3	3	15	35	50	1.5
8	20A3203493 (PCC-L)	Measurements & Metrology Lab	0	0	3	3	15	35	50	1.5
9	20A3203791 (MINI-PR)	Mini Project (Design & Fabrication)	0	0	4	4	30	70	100	2.0
10	20A3200802 (MC)	Research Methodology and IPR	2	0	0	2	30	70	100	0
	Total		**17**	**0**	**13**	**30**	**285**	**595**	**850**	**21.5**
	Honors/Minor courses		4	0	0	4	30	70	100	4

L - LECTURE T – TUTORIAL P - PRACTICAL

CIA – Continuous Internal Assessment SEA – Semester End Assessment

- **At the end of III Year II Semester Students shall complete summer Internship spanning between 1 to 2 months (minimum of 4 weeks) at industry/ higher learning institutions/APSSDC.**

Mechanical Department
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POTHAVARAPPADU (Vill)
AgMpalli (Md)

NRI INSTITUTE OF TECHNOLOGY

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POTHAVARAPPADU (V), (VIA) NUNNA, AGIRIPALLI (M), PIN – 521 212

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

III YEAR I SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Max Marks)			No. of Credits
			L	T	P	Total	CIA	SEA	Total	
1	20A3104401	Linear and Digital Integrated Circuits	3	-	-	3	30	70	100	3
2	20A3104402	Antennas and Wave Propagation	3	-	-	3	30	70	100	3
3	20A3104403	Digital Communications	3	-	-	3	30	70	100	3
4	20A3105601	Data structures	3	-	-	3	30	70	100	3
5	20A3104511	Computer architectureand Organization	3	-	-	3	30	70	100	3
	20A3104512	BiomedicalEngineering								
	20A3104513	Electromagnetic Interference and ElectromagneticCompatibility								
6	20A3104491	Linear and Digital Integrated Circuits Lab	-	-	3	3	15	35	50	1.5
7	20A3104492	Digital Communications Lab	-	-	3	3	15	35	50	1.5
8	20A3104991	Internet of Things	1	-	2	3	-	50	50	2
9	20A3100803	Intellectual Property Rights and Patents	-	-	2	3	30	70	100	0
	20A3104791	Summer Internship two months (mandatory)after second year (to be evaluated during V semester)	0	0	0	0	15	35	50	1.5
Total			16	-	10	27	255	595	850	21.5

Head, ECE Department
NRI Institute of Technolog
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Agiripalli (Mdl), Krishna Dist.

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Pothavarappadu (V), Agiripalli (M), Eluru District, A.P., India, Pin: 521 212
URL: www.nriit.edu.in, email: principal@nriit.edu.in, Mobile: + 91 8333882444

III YEAR II SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P/D	Total	CIA	SEA	Total	
1	20A3205403	Machine Learning	3	0	0	3	30	70	100	3
2	20A3205402	Compiler Design	3	0	0	3	30	70	100	3
3	20A3205401	Cryptography and Network Security	3	0	0	3	30	70	100	3
4	20A320560X	OE-2	3	0	0	3	30	70	100	3
5	20A320551X	PE-2	3	0	0	3	30	70	100	3
6	20A3205491	Machine Learning Lab	0	0	3	3	15	35	50	1.5
7	20A3205492	R Programming lab	0	0	3	3	15	35	50	1.5
8	20A3205493	Compiler Design Lab	0	0	3	3	15	35	50	1.5
9	20A3205991	MEAN Stack Technologies	0	0	4	4	15	35	50	2
10	20A3205801	Employability Skills - 2	2	0	0	2	30	70*	100	0
Total			17	0	13	30	240	560	800	21.5
Honors/Minor courses - 3			3	0	2	5	30	70	100	4
Industrial/Research Internship (Mandatory) 2 Months during summer vacation										

Code	Professional Elective -2
20A3205511	2.1 Advanced Database Management Systems
20A3205512	2.2 Network Programming
20A3205513	2.3 Big data Analytics
20A3205514	2.4 Object Oriented Analysis and Design

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DEPARTMENT OF INFORMATION TECHNOLOGY

PRPOPSED STRUCTURE FOR THIRD YEAR B.TECH PROGRAMME

III YEAR I SEMESTER

Sl. No	Course Code	Title of the Course	Scheme of Instruction (Periods Per Week)				Scheme of Examination (Maximum Marks)			No. of Credits
			L	T	P/D	Total	CIA	SEA	Total	
1	20A3105402	Artificial Intelligence	3	0	0	3	30	70	100	3
2	20A3105401	Computer Networks	3	0	0	3	30	70	100	3
3	20A3105403	Design and Analysis of Algorithms	3	0	0	3	30	70	100	3
4	20A310560X	OE-1	3	0	0	3	30	70	100	3
5	20A310551X	PE-1	3	0	0	3	30	70	100	3
6	20A3105491	Computer Networks lab	0	0	3	3	15	35	50	1.5
7	20A3105492	AI Programming Lab	0	0	3	3	15	35	50	1.5
8	20A3105991	DEVOPS	0	0	4	4	15	35	50	2
10	20A3105801	Employability Skills-1	2	0	0	2	30	70*	100	0
Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester)			0	0	0	0	30	70	100	1.5
Total			17	0	10	27	255	595	850	21.5
Honors/Minor courses - 2			**3**	**0**	**2**	**5**	30	70	100	**4**

Code	Professional Elective - 1
20A3105511	1.1 Cloud computing
20A3105512	1.2 Software Testing Methodologies and Tools
20A3105513	1.3 Data Warehousing and Data Mining
20A3105514	1.4 Advanced Data Structures

Head, IT Department
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