For

CIVIL ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

		T	T	P	Credits
S. No.	Subjects	L			3
1-HS	English – I	4			3
2-BS	Mathematics - I	4			2
3-ES	Engineering Chemistry	4			3
4-BS	Engineering Mechanics	4	2		3
5-BS	Computer Programming	4			3
6-ES	Environmental Studies	4			3
7-HS	Engineering /Applied Chemistry Laboratory			3	2
8-BS	English - Communication Skills Lab - I			3	2
9-ES	Computer Programming Lab			3	2
	Total Credits			·	24

I Year - II Semester

S. No.	Subjects	L	T	P	Credits
1-HS	English – II	4			3
2-BS	Mathematics – II (Mathematical Methods)	4			3
3-BS	Mathematics – III	4			3
4-ES	Engineering Physics	4			3
5-HS	Elements of Mechanical Engineering	4			3
6-ES	Engineering Drawing	4			3
7-BS	English - Communication Skills Lab - II			3	2
8-HS	Engineering /Applied Physics Lab			3	2
9-ES	Engineering / Applied Physics – Virtual Labs - Assignments			2	
10	Engg. Workshop & IT Workshop			3	2
	Total Credits		,		24

S. No.	Subjects	L	T	P	Credits
1	Probability & Statistics	4			3
2	Basic Electrical & Electronics Engineering	4			3
3	Strength of Materials-I	4			3
4	Building Materials & Construction	4			3
5	Surveying	4			3
6	Fluid Mechanics	4			3
7	Survey Field Work - I			3	2
8	Strength of Materials Lab			3	2
MC	Professional Ethics & Human Values		3		
	Total Credits				22

II Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Building Planning & Drawing	4			3
2	Strength of Materials - II	4			3
3	Hydraulics & Hydraulic Machinery	4			3
4	Concrete Technology	4			3
5	Structural Analysis - I	4			3
6	Transportation Engineering - I	4			3
7	FM & HM Lab			3	2
8	Survey Field Work - II			3	2
MC	Managerial Economics & Financial Analysis	2			
	Total Credits				22

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

III Year - II Semester

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

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	i. Finite Element Methods ii. Ground Improvement Techniques iii. Air Pollution & Control iv. Urban Hydrology v. Traffic Engineering	4			3
6	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	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

For

ELECTRICAL AND ELECTRONICS ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

		T	T	P	Credits
S. No	Subjects	L			3
1-HS	English – I	4			3
2-BS	Mathematics - I	4	<u></u>		3
3-ES	Applied Chemistry	4			3
4-BS	Engineering Mechanics	4			3
	8	4			3
5-BS	Computer Programming				3
6-ES	Environmental Studies	4			
7-HS	Applied / Engineering Chemistry Laboratory			3	2
8-BS	English- Communication Skills Laboratory - I			3	2
9-ES	Computer Programming Laboratory			3	2
	Total Credits				24

I Year - II Semester

S. No	Subjects	L	T	P	Credits
1-HS	English – II	4			3
2-BS	Mathematics - II (Mathematical Methods)	4			3
3-BS	Mathematics – III	4		-	3
4-ES	Applied Physics	4		-	3
5	Electrical Circuit Analysis - I	4			3
6-ES	Engineering Drawing	4			3
7-BS	English - Communication Skills Laboratory - II			3	2
8-HS	Applied / Engineering Physics Laboratory			3	2
9-ES	Applied / Engineering Physics – Virtual Labs			2	
	- Assignments				
10	Engg.Workshop & IT Workshop			3	2
	Total Credits				24

S. No	Subjects	L	T	P	Credits
1	Electrical Circuit Analysis - II	4			3
2	Electrical Machines-I	4			3
3	Basic Electronics and Devices	4			3
4	Electro Magnetic Fields	4			3
5	Thermal and Hydro Prime Movers	4			3
6	Managerial Economics & Financial Analysis	4			3
7	Thermal and Hydro Laboratory			3	2
8	Electrical Circuits Laboratory			3	2
	Total Credits				22

II Year - II Semester

Subjects	L	T	P	Credits
Electrical Measurements	4			3
Electrical Machines-II	4			3
Switching Theory and Logic Design	4			3
Control Systems	4			3
Power Systems-I	4			3
Management Science	4			3
Electrical Machines -I Laboratory			3	2
Electronic Devices & Circuits Laboratory			3	2
Total Credits		,		22
	Electrical Machines-II Switching Theory and Logic Design Control Systems Power Systems-I Management Science Electrical Machines -I Laboratory Electronic Devices & Circuits Laboratory	Electrical Machines-II 4 Switching Theory and Logic Design 4 Control Systems 4 Power Systems-I 4 Management Science 4 Electrical Machines -I Laboratory Electronic Devices & Circuits Laboratory	Electrical Machines-II 4 Switching Theory and Logic Design 4 Control Systems 4 Power Systems-I 4 Management Science 4 Electrical Machines -I Laboratory Electronic Devices & Circuits Laboratory	Electrical Machines-II

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

III Year - II Semester

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

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

G N	Subjects	L	T	P	Credits
S. No		4			3
1	Digital Control Systems				3
2	HVDC Transmission	4			_
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		_
					10
6	Project Total Credits				24

For

MECHANICAL ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

S. No.	Subjects	L	T	P	Credits
1-HS	English – I	4			3
2-BS	Mathematics - I	4			3
3-ES	Engineering Chemistry	4			3
4-BS	Engineering Mechanics	4			3
5-BS	Computer Programming	4			3
6-ES	Environmental Studies	4			3
7-HS	Engineering/Applied Chemistry Laboratory			3	2
8-BS	English - Communication Skills Lab - I			3	2
9-ES	Computer Programming Lab			3	2
	Total Credits				24

I Year - II Semester

S. No.	Subjects				
1-HS	English – II	<u>L</u>	T	P	Credits
- 115	Liigiisii – II	4			3
2-BS	Mathematics – II (Mathematical Methods)	4			3
3-BS	Mathematics – III	4			3
4-ES	Engineering Physics	4			3
5-HS	Basic Electrical and Electronics Engineering	4			3
6-ES	Engineering Drawing	4			3
7-BS	English - Communication Skills Lab - II			3	2
8-HS	Engineering /Applied Physics Lab			3	2
9-ES	Engineering /Applied Physics - Virtual Labs - Assignments			2	
10	Engg.Workshop & IT Workshop			3	2
	Total Credits				
	1 out of cuits				24

S. No.	Subjects	L	T	P	Credits
1	Metallurgy & Materials Science	4			3
2	Mechanics of Solids	4			3
3	Thermodynamics	4			3
4	Managerial Economics & Financial Analysis	4			3
5	Fluid Mechanics & Hydraulic Machines	4			3
6	Computer Aided Engineering Drawing Practice	3	3		3
7	Electrical & Electronics Engg. Lab			3	2
8	Mechanics of Solids & Metallurgy Lab			3	2
	Total Credits				22

II Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Kinematics of Machinery	4			3
2	Thermal Engineering -I	4			3
	Production Technology	4			3
4	Design of Machine Members -I	4			3
	Machine Drawing	3	3		3
6	Industrial Engineering and Management	4			3
	Fluid Mechanics & Hydraulic Machines			3	2
	Lab			3	2
8	Production Technology Lab			3	22
	Total Credits				

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

III YEAR - II Semester

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

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 22
	Total Credits				22

IV Year - II Semester

	Cubicate	L	T	P	Credits
S. No.	Subjects Production Planning and Control	4			3
1		· ·			3
T 2	Unconventional Machining Processes	4			
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
	Project				10
6	Total Credits				24

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

For

ELECTRONICS AND COMMUNICATION ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

S.No.	Subjects	L	T	P	Credits
1-HS	English – I	4			3
2-BS	Mathematics - I	4			3
3-ES	Mathematics -II (Numerical Methods and Complex Variables)	4			3
4-BS	Applied Physics	4			3
5-ES	Computer Programming	4			3
6-ES	Engineering Drawing	1		3	3
7-HS	English - Communication Skills Lab -1			3	2
8-BS	Applied / Engineering Physics Laboratory			3	2
9-BS	Applied / Engineering Physics – Virtual Labs - Assignments			2	
10-ES	Engineering Workshop& IT Workshop			3	2
	Total Credits				24

I Year - II Semester

S.No.	Subjects	L	T	P	Credits
1-HS	English – II	4			3
2-BS	Mathematics -III	4			3
3-BS	Applied Chemistry	4			3
4-ES	Electrical and Mechanical Technology	4			3
5-HS	Environmental Studies	4			3
6-ES	Data Structures	4			3
7-BS	Applied / Engineering Chemistry Laboratory			3	2
8-HS	English - Communication Skills Lab -2			3	2
9-ES	Computer Programming Lab			3	2
	Total Credits				24

			T	р	Credits
S.No.	Subjects	L	1	-	3
1	Electronic Devices and Circuits	4			3
2	Switching Theory and Logic Design	4			3
3	Signals and Systems	4			3
4	Network Analysis	4			3
	Random Variables and Stochastic	4			
5	Process				3
	Managerial Economics & Financial	4			
6	Analysis			3	2
7	Electronic Devices and Circuits Lab			3	2
8	Networks & Electrical Technology Lab			J	22
8	Total Credits				22

II Year - II Semester

		T	Т	P	Credits
S.No.	Subjects	<u>L</u> 4			3
1	Electronic Circuit Analysis	4			3
2	Control Systems	4	-		3
	Electromagnetic Waves and	4			3
3	Transmission Lines	4			3
4	Analog Communications	4			3
5	Pulse and Digital Circuits	4			3
6	Management Science			3	2
7	Electronic Circuit Analysis Lab				
				3	2
. 0	Analog Communications Lab				
. 8	Total Credits				22
	Total Credits				

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

III Year - II Semester

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

S.No.	C-11				
1	Subjects Radar Systems	L	TD		T
2	Digital Image P	4	T	P	Credits
3	Digital Image Processing	4			3
4	Computer Networks	4			3
4	Optical Communications		-		
		4			3
5	 TV Engineering Electronic Switching Systems 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	4			3
2	Instrumentation				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
3	Project				10
6	Total Credits	X			24

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

For

COMPUTER SCIENCE AND ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

CN	Cubicata	L	Т	P	Credits
S. No.	Subjects				2
1-HS	English – I	4			3
2-BS	Mathematics - I	4			3
2-03	N N				3
3-BS	Mathematics – II (Mathematical Methods)	4			
4-BS	Applied Physics	4			3
5	Computer Programming	4			3
		4			3
6-ES	Engineering Drawing	-			0
7-HS	English - Communication Skills Lab - 1			3	2
8-BS	Applied / Engineering Physics Lab			3	2
	Applied / Engineering Physics – Virtual Labs			2	
9-ES	- Assignments				
10	Computer Programming Lab			3	2
	Total Credits				24

I Year - II SEMESTER

S. No.	Subjects	L	T	P	Credits
1-HS	English – II	4			3
2-BS	Mathematics - III	4			3
3-BS	Applied Chemistry	4			3
4	Object Oriented Programming through C++	4			3
5-HS	Environmental Studies	4			3
6-ES	Engineering Mechanics	4			3
7-BS	Applied / Engineering Chemistry Laboratory			3	2
8-HS	English - Communication Skills Lab – 2			3	2
9	Object Oriented Programming Lab			3	2
	Total Credits				24

		T	Т	P	Credits
S. No.	Subjects	1			3
1-HS	Statistics with R Programming	4			
2	Mathematical Foundations of Computer	4			3
	Science				3
3	Digital Logic Design	4			2
1		4			3
4	Python Programming	4			3
5	Data Structures through C++				3
6	Computer Graphics	4		2	2
7	Data Structures through C++Lab			3	2
/	Data Structures through C++Eas			3	2
8	Python Programming Lab				
	Total Credits				22
	Total Creuis				

II Year - II Semester

	Subjects	L	T	P	Credits
S. No.	V	4			3
1	Software Engineering				2
2	Java Programming	4			3
3	Advanced Data Structures	4			3
	G. Organization	4			3
4	Computer Organization	4			3
5	Formal Languages and Automata Theory				2
6	Principles of Programming Languages	4			3
7	Advanced Data Structures Lab			3	2
8	Java Programming Lab			3	2
	Total Credits				22

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

III Year - II Semester

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

		T	Т	P	Credits
S. No.	Subjects	L	1		3
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	4			3
	iii. Scripting Languages			3	2
7	Software Architecture& Design Patterns Lab			3	2
8	Web Technologies Lab Total Credits				22

IV Year - II Semester

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

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

For

CIVIL ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

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

III Year - II Semester

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

S. No.	Subjects	L	T	P	Credits
1	Environmental Engineering - II	4	1		3
2	Water Resource Engineering - II	4	1		3
3	Geotechnical Engineering - II	4			3
4	Remote Sensing & GIS Applications	4			3
5	i. Finite Element Methods ii. Ground Improvement Techniques iii. Air Pollution & Control iv. Urban Hydrology v. Traffic Engineering	4			3
6	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	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

For

ELECTRICAL AND ELECTRONICS ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

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

III Year – II Semester

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

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: Optimization Techniques Electric Power Quality 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		- 1	3
5	Seminar		3		2
6	Project				10
	Total Credits				24

For

MECHANICAL ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

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

III YEAR - II Semester

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

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 II1. Advanced Materials2. Design for Manufacture3. 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	1	1	3
2	Unconventional Machining Processes	4			3
3	Automobile Engineering	4			3
4	Elective III1. Thermal Equipment Design2. Non Destructive Evaluation3. Quality and Reliability Engineering	4			3
5	Seminar		3		2
6	Project				10
	Total Credits 24				

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

For

ELECTRONICS AND COMMUNICATION ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

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

III Year - II Semester

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

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

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

III Year - I Semester

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

III Year - II Semester

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

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	1		3
4- HS	Managerial Economics and Financial Analysis	4	1		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	I		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	-1		3
5	Seminar		3		2
6	Project				10
	Total Credits				24

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

III Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Human Computer Interaction	4	1		3
2	Unix and Shell Programming	4	-		3
3	Advanced Java Programming	4			3
4	Database Management Systems	4	-		3
5	Operating Systems	4			3
6	Advanced Java Programming Lab				2
7	Unix and Operating Systems Lab			3	2
8	Database Management System Lab		1	3	2
MC	Professional Ethics & Human Values		3		
	Total Credits				21

III Year - II Semester

S. No.	Subjects	L	T	P	Credits
1	Computer Networks	4			3
2	Data Mining	4			3
3	Web Technologies	4			3
4	Software Testing Methodologies	4			3
5	Open Elective: i. Artificial Intelligence ii. Social Networks and Semantic Web iii.Digital Signal Processing iv.Embbeded Systems v. Robotics vi.Operations Research	4		1	3
6	Web Technologies Lab			3	2
7	Software Testing Lab			3	2
8	Data Mining Lab			3	2
9	IPR & Patents		2		
	Total Credits				21

IV Year - I Semester

S. No.	Subjects	L	T	P	Credits
1	Cryptography and Network Security	4			3
2	Mobile Computing	4	1		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 Elective-II	4			3
6	 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	1		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

ACADEMIC REGULATIONS COURSE STRUCTURE & DETAILED SYLLABUS

For

MASTER OF BUSINESS ADMINISTRATION

(Applicable for the batches admitted from 2019-20)



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

		I YEAR I SEMESTER					
S.N	Course	Courses	Marks	L	T	P	С
0	Code						
1	C-101	Management and Organizational Behavior	100	4	0	0	4
2	C-102	Managerial Economics	100	4	0	0	4
3	C-103	Accounting for Managers	100	4	0	0	4
4	C-104	Quantitative Analysis for Business Decisions	100	4	0	0	4
5	C-105	Legal and Business Environment	100	4	0	0	4
6		Business Communication and	100	2	0	2	4
	C-106	Soft skills	100		U	2	+
7	C-107 Open Elective	Cross Cultural Management Rural Innovation projects MOOCs: SWAYAM/NPTEL- Related to Management Courses other than listed courses in the syllabus	100	4	0	0	4
8	C-108	Information Technology – Lab1(Spreadsheet and Tally)	50	0	0	2	2
		Total	750	28	0	2	30

	I YEAR II SEMESTER							
S.No	Course Code	Courses	Marks	L	Т	P	C	
1	C-201	Financial Management	100	4	0	0	4	
2	C-202	Human Resource Management	100	4	0	0	4	
3	C-203	Marketing Management	100	4	0	0	4	
4	C-204	Operations Management	100	4	0	0	4	
5	C-205	Business Research Methods	100	4	0	0	4	
6	C-206 open elective	Project Management Technology Management Lean Management Database Management System	100	4	0	0	4	
7	C-207	IT-lab 2(Programming R)	50	0	0	2	2	
	•	•	Total 650	24	0	2	26	

II YEAR III SEMESTER								
S.No	Course Code	Courses		Marks	L	Т	P	C
1	C-301	Strategic Management		100	4	0	0	4
2	C -302	Operations Research		100	4	0	0	4
3	E -301	Elective – 1		100	4	0	0	3
4	E-302	Elective – 2		100	4	0	0	3
5	E-303	Elective – 3		100	4	0	0	3
6	E-304	Elective – 4		100	4	0	0	3
7	C-304	Industrial Project based on Summer Internship		150	4	0	0	4
			Total	750	28	0	0	24

S.No	Course Code	Courses	Marks	L	Т	P	С
1	C -401	Supply Chain Management and Analytics	100	4	0	0	4
2	C-402	Innovation and Entrepreneurship	100	4	0	0	4
3	E-401	Elective – 5	100	4	0	0	3
4	E-402	Elective – 6	100	4	0	0	3
5	E-403	Elective – 7	100	4	0	0	3
6	E-404	Elective – 8	100	4	0	0	3
7	C-403	Comprehensive Viva- voce	50	0	0	0	2
	I	Total Marks / Credits	650	28	0	0	22
			2800				102

^{*}The project work documentation shall be checked with anti plagiarism software (Turnitin). The permissible similarity shall be less than 30%.

^{*}Comprehensive Viva is to verify the student knowledge as a whole from which he was studied during the two year course work.

III SEMESTER Human Resource Management

S. no	Course Code	SUBJECT TITLE
1	EH-301	Leadership and Change Management
2		Performance Evaluation and Compensation
4	1211-302	Management
3	EH-303	Human Resource Metrics and Analytics
4	EH-304	Human Capital Management
5	EH-305	Manpower Planning, Recruitment, and Selection

IV SEMESTER Human Resource Management

S. no	Course	SUBJECT TITLE
	Code	
6	EH-401	Labor Welfare and employment laws
7	EH-402	International HRM
8	EH-403	Employee Relations and Engagement
9	EH-404	Human Resources Development
10	EH-405	Strategic HRM

III SEMESTER FINANCE

S. no	Course	SUBJECT TITLE
	Code	
1	EF-301	Investment Analysis and Portfolio Management
2	EF-302	Managing Banks and Financial Institutions
3	EF-303	Financial Markets and Services
4	EF-304	Mergers, Acquisitions and Corporate Restructuring
5	EF-305	Taxation

IV SEMESTER FINANCE

S. no	Course	SUBJECT TITLE
	Code	
6	EF-401	Financial Derivatives
7	EF-402	Global Financial Management
8	EF-403	Financial Risk Management
9	EF-404	Strategic Financial Management
10	EF-405	Behavioral Finance

III SEMESTER - ELECTIVES MARKETING

S. no	Course	SUBJECT TITLE
	Code	
1	EM-301	Consumer Behavior
2	EM-302	Retail Management
3	EM-303	Customer Relationship Management
4	EM-304	Strategic Marketing Management
5	EM-305	Digital and Social Media Marketing

IV SEMESTER MARKETING

S. no	Course	SUBJECT TITLE
	Code	
6	EM-401	Services Marketing
7	EM-402	Promotional and Distribution
		Management
8	EM-403	Green Marketing
9	EM-404	Advertising and Brand Management
10	EM-405	Global Marketing Management

III SEMESTER ELECTIVES SYSTEMS

S. no	Course	SUBJECT TITLE
	Code	
1	ES-301	Data Mining for Business Decisions
2	ES-302	Managing Software Projects
3	ES-303	Web Designing
4	ES-304	Business Analytics
5	ES-305	Managing Digital Innovation and Transformation

IV SEMESTER SYSTEMS

S. no	Course	SUBJECT TITLE
	Code	
6	ES-401	Big Data Analytics
7	ES-402	Enterprise Resource Planning
8	ES-403	Cyber Laws & Security
9	ES-404	Information Systems Audit
10	ES-405	Artificial Intelligence and Machine
		Learning

OPERATIONS MANAGEMENT III SEMESTER

S. no	Course Code	SUBJECT TITLE
1	EO-301	Service Operations Management
2	EO-302	Quality Toolkit for Managers
3	EO-303	Pricing and Revenue Management
4	EO-304	Operations Strategy
5	EO-305	Sales and Operations Planning

S. no	Course Code	SUBJECT TITLE
6	EO-401	Behavioral Operations Management
7	EO-402	Theory of Constraints
8	EO-403	Management of Manufacturing Systems
9	EO-404	Sourcing Management
10	EO-405	Supply Chain Analytics

TRAVEL AND TOURISM MANAGEMENT III SEMESTER

S. no	Course	SUBJECT TITLE
	Code	
1	ET-301	Travel agency and Tour Operations
2	ET-302	Hospitality Management
3	ET-303	Resort Planning and Destination Management
4	ET-304	Tourism Policy and Planning
5	ET-305	Recreation Management

		IV BEIVIEBIER
S. no	Course	SUBJECT TITLE
	Code	
6	ET-401	Travel Media and Journalism
7	ET-402	Event Management
8	ET-403	Front Office Management
9	ET-404	Information Technology and Tourism
10	ET-405	Eco Tourism Practices



HEALTH CARE AND HOSPITAL MANAGEMENT III SEMESTER

S. no	Course Code	SUBJECT TITLE
1	EHC-301	Hospital organization and Management
2	EHC-302	Health Care Policies and Delivery Systems
3	EHC-303	Health Economics
4	EHC-304	Hospital Functions and Support Services
5	EHC-305	Revenue Cycle Management

S. no	Course Code	SUBJECT TITLE
6	EHC-401	Patient Care & Services Management
7	EHC-402	Managed Health Care and Insurance
8	EHC-403	Health Laws, Ethics and Regulations
9	EHC-404	Hospital Management Information System
10	EHC-405	Health Analytics

ENTREPRENEURSHIP AND SMALL ENTERPRISE MANAGEMENT III SEMESTER

S. no	Course	SUBJECT TITLE
	Code	
1	EE-301	Indian Models in Entrepreneurship
2	EE-302	Social Entrepreneurship
3	EE-303	Business Plan Preparation for Small Business
4	EE-304	Entrepreneurial Marketing
5	EE-305	Planning, Structuring, and Financing Small Business

S. no	Course	SUBJECT TITLE
	Code	
6	EE-401	Marketing for Small Business
7	EE-402	Finance and Accounting for Small Business
8	EE-403	Technology Appreciation and Intellectual Property Rights
9	EE-404	Innovation Technology Management
10	EE-405	Venture Valuation and Accounting

AGRO-BUSINESS MANAGEMENT III SEMESTER

S. no	Course Code	SUBJECT TITLE
	EA-301	Agro-Marketing Management
2	EA-302	Agro-Business and Rural Green Market
3	EA-303	Agro-Business Environment
4	EA-304	Agro-Supply Chain Management
5	EA-305	Entrepreneurship for Agriculture

S. no	Course Code	SUBJECT TITLE
6	EA-401	Food Processing Management
7	EA-402	Disaster Management
8	EA-403	Food Retail Management
9	EA-404	Agro- Technology Management
10	EA-405	Organic Food Technology

LOGISTICS AND SUPPLY CHAIN MANAGEMENT III SEMESTER

S. no	Course Code	SUBJECT TITLE
1	EL-301	Store keeping and Warehousing management
2	EL-302	Transportation and Infrastructure Management for SCM
3	EL-303	Purchasing and Material Management
4	EL-304	Reverse Logistics
5	EL-305	Supply Chain Risk Management

S. no	Course Code	SUBJECT TITLE
6	EL-401	Enterprise Resource Planning
7	EL-402	International Logistics Management
8	EL-403	Lean Supply Chain Management
9	EL-404	Shipping and Maritime law
10	EL-405	Green Supply Chain Management