

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

C&C, C&CE

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Subject	L	P	C
1	Digital System Design	4	-	3
2	Advanced Computer Architecture	4	-	3
3	Wireless Communications and Networks	4	-	3
4	Digital Data Communications	4	-	3
5	Elective I I. Data Base Management Systems II. Information Theory and Coding Techniques III. Big Data Analytics	4	-	3
6	Elective II I. Internet Protocols II. Image & Video Processing III. Objective Oriented Programming	4	-	3
7	System Design & Data Communications Lab		3	2
Total Credits				20

II Semester

S. No.	Subject	L	P	C
1	Advanced Operating Systems	4	-	3
2	Advanced Computer Networks	4	-	3
3	Advanced Digital Signal Processing	4	-	3
4	Optical Communications and Networks	4	-	3
5	Elective III I. EMI / EMC II. Internet of Things III. Soft Computing Techniques IV. Cyber Security	4	-	3
6	Elective IV I. Embedded System Design II. Radar Signal Processing III. Network Security & Cryptography	4	-	3
7	Advanced Communications Lab	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

COMMUNICATION SYSTEMS

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Detection & Estimation Theory	4	-	3
2	Digital Data Communications	4	-	3
3	Optical Communication Technology	4	-	3
4	Advanced Digital Signal Processing	4	-	3
5	Elective I I. Radar Signal Processing II. RF Circuit Design III. Advanced Computer Networks	4	-	3
6	Elective II I. Wireless LANs and PANs II. Mobile Computing Technologies III. Network Security & Cryptography	4	-	3
7	Optical & Data Communications Laboratory	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Coding Theory and Applications	4	-	3
2	Wireless Communications and Networks	4	-	3
3	Image and Video Processing	4	-	3
4	Software Defined Radio	4	-	3
5	Elective III I. Soft Computing Techniques II. Internet Protocols III. Cyber Security	4	-	3
6	Elective IV I. Optical Networks II. DSP Processors and Architectures III. Radio and Navigational Aids	4	-	3
7	Advanced Communications Laboratory	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

DECS, ECE, DECE

(Applicable for batches admitted from 2016-2017)



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

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	4	-	3
	I. Transform Techniques			
	II. VLSI Technology & Design			
6	Elective II	4	-	3
	I. Statistical Signal Processing			
	II. Optical Communication Technology			
7	III. Network Security & Cryptography	-	3	2
	1. System Design & Data Communications Lab			
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	4	-	3
	I. CMOS Analog & Digital IC Design			
	II. Advanced Computer Architecture			
	III. Soft Computing Techniques			
6	Elective IV	4	-	3
	I. DSP Processors and Architectures			
	II. EMI / EMC			
7	III. Object Oriented Programming	-	3	2
	Advanced Communications Laboratory			
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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

DSCE

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Digital System Design	4	-	3
2	VLSI Technology and Design	4	-	3
3	Digital Data Communications	4	-	3
4	Advanced Computer Architecture	4	-	3
5	Elective I I. Wireless Communications and Networks II. Digital Design Using HDL III. Internet Protocols	4	-	3
6	Elective II I. Software Defined Radio II. Network Security and Cryptography III. Image & Video Processing	4	-	3
7	System Design & Data Communications Lab	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Embedded System Design	4	-	3
2	CMOS Analog and Digital IC Design	4	-	3
3	DSP Processors & Architecture	4	-	3
4	Design for Testability	4	-	3
5	Elective III I. System On Chip Design II. Soft Computing Techniques III. Cyber Security	4	-	3
6	Elective IV I. Embedded Real Time Operating Systems II. High Speed Networks III. EMI/EMC	4	-	3
7	Embedded System Design Lab	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

EMBEDDED SYSTEMS

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Digital System Design	4	-	3
2	Embedded System Design	4	-	3
3	Embedded Real Time Operating Systems	4	-	3
4	Embedded - C	4	-	3
5	Elective I 1. Sensors and Actuators 2. Network Security & Cryptography 3. Advanced Computer Architecture	4	-	3
6	Elective II 1. Embedded Computing 2. Soft Computing Techniques 3. Advanced Operating Systems 4. Cyber Security	4	-	3
7	Embedded C-Laboratory	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Hardware Software Co-Design	4	-	3
2	Digital Signal Processors and Architecture	4	-	3
3	Embedded Networking	4	-	3
4	CPLD and FPGA Architectures and Applications	4	-	3
5	Elective III 1. CMOS Mixed Signal Circuit Design 2. Micro Electro Mechanical System Design 3. Internet Protocols	4	-	3
6	Elective IV 1. System on Chip Design 2. Wireless LANs and PANs 3. Multimedia and Signal Coding	4	-	3
7	Embedded System Design Laboratory	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

I&CS

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Transducers and Sensors	4	-	3
2	Digital Control Systems	4	-	3
3	Fiber Optic Sensors and Devices	4	-	3
4	Digital System Design	4	-	3
5	Elective I 1. Adaptive Control Systems 2. Soft Computing Techniques 3. Cyber Security 4. Object Oriented Programming	4	-	3
6	Elective II 1. Fuzzy Based Control Systems 2. VLSI Technology and Design 3. Advanced Digital Signal Processing	4	-	3
7	Transducers & Instrumentation Lab	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Data Acquisition Systems	4	-	3
2	Bio-Medical Instrumentation	4	-	3
3	Process Control Instrumentation	4	-	3
4	Embedded System Design	4	-	3
5	Elective III 1. Non Linear and Optimal Control Systems 2. PC Based Instrumentation 3. DSP Processors & Architecture	4	-	3
6	Elective IV 1. EMI / EMC 2. Control and guidance systems 3. Analytical Instrumentation	4	-	3
7	Process Control Instrumentation Lab	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

MICROWAVE & COMMUNICATION ENGINEERING

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Advanced Electro Magnetic Theory	4	-	3
2	Microwave Components & Measurements	4	-	3
3	Microwave Solid State Devices	4	-	3
4	Digital Data Communications	4	-	3
5	Elective I 1. Microwave Integrated Circuits 2. Advanced Digital Signal Processing 3. Detection & Estimation Theory	4	-	3
6	Elective II 1. Optical Communication Technology 2. Statistical Signal Processing 3. Soft Computing Techniques 4. Cyber Security	4	-	3
7	Microwave Measurements Lab	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Advanced Antenna Theory & Design	4	-	3
2	Phased Array Systems	4	-	3
3	Software Defined Radio	4	-	3
4	Wireless Communications & Networks	4	-	3
5	Elective III 1. Microwave Networks 2. EMI / EMC 3. Radio & Navigational Aids	4	-	3
6	Elective IV 1. Smart Antennas 2. RF Circuit Design 3. Radar Signal Processing	4	-	3
7	Antenna Simulation Laboratory	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

SSP, DIP, CE&SP AND IP

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Coding Theory and Applications	4	-	3
2	Transform Techniques	4	-	3
3	Advanced Digital Signal Processing	4	-	3
4	Digital Data Communications	4	-	3
5	Elective I 1. Statistical Signal Processing 2. Network Security and Cryptography 3. Pattern Recognition Principles	4	-	3
6	Elective II 1. Speech Processing 2. Soft Computing Techniques 3. Object Oriented Programming 4. Cyber Security	4	-	3
7	Signal Processing Laboratory	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Adaptive Signal Processing	4	-	3
2	Image & Video Processing	4	-	3
3	Detection and Estimation Theory	4	-	3
4	DSP Processors and Architectures	4	-	3
5	Elective III 1. Computer Vision 2. Embedded System Design 3. Bio-Medical Signal Processing	4	-	3
6	Elective IV 1. Internet Protocols 2. Radar Signal Processing 3. Wireless Communications & Networks	4	-	3
7	Advanced Signal Processing Laboratory	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

TELEMATICS

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Telecommunication Switching Systems	4	-	3
2	Optical Communication Technology	4	-	3
3	Mobile Cellular Communications	4	-	3
4	Digital Data Communications	4	-	3
5	Elective I 1. Stochastic Signal Processing 2. Software Defined Radio 3. Radio and Navigational Aids	4	-	3
6	Elective II 1. Digital System Design 2. Cyber Security 3. Network Security and Cryptography 4. Advanced Computer Networks	4	-	3
7	Wireless Communications Lab	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Internet Protocols	4	-	3
2	Coding Theory and Applications	4	-	3
3	Wireless Communication & Networks	4	-	3
4	Telematics and Control	4	-	3
5	Elective III 1. Internet of Things 2. Adhoc Networks 3. Multi Media Signal Coding	4	-	3
6	Elective IV 1. DSP Processors and Architectures 2. GPS 3. Design for Testability	4	-	3
7	Advanced Communications Lab	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

VLSI&ES, ES&VLSI, VLSID&ES

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Digital System Design	4	-	3
2	VLSI Technology and Design	4	-	3
3	CMOS Analog IC Design	4	-	3
4	Hardware Software Co-Design	4	-	3
5	Elective I 1. Embedded - C 2. CMOS Digital IC Design 3. Soft Computing Techniques 4. Cyber Security	4	-	3
6	Elective II 1. Advanced Operating Systems 2. System on Chip Design 3. Network Security and Cryptography	4	-	3
7	VLSI Laboratory	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	Embedded System Design	4	-	3
2	CMOS Mixed Signal Circuit Design	4	-	3
3	Embedded Real Time Operating Systems	4	-	3
4	Design For Testability	4	-	3
5	Elective III 1. DSP Processors & Architectures 2. Low Power VLSI Design 3. VLSI Signal Processing	4	-	3
6	Elective IV 1. Micro Electro Mechanical Systems (MEMS) Design 2. CPLD and FPGA Architectures and Applications. 3. Semiconductor Memory Design and Testing.	4	-	3
7	Embedded System Design Laboratory	-	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

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

VLSI, VLSID, VLSISD

(Applicable for batches admitted from 2016-2017)



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

I Semester

S. No.	Name of the Subject	L	P	C
1	Digital System Design	4	-	3
2	VLSI Technology and Design	4	-	3
3	CMOS Analog IC Design	4	-	3
4	CMOS Digital IC Design	4	-	3
5	Elective I 1. Digital Design using HDL 2. Advanced Operating Systems 3. Soft Computing Techniques 4. Cyber Security	4	-	3
6	Elective II 1. CPLD and FPGA Architectures and Applications 2. Advanced Computer Architecture 3. Hardware Software Co-Design	4	-	3
7	Front end VLSI Design Laboratory	-	3	2
Total Credits				20

II Semester

S. No.	Name of the Subject	L	P	C
1	CMOS Mixed Signal Circuit Design	4	-	3
2	Embedded System Design	4	-	3
3	Low Power VLSI Design	4	-	3
4	Design For Testability	4	-	3
5	Elective III 1. CAD for VLSI 2. DSP Processors & Architectures 3. VLSI Signal Processing	4	-	3
6	Elective IV 1. System on Chip Design 2. Optimization Techniques in VLSI Design 3. Semiconductor Memory Design and Testing	4	-	3
7	1. Back end VLSI Design Laboratory	-	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