1.1.1 The Institution ensures effective curriculum delivery through a well planned and documented process.

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Sri Indu Institute of Engineering & Technology SHERIGUDA 501 510

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Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
ACADEMIC CALENDAR (2019-20)
B. TECH. I YEAR I & II SEMESTERS

I SEM

S. No	EVENT	DATE	Duration
1	Induction programme	1st to 14th Aug. 2019	2 weeks
2	Commencement of Instruction	16th Aug. 2019	--
3	Dussehra recess	6th to 12th oct. 209	1 week
4	First Mid Term Examinations	17th to 19th Oct. 2019	--
5	Submission of First Mid Term Exam Marks to University on or before	26th Oct. 2019	--
6	Parent-Teacher Meeting	9th Nov. 2019	--
7	Last date of Instruction	7th Dec. 2019	16 weeks
8	Second Mid Term Examinations	9th to 11th Dec. 2019	--
9	Preparation Holidays and Practical Examinations	12th to 18th Dec. 2019	1 week
10	Submission of Second Mid Term Exam Marks to University on or before	18th Dec. 2019	--
11	End Semester / Supplementary Examinations	19th Dec.2019 to 4thJan 2020	2 weeks

II SEM

S. No	EVENT	DATE	Duration
1	Commencement of Instruction	6th Jan. 2020	--
2	First Mid Term Examinations	27th to 29th Feb. 2020	--
3	Submission of First Mid Term Exam Marks to University on or before	7th March 2020	--
4	Parent-Teacher Meeting	14th March 2020	--
5	Last date of Instruction	24th April 2020	16 weeks
6	Second Mid Term Examinations	25th to 28th April	--
7	Preparation Holidays and Practical Examinations	29th April to 5th May 2020	1 week
8	Submission of Second Mid Term Exam Marks to University on or before	5th May 2020	--
9	End Semester / Supplementary Examinations	6th to 19th May 2020	2 weeks
10	Summer Vacation	20th May to 4th July	7 weeks

DIRECTOR
ACADEMIC & PLANNING, JNTUH

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Institution academic calendar- 2019-20

B.Tech II, III, IV Years - I Semester

S.No	Event	Date	Duration
1	Commencement of Instructions :	15-07-2019	--
2	1st Mid Term Examinations :	12-09-2019 to 14-09-2019	--
3	Submission of 1st Mid Term Exam Marks to University on or before :	20-09-2019	--
4	Parents Teachers Meeting :	21-09-2019	--
5	Cultural Fest (Bathukamma)	05-10-2019	--
6	Dussehra Vacation :	07-10-2019 to 19-10-2019	2 Weeks
7	Last Date of Instruction :	20-11-2019	17 Weeks
8	2nd Mid Term Examinations :	21-11-2019 to 23-11-2019	--
9	Preparation Holidays & Practical Examinations :	25-11-2019 to 30-11-2019	1 Week
10	Submission of 2nd Mid Term Exam Marks to University on or before :	30-11-2019	--
11	End Semester Examinations :	02-12-2019 to 14-12-2019	2 Weeks

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Institution academic calendar- 2019-20

B.Tech II, III, IV Years - II Semester

S.No	Event	Date	Duration
1	Commencement of Instructions :	16-12-2019	--------
2	Traditional Day	11-01-2020	
3	1st Mid Term Examinations :	10-02-2020 to 12-02-2020	---------
4	Submission of 1st Mid Term Exam Marks to University on or before :	19-02-2020	---------
5	Technoera 2K20	21-02-2020 to 22-02-2020	
6	Parents Teachers Meeting :	14-03-2020	---------
7	Last Date of Instruction :	07-04-2020	16 Weeks
8	2nd Mid Term Examinations :	08-04-2020 to 11-04-2020	---------
9	Preparation Holidays & Practical Examinations :	13-04-2020 to 18-04-2020	1 Week
10	Submission of 2nd Mid Term Exam Marks to University on or before :	18-04-2020	---------
11	End Semester Examinations :	20-04-2020 to 02-05-2020	2 Weeks
12	Summer Vacation :	04-05-2020 to 04-07-2020	9 Weeks

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Class Time Table

CLASS: II-B.Tech ECE A.Y:2019-20 SEMESTER: I W.E.F: 15-07-2019

	I 9:30-10:30	II 10:30 -11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON	NATL	SS	DSD	PTSP	LUNCH	COI	EDC	INT
TUE	PTSP	DSD	SS	NATL		EDC	SS(T)/EDC(T)	SPORTS
WED	SS	EDC	DSD	COI		PTSP	DSD LAB/EDC LAB	
THU	EDC(T)/SS(T)	PTSP	COI	LIB		SS	NATL	DSD(T)/SS(T)
FRI	PTSP	DSD	NATL	SS		COUN	EDC LAB /BS LAB	
SAT	EDC		CO-CU/DAA			PTSP	BS LAB/DSD LAB	

*(T) – Tutorial Concern Faculty

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
EC301PC	EDC-Electronic Devices and Circuits	Mrs.G.Anitha	EC306PC	EDC Lab-Electronic Devices and Circuits Lab	Mrs.G.Anitha/Ms.M.Tejaswini
EC302PC	NATL-Network Analysis and Transmission	Mrs.P.Pravallika	EC307PC	DSD Lab-Digital System Design Lab	Mr.I.Venu/Ms.T.Sadhana
EC303PC	DSD-Digital System Design	Mr.I.Venu	EC308ES	BS LAB-Basic Simulation Lab	Sk.Shahana/Mrs.T.Divya
EC304PC	S&S-Signals and Systems	Sk.Shahana	LIB	Library	Mr.P.Krishna Rao
EC305ES	PTSP-Probability Theory and Stochastic Processes	Mr.P.Krishna Rao	COUN	Counseling	Mrs.G.Anitha
*MC309	COI-Constitution of India	Dr.C.Rama Rao	INT	Internet	Mr.I.Venu
Co-Cu/DAA	Co-Curricular/Dept.Association Activities	Sk.Shahana			
SPORTS	Sports	Mrs.G.Anitha			

Class Mentor : Mrs.G.Anitha

I/C Time Table HOD-ECE Time Table Co-Ordinator Principal

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Class Time Table

CLASS: III-B.Tech ECE A.Y:2019-20 SEMESTER: I W.E.F: 15-07-2019

	I 9:40-10:30	II 10:30 -11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON	OS	LICA LAB/DC LAB				LDIC	EMTL	SPORTS
TUE	FM	EMTL	LDIC	DC		DICA LAB/LICA LAB		
WED	LIB	DC LAB/DICA LAB				PE	EMTL(T)/DC(T)	DC
THU	LDIC	DC	FM	OS		COUN	EMTL	INT
FRI	DC	CO-CU/DAA		LDIC		FM	OS	PE
SAT	LDIC	EMTL	FM	OS		PE	DC(T)/EMTL(T)	OS

LUNCH

*(T) – Tutorial Concern Faculty

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
EC501PC	EMTL-Electromagnetic Theory and Transmission Lines	Mrs.K.Hemalatha	EC505PC	LICA Lab-Linear IC Applications Lab	Mrs.P.Kavitha/Ms.G.Anusha
EC502PC	LDIC-Linear and Digital IC Applications	Mrs.P.Kavitha	EC506PC	DICA Lab-Digital IC Applications Lab	Ms.K.Padma/Mrs.K.Hemalatha
EC503PC	DC-Digital Communications	Mrs.P.Meena	EC507PC	DC Lab-Digital Communications Lab	Mrs.P.Meena/K.Mallaiah
SM504MS	FM-Fundamentals of Management	Mr.Rahul Paul	LIB	Library	Mrs.P.Kavitha
CS511OE	OS-Operating Systems (Open Elective – I)	Ms.B.Laxmi	COUN	Counseling	Mrs.P.Meena
*MC500HS	PE-Professional Ethics	Dr.C.Rama Rao	INT	Internet	Mr.K.Mallaiah
Co-Cu/DAA	Co-Curricular/Dept.Association Activities	Mrs.P.Kavitha			
SPORTS	Sports	Mrs.Y.Rajani			

Class Mentor : Mrs.K.Hemalatha

I/C Time Table HOD-ECE Time Table Co-Ordinator Principal

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Class Time Table

CLASS: IV-B.Tech ECE A.Y:2019-20 SEMESTER: I W.E.F: 15-07-2019

	I 9:40-10:30	II 10:30 -11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON	MWE	CN	AI	LIB		VLSI&ECAD LAB/MWE LAB		
TUE	CN	AI	VLSID	VLSID		ESD	MWE	COUN
WED	CN	MWE LAB/VLSI & ECAD LAB				MWE	MWE	SPORTS
THU	ESD	VLSID	CO-CU/DAA			AI	MWE	CN
FRI	AI	ESD	MWE	INT		CN	VLSID	ESD
SAT	VLSID	AI	MWE	MWE		CN	SEMINAR	

LUNCH

*(T) – Tutorial Concern Faculty

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
EC701PC	MWE-Microwave Engineering	Mr.G.Narasimha	EC703PC	VLSI and E-CAD Lab	Mrs.Md.Azra/Mr.T.Naresh
EC721PE	CN-Computer Networks (Professional Elective-II)	Mr.K.Bhaskar Reddy	EC704PC	Microwave Engineering Lab	Mr.G.Narasimha/ Mr.P.KrishnaRao
EC734PE	ESD-Embedded Sytem Design (Professional Elective-III)	Mr.K.Mallaiah	EC705PC	Industry Oriented Mini Project	Mr.K.Bhaskar Reddy
EC744PE	AI-Artificial Intelligence (Professional Elective-IV)	Mrs.A.Sindhuja	LIB	Library	Mrs.K.Hemalatha
EC702PC	VLSID-VLSI Design	Md.Azra	COUN	Counseling	Mrs.K.Hemalatha
Co-Cu/DAA	Co-Curricular/Dept.Association Activities	Mr.G.Narasimha	INT	Internet	Mr.T.Naresh
SPORTS	Sports	R.Laxmi	SEM	Seminar	Md.Azra

Class Mentor : Mrs.A.Sindhuja

I/C Time Table HOD-ECE Time Table Co-Ordinator Principal

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

VISION AND MISSION

VISION:

To become a recognized center in the field of Electronics and Communication Engineering by producing creative engineers with social responsibility and address ever-changing global challenges.

MISSION:

DM1: To facilitate an academic environment that enables student's centric learning.

DM2: To provide state-of-the-art hardware and software technologies to meet industry requirements.

DM3: To continuously update the Academic and Research infrastructure.

DM4: To Conduct Technical Development Programs for overall professional caliber of Stake Holders.

Head of the Department

Principal

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Sri Indu Institute of Engineering & Technology SHERIGUDA 501 510

Vision

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

Mission

- To offer outcome-based education and enhancement of technical and practical skills.
- To continuously assess teaching-learning process through institute-industry collaboration.
- To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students' fraternity.
- To Create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders.

Quality Policy

- To ensure students to uphold moral and ethical values.
- To expose the students to understand the socio-economic strata of the society with an empathetic attitude.
- To nurture talent and entrepreneurship and enable all-round development in students.
- To cater to the demand-driven needs of various stake holders. To continually improve all the processes through endorsing cognizance, conducting periodical reviews and unifying trainings at all levels.

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Course/Subject Name
Prepared by
Dept
AY
Class
Institute V/M
Department V / M /PEO
POs /PSOs
Course Syllabus with Structure
Course Outcomes (CO)
Mapping CO with PO/PSO; Course with PO/PSO with Justification
Academic Calendar
Time table - highlighting your course periods including tutorial
Lesson plan with number of hours/periods, TA/TM, Text/Reference book
Gap within the syllabus - mapping to CO, PO/PSO
Gaps beyond the syllabus - Mapping to PO/PSO
Gaps addressed by a resourse person - document
Gaps addressed by any other teaching aid/methodology
Web references
Lecture notes
List of Power point presentations / Videos
CD with PPT/Videos
University Question papers
Internal Question papers, Key with CO and BT
Assignment Question papers mapped with CO and BT
Scheme of evaluation with CO and BT mapping
Tutorial topics with evidence
Result Analysis to identify weak and advanced learners - 3 times in a semester
Result Analysis at the end of the course
Remidial class for weak students - schedule and evidences
Advance Learners- Engagement documentation
Course Assessment (Plan & Execution)
CO, PO/PSO attainment sheets
Observation for not attaining CO or for improvement
Plan of action to improve CO attainment next time
Attendance register (Theory/Tutorial/Remidial) - Teacher/Course delivery record; Continuous evaluation
Course file (Digital form)

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ACTION PLAN for A.Y 2019-20 Semester-I

JNTUH Academic Calendar 2019-20 Semester-I		
S.NO	Event	Dates
1	Commencement of Instruction	15th July 2019
2	First Mid Term Examinations	12th to 14th Sept. 2019
3	Submission of First Mid Term Exam Marks to University on or before	20th Sept 2019
4	Parent – Teacher Meeting	21st Sept 2019
5	Dussehra recess	7th to 12th Oct 2019
6	Last date of Instruction	13th Nov 2019
7	Second Mid Term Examinations	14th to 16th Nov 2019
8	Preparation Holidays and Practical Examinations	18th to 23rd Nov 2019
9	Submission of Second Mid Term Exam Marks to University on or before	23rd Nov 2019
10	End Semester Examinations	25th Nov to 7th Dec 2019

Academic Calender Week No.	Date	Work/Event Planned	Assigned to(if Applicable)	Resources Required / By Date : Remarks
Week 0				
0	8.7.2019 to 13.7.2019	Department staff meeting-01(regarding the class commencement)	H.O.D	Completed
		Information passing to students & parents for regularity in attending classes right from start	Mentors	Completed
		Lab Manuals Verification	H.O.D & Suresh Ballala	Completed
		Subject Course Files Verification	H.O.D & G.Narasimha	Completed
Week 1				
1	15.7.2019 to 20.7.2019	Class work commencement	H.O.D	
		Academic Meeting-01	Dr.S.Suresh	
		Discipline Meeting-01	Dr.D.Lakshmaiah	
		Information passing to parents for absentees of students	Mentors	

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Week 2				
2	22.7.2019 to 27.7.2019	CR's Meeting-01	H.O.D	
		Counseling of irregular students	Class Mentors & Counselors	
		Mini Project Review-01	Project Coordinator	
Week 3				
3	29.7.2019 To 03.8.2019	Department staff meeting-2(to set planning activities)	H.O.D	
		Verbal Feedback-01	H.O.D	
		Submission of Assignment of Unit-I	Concern Subject Faculty	Report should be submitted to HOD on 05.08.2019
Week 4				
4	05.8.2019 To 10.8.2019	Evaluation & Submission of Lab Records by all students	Lab In-charges	
		Class Mentors & CR's meeting-02 regarding discipline	Dr.D.Lakshmaiah	
		Unit Test-I	Concerned sub faculty	During Class Hours
		Monthly report-1 submission to principal	H.O.D	
		Submission of Attendance report and syllabus coverage report	Mentors & H.O.D	
Week 5				
5	12.08.2019 To 17.8.2019	Written Feedback-01	H.O.D	
		Mini Project Review-02	Project Coordinator	
		1st Retest of Unit Test-01	Concerned sub faculty	04.00 PM to 04.50 PM
Week 6				
6	19.8.2019 To 24.8.2019	Department Staff Meeting-03	H.O.D	
		IETE Acities	H.O.D & K.Bhaskar Reddy	
		2nd Retest of Unit Test-01	Concerned sub faculty	04.00 PM to 04.50 PM
		Verification of final mini project report	Project coordinator &	

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			Project Guides	
		Submission of Attendance report and syllabus coverage report	Mentors & H.O.D	
Week 7				
7	26.8.2019 to 31.8.2019	Submission of Assignments for Unit-II	Concerned Subject Faculty	Report should be submitted to HOD on 02.09.2019
		Submission of Unit Test marks with retest marks , improvements	Mentors	
Week 8				
8	2.9.2019 to 7.9.2019	IETE Activities	H.O.D & K.Bhaskar Reddy	
		Lab Internal Exam-01	Lab In-charges	
		Submission of final mini project report	Project Coordinator & Project Guides	
		Submission of Attendance report and syllabus coverage report	Mentors	
		Monthly report-2 submission to principal	H.O.D	
Week 9				
9	9.9.2019 to 14.9.2019	Department staff meeting-04	H.O.D	
		I Mid exams for II,III & IV years (12.9.2019 to 14.9.2019)	Exam Branch	
Week 10				
10	16.9.2019 To 21.9.2019	I Mid Marks Submission	Concerned Faculty	
		Weak students identification based on attendance, Unit test & I Mid marks	Class Mentors	
		Targetted result submission by all faculty	Mentors	
		Parent teacher meeting	Principal , H.O.D & Mentors	
		Submission of Attendance	Mentors	

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		report and syllabus coverage report		
Week 11				
11	23.9.2019 To 28.9.2019	Verbal Feedback - 03	H.O.D	
		Department staff meeting-05 & Counseling the faculty	H.O.D	
		Lab Records Submission	Lab In-charges	
Week 12				
12	30.9.2019 to 5.10.2019	Unit Test-02	Concerned Faculty	During Class Hours
		Submission of Assignments for Unit-III	Concerned Faculty	Report should be submitted to HOD on 07.10.2019
		Monthly Report-3 Submission to Principal	H.O.D	
Week 13				
13	07.10.2019 To 12.10.2019	Dussehra Holidays		
Week 14				
14	14.10.2019 To 19.10.2019	Department Meeting-06	H.O.D	
		Submission of Attendance report and syllabus coverage report	Mentors	
		Monthly report-4 submission to principal	H.O.D	
		Conducting Parents teacher meeting for poor attendance & performance of students	H.O.D & Mentors	
		Ist Retest for Unit Test-02	Concerned faculty	04.00 PM to 04.50 PM
Week 15				
15	21.10.2019 To 26.10.2019	Submission of Assignments for Unit-IV	Concerned faculty	Report should to 28.10.2019
		2nd Retest of Unit test-02	Concerned faculty	
		Submission of Attendance report and syllabus coverage report	Mentors	

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.Week 16				
16	28.10.2019 To 02.11.2019	Marks submission & Special Descriptive Test	Class Mentors	
		Comparison of each & every student about his performance	Class Mentors	
Week 17				
17	04.11.2019 To 09.11.2019.	Final Lab Records submission	Lab in-charges	
		Department staff meeting-07	H.O.D	
		Submission of Assignments for Unit-5	Concerned faculty	Report should be submitted to HOD on 11.11.2019
		Lab Internal-II	Lab in-charges	
		Submission of Attendance report and syllabus coverage report	Mentors	
		Monthly report submission to principal-04	H.O.D	
Week 18				
18	11.11.2019 To 16.11.2019	II Mid Examinations (14.11.2019 To 16.11.2019)	Exam branch	
		Department staff meeting-08	H.O.D	
		Final Attendance Report of the semester	Mentors	
		Final syllabus coverage report	Mentors	
Week 19				
19	18.11.2019 To 23.11.2019	Final Submission of Lab Records	Lab In-charges	
		Lab Externals	Lab In-charges	

Prepared by
Mrs.G.Anitha

Academic Co-ordinator
Dr.S.Suresh

HOD-ECE
Mr.Suresh Ballala

Principal
Dr.I.Satyanarayana

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

2019-20 IInd SEM

COURSE OUTCOMES

Course: Electromagnetic fields and waves-(C222) –EC402PC

Class: II –II SEM – ECE - A & B- Section

After completing this course, the student will be able to:

C222.1:	Apply the basic laws to derive the Maxwell's Equation in Differential and Integral form for solving the engineering problems in Electrostatics. (Application and Evaluation)
C222.2:	Describe the knowledge of Magnetic Scalar and Vector Potentials, Forces due to Magnetic Fields, Ampere's Force Law. (Knowledge)
C222.3:	Distinguish between static and Time varying fields, apply these concepts to derive the Maxwell's Equation in Differential, Integral form and boundary conditions for solving the engineering problems. (Comprehension and Application)
C222.4:	Analyze the wave equation for good conductors and good dielectrics, criticize and apply the characteristics of uniform plane wave for practical problems. (Evaluation and Analysis)
C222.5:	To analyze the characteristics of Uniform Plane Waves (UPW), determine their propagation parameters and estimate the same for dielectric and dissipative media.(Analysis)
C222.6:	Analyze the rectangular waveguides, their mode characteristics, and design waveguides for solving practical problems. (Analysis, Synthesis and Evaluation)

faculty

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Work Load

A.Y :-2019-20 SEMESTER: I W.E.F:-15.07.2019

S. No	Name of the Faculty & Designation	Subject / Lab Assigned								Additional Workload /Responsibilities, if any	Total Work load
		I Year		II Year		III Year		IV Year			
		Theory	Lab	Theory	Lab	Theory	Lab	Theory	Lab		
1	Dr S Suresh					EMTL (III ECE-B)				1.Academic Committee member 2.Internal Quality Assurance Cell member	6
2	Dr. N. Tamilarasan					DC (III ECE-B)				1.R&D Consult Cell Member	6
3	Dr.D.Lakshmaiah							VLSID (IV ECE-C)		1.Academic Committee member 2.Internal Quality Assurance Cell member	6
4	Suresh Ballala			DSD (II ECE-C)	DSD LAB (II ECE-C)					1.Academic Committee member 2.Internal Quality Assurance Cell member 3. Grievance &	12

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										Redressal Cell Member 4. Anti-Ragging Committee and Anti Ragging Squads Member	
5	I Venu			DSD (II-ECE-A)	DSD LAB (II-ECE-A)					Internet II ECE-A	13
6	S Naresh					DC (III-ECE-B&C)	DC LAB (III-ECE-B&C)			Internet II ECE-C	21
7	M Ganesh							VLSID (IV ECE-A)	VLSI & ECAD LAB (IV ECE-B)	Industry Oriented Mini Project Incharge IV ECE-B Counselling IV ECE-B	16
8	G.Anitha			EDC (II-ECE-A)	EDC LAB (II-ECE-A&C)					Sports II ECE-A Counselling II ECE-A Class Mentor II ECE-A	21
9	P.Krishna Rao			PTSP (II-ECE-A)					MWE LAB (IV ECE-A&B)	Library II ECE-A Library IV ECE-B	20
10	G Chandra Sekhar			SS (II-ECE-B)	BS LAB (II-ECE-B&C)					Library II ECE-B CoCurricular/Dept.Association Activities II ECE-C Counselling II ECE-C Industry Institute Interaction Cell Member	22
11	G.Anusha						LICA LAB (III-ECE-A&C)	AI (IV-ECE-C)		Internet II ECE-B	19
12	T Naresh			SS (II-ECE-C)	BS LAB (II ECE-B)				VLSI & ECAD LAB (IV ECE-A)	Internet IV ECE-A Library III ECE-B CoCurricular/Dept.Association Activities III ECE-C	22

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13	D Swathi			DSD (II-ECE-B)	DSD LAB (II-ECE-B)					CoCurricular/Dept.Association Activities II ECE-B Counselling II ECE-B Sports III ECE-C	16
14	A Sindhuja							AI (IV ECE-A&B)	VLSI & ECAD LAB (IV ECE-C)	Sports II ECE-B Library II ECE-C CoCurricular/Dept.Association Activities III ECE-B	18
15	K Hemalatha					EMTL (III-ECE-A&C)	DICA LAB (III-ECE-A)			Library IV ECE-A Counselling IV ECE-A Library IV ECE-C	18
16	Azra Mohd							VLSID (IV ECE-A)	VLSI & ECAD LAB (IV ECE-A&B)	Seminar Incharge IV ECE-A	18
17	M Tejaswini				EDC LAB (II-ECE-A&B)				MWE LAB (IV-ECE-C)	CoCurricular/Dept.Association Activities IV ECE-C	24
18	T Sadhana				DSD LAB (II-ECE-A&B)			MWE (IV ECE-A)	MWE LAB (IV-ECE-C)		19
19	T. Divya			EDC (II-ECE-C)	BS LAB (II-ECE-A&C)		DC LAB (III-ECE-C)			Counselling IV ECE-C	21
20	R. Sravanthi				DSD LAB (II-ECE-C)			ESD (IV ECE-B&C)		Internet III ECE-C CoCurricular/Dept.Association Activities IV ECE-A Industry Oriented Mini Project Incharge IV ECE-C Counselling IV ECE-C	22
21	K.Bhaskar Reddy						DC LAB (III-ECE-B)	CN (IV ECE-A&B)		Industry Oriented Mini Project Incharge IV ECE-A Alumni Association Member	21

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22	Rapaka Laxmi			EDC (II-ECE-B)			DICA LAB (III-ECE-B&C)			Sports IV ECE-A Sports III ECE-B Library III ECE-C	21
23	P Meena					DC (III-ECE-A)	DC LAB (III-ECE-A)			Counselling III ECE-A Internet IV ECE-B Sports IV ECE-C	16
24	Y. Rajani					LDIC (III-ECE-B)	LICA LAB (III-ECE-B&C)			Sports III ECE-A Counselling III ECE-B Grievance & Redressal Cell Member	20
25	T. Padma Sri			A&DE (II CSE-A)	A&DE LAB (II CSE-A)					Seminar IV ECE-C	12
26	K Padma						DICA LAB (III-ECE-A&B)	CN (IV ECE-C)			18
27	P Kavitha					LDIC (III-ECE-A)	LICA LAB (III-ECE-A&B)			CoCurricular/Dept.Association Activities III ECE-A Library III ECE-A Internet IV ECE-C	22
28	G Narasimha							MWE (IV ECE-A&B)	MWE LAB (IV ECE-A&B)	CoCurricular/Dept.Association Activities IV ECE-A	24
29	K Mallaiah						DC LAB (III-ECE-A)	ESD (IV ECE-A)		Internet III ECE-A	14
30	G Shiva Kumar				EDC LAB (II-ECE-B&C)			DICA LAB (III ECE-C)		Sports II ECE-C	16
31	Sk Shahana			SS (II-ECE-A)	BS LAB (II-ECE-A)					CoCurricular/Dept.Association Activities II ECE-A Internet III ECE-B	14

I/C Time Table

HOD-ECE

Time Table Co-Ordinator

Principal

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

LESSON PLAN

Course Title	DIGITAL COMMUNICATIONS
Course Code	EC503PC
Programme	B.Tech
Year & Semester	IIIyear I-semester
Regulation	R16
Course Faculty	Mrs.A.Swetha, Assistant Professor , ECE

S.NO	Unit	TOPIC	Number of Sessions Planned	Teaching method/Aids	REFERENCE
1.	1	Model of Digital Communication Systems	1	Black Board	R6,W1
2.		Digital Representation of Analog Signal	1	Black Board, Video	R6,W1
3.		Certain Issues in Digital Transmission	1	Black Board	R6
4.		Advantages of Digital Communication Systems	1	Black Board, PPT	R6
5.		Sampling Theorem	1	Black Board ,PPT	R6
6.		Types of Sampling – Impulse Sampling	1	Black Board	R6
7.		Natural Sampling , Flat – Top Sampling	1	Black Board	R6
8.		PCM Generation and Reconstruction	1	Black Board	R6
9.		Quantization Noise	1	Black Board	R6
10		Non Uniform Quantization	1	Black Board	R6
11		Companding	1	Black Board, Role Play	R6
12		DPCM Generation	1	Black Board	R6
13		DPCM Reconstruction	1	Black Board	R6
14		Adaptive DPCM Generation and Reconstruction	1	Black Board, Role Play	R6,W6
15		DM Generation and Reconstruction	1	Black Board, Role Play	R6
16		Adaptive DM Generation and	1	Black Board,	R6

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		Reconstruction		PPT	
17		Noise in PCM, Noise in DM	1	Black Board	R6
18		Information and Entropy	1	Black Board	T1
19		Conditional Entropy and Redundancy	1	Black Board	T1
20		Shannon-Fano Coding	1	Black Board	T1,W4
21		Information Loss due to Noise	1	Black Board, Discussion Method	T1
22	2	Source coding Huffman Code	1	Black Board, Video	T1,W8
23		Variable Length Coding	1	Black Board	T1
24		Lempel-ziv coding	1	Black Board, PPT	T1
25		Source coding to increase average information per bit	1	Black Board	T1
26		Lossy Source coding	1	Black Board	R6
27		Bandwidth-S/N Trade off	1	Black Board	R6
28		Hartley Shannon Law	1	Black Board, PPT	R6
29		Matrix Description of LBC	1	Black Board, PPT	R4
30		Error Detection Capabilities of Linear Block	1	Black Board	R3,R4
31		Error Correction Capabilities of Linear Block	1	Black Board	R3,R4
32		Cyclic Codes: Algebraic Structure	1	Black Board	R3,R4
33		Syndrome Calculation	1	Black Board	R3,R4
34		Convolution Codes: Encoding, Decoding	1	Black Board	R3,R4
35		Introduction, Matched Filter	1	Black Board, PPT	T2,W2
36		Error Rate Due to Noise	1	Black Board	R5
37		Intersymbol interference	1	Black Board	R5
38		Nyquist's criterion for Distortion less Baseband Binary Transmission	1	Black Board	R5
39		Correlative -Level Coding Baseband M-Array PAM Transmission	1	Black Board, PPT	R5
40		Digital subscriber Lines	1	Black Board, Quiz	R5
41	3	Optimal Liner Receiver	1	Black Board	W5

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42		Adaptive Equalization	1	Black Board	R5
43		Eye patterns	1	Black Board	R6
44		Pass band transmission model Gram-Schmidt orthogonalization	1	Black Board, Video	R6,W3
45		Probability of error	1	Black Board, PPT	R6
46		Correlation receiver	1	Black Board	R6
47	4	Introduction, ASK Modulation	1	Black Board ,Role Play	R5
48		Coherent ASK Detector	1	Black Board	R5
49		Non-Coherent ASK Detector	1	Black Board	R6,R5
50		Bandwidth and Frequency Spectrum of FSK	1	Black Board, Group Work	R6,R5
51		Non Coherent FSK Detector	1	Black Board	R6,R5
52		Coherent FSK Detector FSK Detection using PLL	1	Black Board, Role play	R6,R5
53		BPSK	1	Black Board	R6,R5
54		Coherent PSK Detection	1	Black Board	R6,R5
55		QPSK	1	Black Board	R6,R5
56		8-PSK, 16-PSK	1	Black Board, PPT	R6,R5
57		Differential PSK	1	Black Board, PPT	R6,R5
58		QAM	1	Black Board	R6,R5
59	5	Use of Spread Spectrum	1	Black Board	T2
60		Direct Sequence Spread (DSSS)	1	Black Board	T2
61		Code Division Multiple Access	1	Black Board	T2
62		Ranging using DSSS	1	Black Board	T2
63		Frequency Hopping Spread Spectrum	1	Black Board, PPT	T2
64		PN – Sequence: Generation and characteristics	1	Black Board, Video	T2,W7
65		Synchronization in Spread Spectrum Systems	1	Black Board, PPT	T2

TEXT BOOKS:

T1.Communications system, S. Haykin, Wiley, 4 edition 2009.
T2.Digital and Analog Communication Systems – Sam Shanmugam, John Wiley, 2005.

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REFERENCES:

R1.Principles of Communication Systems – Herbert Taub, Donald L Schiling, Goutam Saha, 3rd Edition, McGraw-Hill, 2008

R2.Electronic communication systems, Wayne Tomasi, 5 edition, Pearson

R3.Communication Systems: Analog and Digital, R. P. Singh ,S. Sapre, McGraw-Hill Education, 2012

R4.Digital Communications – John G. Proakis , Masoud Salehi – 5th Edition, McGrawHill, 2008.

R5.Digital Communications- B.P.Lathi.

R6. Digital Communications- Sanjay Sharma.

Web references

W1.https://nptel.ac.in/courses/108101113/

W2. https://www.youtube.com/watch?v=JEMTDgM8Dmw

W3.https://onlinelibrary.wiley.com/doi/10.1002/0471200573.ch3

W4.https://ieeexplore.ieee.org/document/4036165/

W5. https://www.youtube.com/watch?v=9n2xG9ooD2s

W6. https://www.youtube.com/watch?v=GlKu8QTrK8Y

W7. https://www.youtube.com/watch?v=GrA46JJ0xbU

W8. https://nptel.ac.in/courses/108101113/64

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Electronics and Communication Engineering
2019-20; 1st Semester

COs and Mapping with PO/PSO

Course: SIGNALS AND SYSTEMS (C214) Class: II ECE-B&C

Course Outcomes

After completing this course, the student will be able to:

C214.1: Explain any arbitrary signals in terms of complete sets of orthogonal functions and understands the principles of impulse functions, step function and signum function. [Knowledge]

C214.2: Express periodic signals in terms of Fourier series and express the spectrum and express the arbitrary signal (discrete) as Fourier transform to draw the spectrum. [Knowledge]

C214.3: Analyze the characteristics of linear time invariant systems. [Analysis]

C214.4: Explain response can be obtained using Laplace transform and Z- Transform, properties and ROC of L.Tand Z- Transform [Knowledge]

C214.5: Analyze the Sampling theorem, reconstruction, aliasing, and Nyquist's theorem to represent continuous time signals in discrete time. [Analysis]

C214.6: Compare auto Correlation and cross correlation and concept of power density spectrum. [Evaluation]

Mapping of course outcomes with program outcomes:

High -3 Medium -2 Low-1

PO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C214.1	3	2	-	-	-	-	-	-	-	-	-	-	2	3
C214.2	3	1	-	-	2	-	-	-	-	-	-	2	3	2
C214.3	3	-	2	-	-	-	-	-	-	-	-	-	2	2
C214.4	2	3	-	-	1	-	-	-	-	-	-	-2	1	3
C214.5	3	2	-	-	-	-	-	-	-	-	-	-	2	2
C214.6	3	1	-	-	2	-	-	-	-	-	-	2	3	3
	2.8	1.8	2		1.6							3	2.16	2.5

Faculty

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SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Electronics and Communication Engineering
2019-20; 1st Semester

CO- PO/PSO Mapping - Justification

Course: SIGNALS AND SYSTEMS (C214) Class: II ECE-A&B

P01.ENGINEERING KNOWLEDGE: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
P02.PROBLEM ANALYSIS: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
P03. DESIGN/DEVELOPMENT OF SOLUTIONS: Design solutions for complex engineering problems and design system components or processes that meet t h e specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
P05.MODERN TOOL USAGE: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

CO-PO mapping Justification

C214.1: Explain any arbitrary signals in terms of complete sets of orthogonal functions and understands the principles of impulse functions, step function and signum function. [Knowledge]

	Justification
PO1	Students get the knowledge on arbitrary signals in terms of complete sets of orthogonal functions and understands the principles of impulse functions, step function and signum function(level 3)
PO2	Students calculate information of Mean Square Error. (level 2)

C214.2: Express periodic signals in terms of Fourier series and express the spectrum and express the arbitrary signal (discrete) as Fourier transform to draw the spectrum. [Knowledge]

	Justification
PO1	Students get the knowledge on periodic signals in terms of Fourier series and express the

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	spectrum and express the arbitrary signal (discrete) as Fourier transform to draw the spectrum. (level 3)
PO2	Students can formulate the Fourier transform of standard signals (level 1)
PO5	By using MATLAB tool students perform transform techniques like FS, FT (level 2)

C214.3:Analyze the characteristics of linear time invariant systems. [Analysis]

	Justification
PO1	Students get the knowledge on the characteristics of linear time invariant systems (level 3)
PO3	Students can design LPF and HPF (level 2)

C214.4: Explain response can be obtained using Laplace transform and Z- Transform, properties and ROC of L.T and Z- Transform [Knowledge]

	Justification
PO1	Student gets the knowledge on Laplace transform and Z- Transform. (level 2)
PO2	Students calculate response can be obtained using Laplace transform and Z- Transform. (level 3)
PO5	By using MATLAB tool students perform transform techniques like L.T and Z.T (level 1)

C214.5:Analyze the Sampling theorem, reconstruction, aliasing, and Nyquist's theorem to represent continuous time signals in discrete time. [Analysis]

	Justification
PO1	Student get the knowledge on Sampling theorem, reconstruction, aliasing, and Nyquist's theorem to represent continuous time signals in discrete time(level 3)
PO2	Students calculate Sampling theorem and Nyquist's theorem. (level 2)

C214.6: Compare auto Correlation and cross correlation and concept of power density spectrum. [Evaluation]

	Justification
PO1	Student gets the knowledge on auto Correlation and cross correlation and concept of power density spectrum. (level 3)
PO2	Students calculate power density spectrum.(level 1)
PO5	By using MATLAB tool students perform auto Correlation and cross correlation (level 2)

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