

17
18 NOV 2023

ECE A-22 COURSE STRUCTURE

I Year I Semester

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	BS	S&H	9HC07	Engineering Physics	2	1	0	3	40	60
2	ES	IT	9FC01	Problem Solving using C	3	0	0	3	40	60
3	BS	S&H	9HC11	Matrix Algebra and Calculus	2	1	0	3	40	60
4	HS	S&H	9HC01	Essential English Language Skills	2	0	0	2	40	60
5	ES	S&H	9BC01	Engineering Graphics	1	0	4	3	40	60
6	HS	S&H	9HC61	Oral communication Lab - I	0	0	2	1	40	60
7	BS	S&H	9HC66	Engineering Physics Lab	0	0	3	1.5	40	60
8	ES	IT	9FC61	Problem Solving using C Lab	0	0	3	1.5	40	60
9	ES	S&H		Induction Program	-	-	-	-	-	-
Total					10	2	12	18	320	480

I Year II Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	BS	S&H	9HC04	Engineering Chemistry	2	1	0	3	40	60
2	ES	CSE	9EC01	Data Structures	3	0	0	3	40	60
3	BS	S&H	9HC12	Advanced Calculus	2	1	0	3	40	60
4	ES	EEE	9AC42	Electrical Circuits & Networks Analysis	2	1	0	3	40	60
5	HS	S&H	9HC62	Oral communication Lab - II	0	0	3	1.5	40	60
6	BS	S&H	9HC64	Engineering Chemistry Lab	0	0	3	1.5	40	60
7	ES	CSE	9EC61	Data Structures using CLab	0	0	3	1.5	40	60
8	ES	S&H	9BC61	Workshop/Manufacturing Processes Lab	0	1	3	2.5	40	60
Total					9	4	12	19	320	480

Sallys
PROFESSOR

Dept of Electronics & Communication Engineering
JNTUH College of Engineering Hyderabad - 500084

Ratna
PROFESSOR

Department of
Electronics & Communication Engineering
National Institute of Technology
Warangal - 506 004 (T.S.)

Suresh

Ganapathi

II Year I Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	PC	ECE	9CC01	Electronic Devices and Circuits	3	0	0	3	40	60
2	PC	ECE	9CC02	Signals and Systems	3	0	0	3	40	60
3	BS	ECE	9CC03	Probability Theory and Stochastic Process	2	1	0	3	40	60
4	BS	S&H	9HC14	Complex Variable and Transform Techniques	2	1	0	3	40	60
5	HS	MBA	9ZC01	Business Economics and Financial Analysis	3	0	0	3	40	60
6	HS	S&H	9HC03	Universal Human Values	3	0	0	3	40	60
7	HS	S&H	9HC63	Soft Skills Lab	0	1	2	2	40	60
8	PC	ECE	9CC71	Electronic Devices and Circuits Lab	0	0	3	1.5	40	60
9	PC	ECE	9AC72	Electrical Circuits & Networks AnalysisLab	0	0	3	1.5	40	60
Total					16	3	8	23	360	540

II Year II Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	PC	ECE	9CC04	Analog Circuits	3	0	0	3	40	60
2	PC	ECE	9CC05	Digital Logic Design	3	0	0	3	40	60
3	PC	ECE	9CC06	Analog& Digital Communications	2	1	0	3	40	60
4	PC	ECE	9C407	Electromagnetic Waves and Transmission Lines	3	0	0	3	40	60
5	BS	S&H	9HC16	Quantitative Aptitude and Logical Reasoning	3	0	0	3	40	60
6	MC	S&H	9HC05	Environmental Science	3	-	-	-	Pass/ Fail	
7	PC	ECE	9CC72	Analog Circuits Lab	0	0	3	1.5	40	60
8	PC	ECE	9C473	Basic Simulation and Digital Logic Design Lab	0	0	4	2	40	60
9	PC	ECE	9CC74	Analog& Digital Communication Lab	0	0	3	1.5	40	60
10	PW	ECE	9C461	Technical seminar	0	1	0	1	100	-
Total					17	2	10	21	420	480

Note: Summer Industry Internship-I is to be carried out during the summer vacation between 4th and 5th semesters and Evaluation of Summer Industry Internship - I will be done along with III-I courses

Sally
PROFESSOR

Dept of Electronics & Communication Engineering
INTUM College of Engineering Hydersbad 500085

Pats
PROFESSOR
Department of
Electronics & Communication Engineering
National Institute of Technology
Warangal - 506 004 (T.S.)

Salem

Ganesh

III Year I Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	PC	ECE	9CC08	Digital Signal Processing	2	1	0	3	40	60
2	PC	ECE	9CC09	IC Applications	3	0	0	3	40	60
3	PC	ECE	9C510	Antennas and Wave Propagations	3	0	0	3	40	60
4	PE	ECE		Professional Elective- I	3	0	0	3	40	60
5	ES	EEE	9AC07	Linear Control systems	3	0	0	3	40	60
6	MC	CSE	9EC54	Artificial Intelligence	2	-	-	-	Pass/ Fail	
7	PC	ECE	9CC75	Digital Signal Processing Lab	0	0	4	2	40	60
8	PC	ECE	9CC76	IC Applications Lab	0	0	3	1.5	40	60
9	PC	ECE	9C578	Antenna Simulation Lab	0	0	3	1.5	40	60
	PW	ECE	9C591	Summer Industry Internship-I	0	0	2	1	40	60
Total					16	1	12	21	360	540

III Year II Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	PC	ECE	9C611	Microwave and Optical Communications	3	0	0	3	40	60
2	PC	ECE	9C612	VLSI Technology and Design	3	0	0	3	40	60
3	PC	ECM	9DC05	Microprocessors and Microcontrollers	2	1	0	3	40	60
4	PE			Professional Elective- II	3	0	0	3	40	60
5	OE			Open Elective- I	3	0	0	3	40	60
6	MC	IT	9FC24	Cyber Security	2	-	-	-	Pass/ Fail	
7	PC	ECE	9C679	Microwave and Optical Communications Lab	0	0	4	2	40	60
8	PC	ECE	9C677	VLSI Technology and Design Lab	0	0	3	1.5	40	60
9	PC	ECM	9DC71	Microprocessors and Microcontrollers Lab	0	0	3	1.5	40	60
10	ES	ECE	9C662	Comprehensive Viva Voce	0	1	0	1	100	-
Total					16	2	10	21	420	480

Note: Summer Industry Internship-II is to be carried out during the summer vacation between 6th and 7th semesters and Evaluation of Summer Industry Internship - II will be done along with IV-I courses

Sally

PROFESSOR

Dept of Electronics & Communication Engineering
NITUH College of Engineering Hyderabad 500086

Ravi Kumar
PROFESSOR
Department of
Electronics & Communication Engineering
National Institute of Technology
Warangal - 506 004 (T.S.)

Suresh

Gautam

IV Year I Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	PC	ECE	9C713	Internet of Things and Applications	2	1	0	3	40	60
2	PC	ECE	9C714	Advanced Communications and Networks	3	0	0	3	40	60
3	ES	ECE	9C715	Computer Networks	3	0	0	3	40	60
4	PE	ECE		Professional Elective- III	3	0	0	3	40	60
5	PE	ECE		Professional Elective –IV	3	0	0	3	40	60
6	OE			Open Elective – II	3	0	0	3	40	60
7	PC	ECE	9C780	Internet of Things and Applications Lab	0	0	2	1	40	60
8	PC	ECE	9C781	Advanced Communications and Networks Lab	0	0	2	1	40	60
9	PW	ECE	9C792	Summer Industry Internship - II	0	0	2	1	40	60
TOTAL					17	1	6	21	360	540

IV Year II Semester ECE

Sl. No	Course Type	Dept Course	Code	Name of the Course	L	T	P	C	CIE	SEE
1	PE	ECE		Professional Elective –V	3	0	0	3	40	60
2	OE	ECE		Open Elective –III	3	0	0	3	40	60
3	PW	ECE	9C893	Project	0	0	20	10	40	60
TOTAL					6	0	20	16	120	180

Professional Electives

S. No	Stream	PE-I	PE- II	PE-III	PE-IV	PE-V
1						
	Code	9C516	9C620	9C724	9C728	9C832
	Communications	Software Defined Radio	Satellite Communication	Ad hoc and Wireless Sensor Networks	MIMO OFDM System	5G Communications
2						
	Code	9C517	9C621	9C725	9C729	9C833
	Signal Processing	Artificial Neural Networks	Digital Image Processing	Electronics & Instrumentation	Machine Learning & Deep Learning Techniques	Radar Signal Processing
3						
	Code	9C518	9C622	9C726	9C730	9C834
	VLSI	CMOS Analog IC Design	VLSI Physical Design	Design Verification using System Verilog	Low Power VLSI Design	Design of Fault Tolerant System
4						
	Code	9C519	9C623	9C727	9C731	9C835
	Embedded System	Computer Organization & Architecture	Embedded C Programming	Embedded System Design using ARM	Embedded Real Time Operating Systems	System on Chip Architecture

Sally
PROFESSOR

Dept of Electronics & Communication Engineering
INTUH College of Engineering Hyderabad 500086

Ravi
PROFESSOR

Department of
Electronics & Communication Engineering
Institute of Technology
506 004 (T.S.)

Suresh
Ganesh

Open Electives

Sl. No	Stream	OE-I	OE-II	OE-III
1	Code	9ZC05	9ZC19	9ZC15
	Finance	Banking Operations and Insurance	Financial Markets and services	Project and Risk Management
2	Code	9EC72		9EC76
	Computer Science	Programming in Java	Database Systems Concepts	Operating Systems Concepts
	Code	9ZC22	9ZC23	9ZC24
3	Entrepreneurship	Basics of Entrepreneurship	Advanced Entrepreneurship	Product and Services
5	Code	9CC36	9CC37	9CC38
	ECE Stream	Fundamentals of digital circuits & Microprocessors	Fundamentals of Communication	Embedded Systems
6	Code	9AC47	9AC44	9AC45
	EEE stream	Power Electronic Devices and Converters	Fundamentals of Measurements and Instrumentation	Fundamentals of Renewable energy sources
7	Code	9BC51	9BC52	9BC53
	Mechanical Stream	Introduction To Additive Manufacturing Processes	Principles of Operations Research	Principles of Automation and Robotics
8	Code	9ZC08	9ZC09	9ZC10
	Innovation and Design Thinking	Design literacy and Design Thinking	Co-Creation and Product Design	Entrepreneurship & Business Design

Sallys

PROFESSOR

Dept of Electronics & Communication Engineering
INTUH College of Engineering, Hyderabad 500085

Patsi Neelak
PROFESSOR
Department of
Electronics & Communication Engineering
National Institute of Technology
Warangal - 506 004 (T.S.)

Spren

Ganesh

Service Courses offered by ECE

Sl. No	Code	Name of Subject	Offered to Dept
1	9CC01	Electronic Devices and Circuits	ECM, EEE
2	9CC05	Digital Logic Design	ECM, EEE
3	9CC02	Signals and Systems	ECM, EEE
4	9CC71	Electronic Devices and Circuits Lab	ECM, EEE
5	8CC73	Basic Simulation and Digital Logic Design Lab	ECM
6	9CC04	Analog Circuits	ECM, EEE
7	9CC06	Analog & Digital Communications	ECM
8	9CC09	IC Applications	ECM, EEE
9	9CC72	Analog Circuits Lab	ECM, EEE
10	9CC74	Analog & Digital Communication Lab	ECM
11	9CC76	IC Applications Lab	ECM, EEE
12	9CC08	Digital Signal Processing	ECM, EEE
13	9CC75	Digital Signal Processing Lab	ECM
14	9CC51	Digital Electronics- 3 credits	CSE, IT, IOT
15	9CC82	Digital Electronics Lab-2 credits	CSE, IT
16	9CC52	Electronic Circuits- 3 credits	EEE
17	9CC53	Communication Theory- 3 credits	EEE
18	9CC54	Computer Organization- 3 credits	CSE-AIML, CSE-DS
19	9CC83	Computer Organization Lab – 1 credit	CSE-IOT, CSE-AIML (Half), CSE-DS (Half)
20	9CC56	Computer Organization and Architectures - 2 credits	CSE-CS, CSE-IOT
21	9CC84	Computer Organization and Architectures Lab– 1 credit	CSE-CS, CSE-IOT

A22- Total Credits (Semester-wise Credit Distribution)

SL. NO	SEMESTER	CREDITS
1.	I-I	18
2	I-II	19
3	II-I	23
4.	II-II	21
5	III-I	21
6	III-II	21
7	IV-I	21
8	IV-II	16
	Total	160

Sallys

PROFESSOR

Dept of Electronics & Communication Engineering
INTUH College of Engineering Hyderabad - 500085

[Signature]
PROFESSOR
Department of
Electronics & Communication Engineering
National Institute of Technology
Warangal - 506 004 (T.S.)

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SL.NO	CATEGORY	MODEL CURRICULUM	SNIST
1.	Humanities and Social Sciences including Management	12	12.5
2	Basic Science courses	25	24
3	Engineering sciences	24	24.5
4.	Professional core courses	48	62
5	Professional Elective courses	18	15
6	Open Electives	18	9
7	Project work, Seminar and Internship	15	13
	Total	160	160

Sally

PROFESSOR

Dept of Electronics & Communication Engineering
INTUH College of Engineering Hyderabad 500085

Suresh

Ramesh

PROFESSOR

Department of
Electronics & Communication Engineering
National Institute of Technology
Warangal - 506 004 (T.S.)

Gulshan