

**R15 REGULATIONS
COURSE STRUCTURE
FOR
B.TECH –ELECTRONICS AND
COMMUNICATION ENGINEERING
w.e.f.
2015 ADMITTED BATCH**



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
COLLEGE OF ENGINEERING (AUTONOMOUS) :: PULIVENDULA
Y.S.R. (DIST), ANDHRA PRADESH, INDIA-516390.**

**COURSE STRUCTURE OF R15 REGULATIONS FOR B.TECH IN
ELECTRONICS AND COMMUNICATION ENGINEERING**

B. Tech I Year I Semester

S.No.	Course Code	Subject Name	Theory/Tutorial	Drawing/Lab	Credits
1	15AHS01	Functional English	3+1	-	3
2	15ABS06	Mathematics - I	3+1	-	3
3	15ACS01	Computer Programming	3+1	-	3
4	15ABS01	Engineering Physics	3+1	-	3
5	15AME01	Engineering Drawing	1	3	3
6	15AEC02	Network Analysis	3+1	-	3
7	15AHS02	English Language Communication Skills Lab	3+1	-	2
8	15ACS02	Computer Programming Lab	-	3	2
9	15ABS02	Engineering Physics Lab	-	3	2
		Total	25	09	24

B. Tech I Year II Semester

S.No.	Course Code	Subject Name	Theory/Tutorial	Drawing/Lab	Credits
1	15AHS03	English for Professional Communication	3+1	-	3
2	15ABS07	Mathematics - II	3+1	-	3
3	15ABS03	Engineering Chemistry	3+1	-	3
4	15ABS05	Environmental Studies	3+1	-	3
5	15ACS04	Data Structures	3+1	-	3
6	15AEC01	Electronic Devices and Circuits	3+1	-	3
7	15ACS05	Data Structures Lab	-	3	2
8	15ABS04	Engineering Chemistry Lab	-	3	2
9	15AME03	Engineering & IT Workshop Lab	-	3	2
		Total	24	09	24

II Year I Semester

S.No	Course Code	Subject Name	Theory/Tutorial	Drawing/ Lab	Credits
1	15ABS08	Mathematics – III	3+1	-	3
2	15AEC05	Signals and Systems	3+1	-	3
3	15AEC06	Switching Theory and Logic Design	3+1	-	3
4	15AEE10	Electrical Technology	3+1	-	3
5	15AEC07	Probability Theory and Stochastic Processes	3+1	-	3
	Choice based credit course of inter department		3+1	-	3
	ANNEXURE-I				
7	15AEC03	Electronic Devices and Circuits Lab	-	3	2
8	15AEE11	Electrical Technology Lab	-	3	2
9	15AHS04	Human Values and Professional Ethics (Audit Course)	2		
		Total	26	6	22

ANNEXURE-I

**Choice Based Credit Course of Inter Department
offered in**

B.TECH II YEAR I SEMESTER

BRANCH	SUBJECT CODE	SUBJECT NAME
PHYSICS	15ABS12	Basics of Nano Science and Nano Technology
MATHEMATICS	15ABS14	Set Theory and Mathematical Logic
	15ABS23	Mathematical Modeling
CHEMISTRY	15ABS15	Green Chemistry and Catalysis for Sustainable Environment
	15ABS16	Instrumental Methods of Chemical Analysis
	15ABS17	Chemistry of Nano Material and Application
ENGLISH	15AHS08	Campus Recruitment Training & Soft Skills
	15AHS09	Competitive & Spoken English
CE	15ACE09	Green Buildings
	15ACE10	Disaster Management and Mitigation
	15ACE11	Water Harvesting and Conservation
ECE	15AEC08	Basic Electronics
	15AEC09	Fundamentals of Digital Electronics
	15AEC10	Electronic Measurements & Instrumentation
ME	15AME11	Robotics
	15AME12	Mechanical Manufacturing Process
	15AME13	Non-Conventional Sources of Energy
EEE	15AEE08	Principles of electrical engineering
	15AEE01	Electrical engineering materials
	15AEE09	Electrical measuring instruments
CSE	15ACS04	Data Structures
	15ACS11	Object oriented Programming
	15ACS08	Operating Systems

II Year II Semester

S.No.	Course Code	Subject Name	Theory/Tutorial	Drawing/Lab	Credits
1	15ABS10	Mathematics – IV	3+1	-	3
2	15AHS05	Managerial Economics & Financial Analysis	3+1	-	3
3	15AEC11	Control Systems Engineering	3+1	-	3
4	15AEC13	Electronic Circuit Analysis and Design	3+1	-	3
5	15AEC14	Pulse and Digital Circuits	3+1	-	3
6	15AEC15	Electromagnetic Waves and Transmission Lines	3+1	-	3
7	15AEC16	Electronic Circuit Analysis and Design Lab		3	2
8	15AEC17	Pulse and Digital Circuits Lab	-	3	2
9	15AEC18	Comprehensive Online Examination	-		1
		Total	26	6	23

III YEAR I SEMESTER

S.No.	Course Code	Subject Name	Theory /Tutorial	Drawing /Lab	Credits
1	15ACS18	Computer Architecture And Organization	3+1	-	3
2	15AEC24	Analog Communication Systems	3+1	-	3
3	15AEC25	Linear IC Applications	3+1	-	3
4	15AEC26	Digital IC Applications	3+1	-	3
5	15AEC27	Electronic Measurements & Instrumentation	3+1	-	3
6	15AEC28	Antennas And Wave Propagation	3+1	-	3
7	15AEC29	Analog Communication Systems Lab	--	3	2
8	15AEC30	IC Applications Lab	-	3	2
9	15AHS06	Advanced Communication Skills Lab (Audit Course)	-	-	-
		TOTAL	24	6	22

III YEAR II SEMESTER

S.No.	Course Code	Subject Name	Theory /Tutorial	Drawing /Lab	Credits
1	15AHS07	Management Sciences	3+1	-	3
2	15AEC31	Digital Communication Systems	3+1	-	3
3	15AEC32	Microprocessors And Microcontrollers	3+1	-	3
4	15AEC33	Digital Signal Processing	3+1	-	3
5		MOOC-I	3+1	-	3
6	CHOICE BASED CREDIT COURSE OF INTER DEPARTMENT				
7	15AEC37	Microprocessor And Microcontrollers Lab	-	3	2
8	15AEC38	Digital Communication Systems Lab	-	3	2
9	15AEC39	Comprehensive Online Examination	-	-	1
		TOTAL	24	8	23

ANNEXURE-II**CHOICE BASED CREDIT COURSE OF INTER DEPARTMENT**

Branch	Subject Code	Subject Name
MATHEMATICS	15ABS18	FUZZY SETS AND APPLICATIONS
	15ABS19	OPTIMIZATION TECHNIQUES
CHEMISTRY	15ABS20	CHEMISTRY ENERGY MATERIALS
	15ABS21	CHEMISTRY OF LIFE
	15ABS22	CHEMISTRY OF POLYMERS AND THEIR APPLICATIONS
CE	15ACE35	REMOTE SENSING & GIS
	15ACE36	ENVIRONMENTAL IMPACT ASSESTMENT & MANAGEMENT
	15ACE37	FINITE ELEMENT METHODS
EEE	15AEE19	POWER ELECTRONICS
	15AEE34	RENEWABLE ENERGY SOURCES
	15AEE35	UTILIZATION OF ELECTRICAL ENERGY
ME	15AME35	OPTIMIZATION TECHNIQUES BY MATLAB
	15AME36	MECHATRONICS & MEMS
	15AME37	AUTOMOTIVE ELECTRONICS
ECE	15AEC34	FUNDAMENTALS OF COMMUNICATION SYSTEMS
	15AEC35	INDUSTRIAL ELECTRONICS
	15AEC36	NEURAL NETWORKS & FUZZY LOGIC
CSE	15ACS35	MOBILE COMPUTING
	15ACS36	OPTIMIZATION TECHNIQUES
	15ACS37	MACHINE LEARNING

IV YEAR I SEMESTER

S.No.	Course Code	Subject Name	Theory /Tutorial	Drawing /Lab	Credits
1	15AEC51	Microwave Engineering	3+1	-	3
2	15AEC52	Optical Fiber Communications	3+1	-	3
3	15AEC53	VLSI Design	3+1	-	3
4		MOOC-II	3+1	-	3
5		CHOICE BASED CREDIT COURSES (DEPARTMENT SPECIFIC)	3+1	-	3
	15AEC54	Digital Image Processing			
	15AEC55	DSP Processors And Architectures			
	15AEC56	Cyber Security			
6		CHOICE BASED CREDIT COURSES (DEPARTMENT SPECIFIC)	3+1	-	3
	15AEC57	Bio-Medical Instrumentation			
	15AEC58	Satellite Communications			
	15AEC59	Advanced DSP			
7	15AEC60	DSP And VLSI Lab	-	4	2
8	15AEC61	Microwave And Optical Communications Lab	-	4	2
		TOTAL	24	8	22

IV YEAR II SEMESTER

S.No.	Course Code	Subject Name	Theory /Tutorial	Drawing /Lab	Credits
1	15AEC81	Embedded Systems And IOT	3+1	-	3
2	15AEC82	Radar And Navigational Aids	3+1	-	3
3	15AEC83	Wireless Communications	3+1	-	3
4		MOOC-III	3+1	-	3
5	15AEC99	Seminar And Project Work		20	10
		TOTAL	16	20	22

15AHS01-FUNCTIONAL ENGLISH
(Common For All Branches)

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1. Introduction:

English is an international language as well as a living and vibrant one. People have found that knowledge of English is a passport for better career, better pay, and advanced knowledge and for communication with the entire world. As it is a language of opportunities in this global age, English is bound to expand its domain of use everywhere. The syllabus has been designed to enhance communication skills of the students of engineering and pharmacy. The prescribed books serve the purpose of preparing them for everyday communication and to face the global competitions in future.

The texts prescribed for detailed study focus on LSRW skills and vocabulary development. The teachers should encourage the students to use the target language. The classes should be interactive and learner-centered. They should be encouraged to participate in the classroom activities keenly.

In addition to the exercises from the text done in the class, the teacher can bring variety by using authentic materials such as newspaper articles, advertisements, promotional material etc.

2. Objectives:

1. To enable the students to communicate in English for academic and social purpose.
2. To enable the students to acquire structure and written expressions required for their profession.
3. To develop the listening skills of the students.
4. To inculcate the habit of reading and critical thinking skills.
5. To enhance the study skills of the students with emphasis on LSRW skills.

3. SYLLABUS:**UNIT -I**

Reading: What Is My Name? —P Sathyavathi

Writing: Paragraph writing

Listening: Listening for sounds, stress

Functional English: Greeting, taking leave and introducing oneself and others

Grammar: Nouns -classification

Vocabulary: Homonyms

Non Detailed Study: Listening Skills from English and Soft Skills

UNIT-II

Reading : SWOT Analysis of the Indian software Industry (from Mindscapes)

Writing : Essay Writing

Listening : Listening for theme -1

Functional English: Making requests

Grammar: Pronouns

Vocabulary : Homophones

Non detailed Study: Teamwork Skills

verified!
checked!
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