

PROGRAM STRUCTURE

I SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
1	171HS1T01	English – I		✓		Students are able to demonstrate communication skills express their thoughts fluently in both written as well as oral form of language which is very much essential for the career growth and enhances the language competency.
2	171BS1T01	Mathematics – I		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using ordinary differential equations, system of linear equations in various engineering disciplines.
3	171BS1T02	Mathematics – II		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using partial differential equations and their applications in various engineering disciplines.
4	171BS1T04	Applied Physics				
5	171ES1T03	Engineering Drawing		✓		Students are able to acquire skills related to creating technical drawings by displaying from different angles of projection and adding dimensional information.
6	171ES1T01	Computer Programming				
7	171HS1L01	English Communication Skills Lab – I		✓		Students are able to demonstrate technical skills to express fluently in both written as well as oral forms of language which is very much essential for career growth.
8	171BS1L04	Applied Physics Lab				
9	171ES1L01	Computer Programming Lab	✓			Students are able to acquire programming skills related to Structured programming, arrays, functions, pointers, structures and unions enabling them to be employed as a software developer.

II SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
10	171HS2T03	English – II		✓		Students are able to demonstrate communication skills express their thoughts fluently in both written as well as oral form of language which is very much essential for the career growth and enhances the language competency.
11	171BS2T06	Mathematics – III		✓		Students are able to demonstrate problem solving skills by evaluating improper and vector integrals applicable in various engineering disciplines.
12	171HS2T02	Environmental Studies				
13	171BS2T05	Applied Chemistry				
14	171ES2T06	Electrical and Mechanical Technology	✓			Students are able to acquire skills related to basic electrical and electronic principles enabling them to be employed in electronics engineering.
15	171CS2T01	Data Structures through C	✓			Students are able to acquire technical skills related to demonstrate fundamental algorithmic problems that enable them to be employed as software developers
16	171HS2L02	English Communication Skills Lab – II		✓		Students are able to demonstrate technical skills to express fluently in both written as well as oral forms of language which is very much essential for career growth.
17	171BS2L03	Applied Chemistry Lab				
18	171ES2L02	Engineering Workshop & IT Workshop				

III SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
19	171EC3T01	Electronic Devices and Circuits	✓			Students are able to acquire skills related to design, of electronic circuits/networks enabling them to be employed for designing and manufacturing of electronic equipment.
20	171EC3T02	Switching Theory and Logic Design	✓			Students are able to acquire skills related to design, and synthesize basic of digital ckts enabling them to be employed for designing and manufacturing of electronic equipment.
21	171EC3T03	Signals and Systems	✓			Students are able to acquire skills related to analysis of signals enabling them to be employed for designing and manufacturing of electronic/ communication equipment.
22	171ES3T15	Network Analysis	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of electric circuits/networks enabling them to be employed for designing and manufacturing of electrical/ electronic equipment.
23	171EC3T04	Random Variables and Stochastic Processes	✓			Students are able to acquire skills related to statistical knowledge enabling them to be employed for designing and manufacturing of to communication equipment
24	171HS3T04	Managerial Economics and Financial Analysis			✓	Students are able to apply the knowledge of economic and financial management enabling them to become an entrepreneur in any domain of their choice.
25	171EC3L01	Electronic Devices and Circuits Lab		✓		Students are able to demonstrate technical skill of characterizing electronic devices, modelling and analysis of electronic circuits.
26	171ES3L08	Networks and Electrical Technology Lab		✓		Students are able to acquire skills related to machines particularly in traction, electrical vehicles, etc. or as generators enabling them to be employed for controlling, designing and manufacturing in power station, wind turbines, etc.

27	171HS3A09	Professional Ethics and Human Values	✓			Students are able to acquire skills which help them in becoming a professional with ethical and human values.
28	171HS3A10	Employability Skills – I	✓			This subject helps the students to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.

IV SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
29	171EC4T05	Electronic Circuit Analysis	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of electronic circuits/networks enabling them to be employed for designing and manufacturing of electronic equipment.
30	171EC4T06	Electromagnetic Waves and Transmission Lines	✓			Students are able to acquire skills related to electromagnetic waves enabling them to be employed for designing and manufacturing of communication systems.
31	171EC4T07	Analog Communications	✓			Students are able to acquire skills related to modulation and demodulation techniques, transmission and reception of signals enabling them to be employed for designing and manufacturing of communication systems.
32	171EC4T08	Pulse and Digital Circuits	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of electric circuits/networks related to digital systems enabling them to be employed for designing and manufacturing of electronic equipment.
33	171HS4T05	Management Science			✓	Students are able to apply the knowledge of economic and financial management enabling them to become an entrepreneur in any domain of their choice.
34	171ES4T28	Linear Control Systems	✓			Students are able to acquire knowledge on open loop and closed loop control systems, mathematical modelling of systems and various responses using Bode plot, Nyquist plot and Polar plots, and state variable analysis suitable for industrial automation applications.
35	171HS4T08	IPR and Patents			✓	It helps the graduates safe guard the IP and innovations at their place of work.

36	171EC4L02	Electronic Circuit Analysis Lab		✓		Students are able to demonstrate technical skill of modelling and analysis of electronic circuits.
37	171EC4L03	Analog Communications Lab		✓		Students are able to demonstrate technical skill of modelling and analysis of communication circuits.
38	171HS4A11	Employability Skills – II	✓			This subject helps the students to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.

V SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
39	R1631041	Computer Architecture and Organization	✓			Students are able to acquire skills related to design, and evaluate the performance of computers enabling them to be employed for designing and manufacturing of computer systems.
40	R1631042	Linear I C Applications	✓			Students are able to demonstrate technical solving skills by providing knowledge on ICs with growing penetration of smart electronics in strategic areas including Space, Defence and Nuclear energy.
41	R1631043	Digital I C Applications	✓			Students are able to acquire skills related to basic ckt. design in the field of digital ICs enabling them to be employed for designing and manufacturing of digital electronic equipment.
42	R1631044	Digital Communications	✓			Students are able to acquire skills related to digital modulation and demodulation techniques, and noise performance, enabling them to be employed for designing and manufacturing of electronic/ communication equipment.
43	R1631045	Antenna and Wave Propagation	✓			imports knowledge related to communication concepts, radiation and reception of radio waves using antennas, which is helpful in being employable in the field of communications.
44	R1631046	Pulse and Digital Circuits Lab		✓		Students are able to demonstrate technical skill of modelling and analysis of electronic circuits.
45	R1631047	Linear I C Applications Lab		✓		Students are able to demonstrate technical skill of designing electronic circuits with linear ics in the fields of instrumentation, communications etc.
46	R1631048	Digital I C Applications Lab		✓		Students are able to demonstrate technical skill of designing electronic circuits with digital ICs.
47	R1631049	Professional Ethics & Human Values		✓		Students are able to acquire skills which help them in becoming a professional with ethical and human values.

VI SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
48	R1632041	Micro Processors & Micro Controllers	✓			Students are able to acquire skills related to design of electronic circuits with micro processors and controllers enabling them to be employed for designing and manufacturing of electronic equipment.
49	R1632042	Micro Wave Engineering	✓			Students are able to acquire skills related to characteristics and applications of microwave devices enabling them to be employed for designing and manufacturing of electronic/ communication equipment.
50	R1632043	VLSI Design	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of VLSI circuits enabling them to be employed for designing and manufacturing of complex electronic equipment in the fields of communications, control and instrumentation etc.
51	R1632044	Digital Signal Processing	✓			Students are able to acquire skills related to processing of digital signals enabling them to be employed for designing and manufacturing of electronic/ communication equipment.
52	R163204A	OOPs through Java	✓			Students are able to demonstrate programming skill in java programming that helps them to gain problem-solving skills i.e. to solve a problem in a logical as well as creative way in an manner.
53	R163204B	Data Mining	✓			Students are able to organize, understand and use the data in effective way and gain knowledge about warehouses which helps in integration of application systems
54	R163204C	Industrial Robotics	✓			Students are able to acquire skills to understand the concepts of robot kinematics, Dynamics and trajectory planning enabling them to be employed in robot manufacturing companies

55	R163204E	Power Electronics	✓			Students are able to acquire skills related to the various power electronic devices which enables them to get employed in semiconductor based industries such as in communications, computing, health care, military systems, transportation, clean energy, etc.
56	R163204D	Bio-Medical Engineering	✓			Students are able to acquire skills related to design, program and evaluate the performance of biomedical instruments like ECG, EMG etc enable them to be employed for designing and manufacturing of electrical equipment in the field of medicine.
57	R163204F	Artificial Neural Networks	✓			gives knowledge related to ANN and applications, which leads to better employability in the field of machine learning.
58	R1632046	Micro Processors & Micro Controllers Lab		✓		Students are able to demonstrate technical solving skills by providing knowledge on microprocessors with growing penetration of smart electronics in strategic areas including Space, Defence and Nuclear energy.
59	R1632047	VLSI Lab		✓		Students are able to demonstrate technical skill of characterizing electronic devices, modelling and analysis of electronic circuits in the field of VLSI.
60	R1632048	Digital Communications Lab		✓		Develops practical skills required for development of basic communication circuits.
61	R1632049	IPR & Patents		✓		It helps the graduates safe guard the IP and innovations at their place of work.

VII SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
62	RT41041	VLSI Design	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of VLSI circuits enabling them to be employed for designing and manufacturing of complex electronic equipment in the fields of communications, control and instrumentation etc.
63	RT41042	Computer Networks	✓			Students are able to acquire skills related to design and evaluate the performance of computer networks enabling them to be employed for designing and manufacturing of networking equipment.
64	RT41043	Digital Image Processing	✓			Students are able to acquire skills related to digital image processing techniques, enabling them to be employed in the field of biomedical image processing , radar systems etc.
65	RT41044	Computer Architecture & Organization	✓			Students are able to acquire skills related to design, and evaluate the performance of computers enabling them to be employed for designing and manufacturing of computer systems
66	RT41045	Electronic Switching Systems	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of electronic switching circuits enabling them to be employed for designing and manufacturing of electronic equipment related to data and voice communication systems.
67	RT41046	Analog IC Design	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of current mirrors, amplifiers and opamps enabling them to be employed for designing and manufacturing of analog Ices
68	RT41047	Object Oriented Programming & O S	✓			Students are able to acquire skills related to design, programs using OOPs concepts enabling them to be employed for designing and development of efficient software


69	RT41048	Radar Systems	✓			Students are able to acquire skills related to operation and performance of radar systems enabling them to be employed for designing and manufacturing of radar systems like tracking radars, scan radars etc.
70	RT41049	Advanced Computer Architecture	✓			Students are able to acquire skills related to design, and synthesize advanced computers enabling them to be employed for designing and manufacturing of computer systems
71	RT4104A	Optical Communication	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of optical communication systems enabling them to be employed for designing, manufacturing and implementation of optical communication systems.
72	RT4104B	Digital IC Design	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of digital ices enabling them to be employed for designing and manufacturing of digital Ices.
73	RT4104C	Speech Processing	✓			Students are able to acquire skills related to speech characteristics and speech processing algorithms enabling them to be employed for designing and manufacturing of speech processing systems.
74	RT4104D	Artificial Neural Network & Fuzzy Logic	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of ANN enabling them to be employed for designing artificial intelligence systems
75	RT4104E	Network Security & Cryptography	✓			Students are able to acquire skills related to design, developed and evaluate the performance of secure and cryptographic codes enabling them to be employed for designing and interfacing devices with security
76	RT4104L	V L S I Lab		✓		Students are able to demonstrate technical skill of characterizing electronic devices, modelling and analysis of electronic circuits in the field of VLSI.
77	RT4104M	Microwave Engineering Lab		✓		Students are able to demonstrate technical skill of characterizing microwave devices, modelling and analysis of microwave circuits.

VIII SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
78	RT42041	Cellular Mobile Communication	✓			Students are able to acquire skills related to cellular concepts enabling them to be employed for designing and manufacturing of mobile communication equipment.
79	RT42042	Electronic Measurements and Instrumentation	✓			Students are able to acquire skills related to design, analyze and evaluate the performance of instrumentation systems enabling them to be employed for designing and manufacturing of measuring instruments, biomedical instrumentation etc.
80	RT42043A	Satellite Communication	✓			Students are able to acquire skills related to design, analyze and evaluate the performance of satellite communication systems
81	RT42043B	Mixed signal Design	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of mixed signal circuits enabling them to be employed for designing and manufacturing of mixed signal ices
82	RT42043C	Embedded systems	✓			Students are able to acquire skills related to design, program and implement embedded systems and evaluate their performance enabling them to be employed for designing and manufacturing of electronic equipment with embedded systems.
83	RT42043D	RF Circuit Design	✓			Students are able to acquire skills related to design, and evaluate the performance of RF circuits enabling them to be employed for designing and manufacturing of communication equipment.
84	RT42043E	Cloud Computing				
85	RT42044A	Wireless Sensors and Networks	✓			Students are able to acquire skills related to design, wireless adhoc networks enabling them to be employed for designing and implementation of WSNs

86	RT42044B	System on Chip	✓			Students are able to acquire skills related to integration of systems on single chips enabling them to be employed for designing and manufacturing of system on chips.
87	RT42044C	Low Power IC Design	✓			Students are able to acquire skills related to low power IC design, synthesize and evaluate the performance of VLSI circuits enabling them to be employed for designing and manufacturing of low power VLSI circuits and systems.
88	RT42044D	Bio-Medical Instrumentation				
89	RT42044E	EMI/EMC	✓			Students are able to acquire skills related to electromagnetic interference and compatibility enabling them to be employed for designing and manufacturing of electronic equipment, free from interference.
90	RT42045	Project & Seminar	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in electronics and communication domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
TOTAL		90	61	22	3	


PROGRAM COORDINATOR


HEAD OF THE DEPARTMENT
Head of the Department
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Aditya Engineering College (A9)