APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Curriculum

for

B.Tech Degree

Semesters III to VIII

2016

Electronics and Communication Engineering

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

CET CAMPUS, THIRUVANANTHAPURAM – 695016

KERALA, INDIA

Phone +91 471 2598122, 2598422

Fax +91 471 2598522 Web: ktu.edu.in

Email: university@ktu.edu.in

BRANCH: *Electronics & Communication Engineering*

SEMESTER - 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA201	Linear Algebra & Complex Analysis	3-1-0	4	A
EC201	Network Theory	3-1-0	4	B
EC203	Solid State Devices	3-1-0	4	C
EC205	Electronic Circuits	3-1-0	4	D
EC207	Logic Circuit Design	3-0-0	3	E
HS200/ HS210	Business Economics/Life Skills	3-0-0/ 2-0-2	3	F
EC231	Electronic Devices & Circuits Lab	0-0-3	1	S
EC233	Electronic Design Automation Lab	0-0-3	1	T

Total Credits = 24   Hours: 28/29   Cumulative Credits= 71

SEMESTER - 4

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA204	Probability, Random Processes and Numerical Methods	3-1-0	4	A
EC202	Signals & Systems	3-1-0	4	B
EC204	Analog Integrated Circuits	4-0-0	4	C
EC206	Computer Organization	3-0-0	3	D
EC208	Analog Communication Engineering	3-0-0	3	E
HS210/ HS200	Life Skills/Business Economics	2-0-2/ 3-0-0	3	F
EC232	Analog Integrated Circuits Lab	0-0-3	1	S
EC230	Logic Circuit Design Lab	0-0-3	1	T

Total Credits = 23   Hours= 27/28Cumulative Credits= 94

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SEMESTER - 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC301	Digital Signal Processing	3-1-0	4	A
EC303	Applied Electromagnetic Theory	3-0-0	3	B
EC305	Microprocessors & Microcontrollers	3-0-0	3	C
EC307	Power Electronics & Instrumentation	3-0-0	3	D
HS300	Principles of Management	3-0-0	3	E
	Elective 1	3-0-0	3	F
EC341	Design Project	0-1-2	2	S
EC333	Digital Signal Processing Lab	0-0-3	1	T
EC335	Power Electronics & Instrumentation Lab	0-0-3	1	U

Total Credits = 23 **Hours: 28** **Cumulative Credits= 117**

Elective 1:- 1. EC361 Digital System Design

2. EC363 Optimization Techniques

3. EC365 Biomedical Engineering

4. EC360 Soft Computing

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SEMESTER - 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC302	Digital Communication	4-0-0	4	A
EC304	VLSI	3-0-0	3	B
EC306	Antenna & Wave Propagation	3-0-0	3	C
EC308	Embedded System	3-0-0	3	D
EC312	Object Oriented Programming	3-0-0	3	E
	Elective 2	3-0-0	3	F
EC332	Communication Engg Lab (Analog& Digital)	0-0-3	1	S
EC334	Microcontroller Lab	0-0-3	1	T
EC352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23   Hours: 27   Cumulative Credits= 140

Elective 2:-

      1. EC362   Modelling & Simulation of Communication Systems

      2. EC366   Real Time Operating Systems

      3. EC368   Robotics

      4. EC370   Digital Image Processing

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SEMESTER - 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC401	Information Theory & Coding	4-0-0	4	A
EC403	Microwave & Radar Engg	3-0-0	3	B
EC405	Optical Communication	3-0-0	3	C
EC407	Computer Communication	3-0-0	3	D
EC409	Control Systems	3-0-0	3	E
	Elective 3	3-0-0	3	F
EC451	Seminar & Project Preliminary	0-1-4	2	S
EC431	Communication Systems Lab (Optical & Microwave)	0-0-3	1	T

Total Credits = 22   **Hours: 27**   **Cumulative Credits= 162**

Elective 3:-

    1. EC461   Microwave Devices and Circuits

    2. EC463   Speech and Audio Signal Processing

    3. EC465   MEMS

    4. EC467   Pattern Recognition

    5. EC469   Opto Electronic Devices

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SEMESTER - 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
EC402	Nano electronics	3-0-0	3	A
EC404	Advanced Communication Systems	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
EC492	Project		6	S

Total Credits = 18   **Hours: 29**   **Cumulative Credits= 180**

Elective 4:-

    1. EC462   Mixed Signal Circuit Design

    2. EC464   Low Power VLSI Design

    3. EC466   Cyber Security

    4. EC468   Secure Communication

    5. EC472   Integrated Optics & Photonic Systems

    6.EC474   Computer Vision

ELECTIVE 5 (NON DEPARTMENTAL ELECTIVE COURSES)

(Note:- If the student has studied or is studying the elective course given in the bracket then the corresponding ND elective cannot be chosen)

1. AO482   FLIGHT AGAIST GRAVITY

2. AE482   INDUSTRIAL INSTRUMENTATION

3. AE484   INSTRUMENTATION SYSTEM DESIGN

4. AU486   NOISE, VIBRATION AND HARSHNESS

5. BM482   BIOMEDICAL INSTRUMENTATION

6. BM484   MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES

7. BT461   DESIGN OF BIOLOGICAL WASTEWATER SYSTEMS

8. BT362   SUSTAINABLE ENERGY PROCESSES

9. CH482   PROCESS UTILITIES AND PIPE LINE DESIGN

10. CH484   FUEL CELL TECHNOLOGY

11. CE482   ENVIRONMENTAL IMPACT ASSESSMENT

12. CE484   APPLIED EARTH SYSTEMS

13. CE486   GEO INFORMATICS FOR INFRASTRUCTURE MANAGEMENT

14. CE488   DISASTER MANAGEMENT

15. CE494   ENVIRONMENT HEALTH AND SAFETY

16. CS482   DATA STRUCTURES

17. CS484   COMPUTER GRAPHICS

18. CS488   C # AND .NET PROGRAMMING

19. EE482   ENERGY MANAGEMENT AND AUDITING

20. EE486   SOFT COMPUTING (EC 360 SOFT COMPUTING)

21. EE488   INDUSTRIAL AUTOMATION

22. EE494   INSTRUMENTATION SYSTEMS

23. FT482   FOOD PROCESS ENGINEERING

24. FT484   FOOD STORAGE ENGINEERING

25. FT486   FOOD ADDITIVES AND FLAVOURING

26. IE482   FINANCIAL MANAGEMENT

27. IE484   INTRODUCTION TO BUSINESS ANALYTICS

28. IE486   DESIGN AND ANALYSIS OF EXPERIMENTS

29. IE488   TOTAL QUALITY MANAGEMENT

30. IC482   BIOMEDICAL SIGNAL PROCESSING

31. IT482   INFORMATION STORAGE MANAGEMENT

32. MA482   APPLIED LINEAR ALGEBRA

33. MA484   OPERATIONS RESEARCH (EC 363 OPTIMISATION TECHNIQUES)

34. MA486   ADVANCED NUMERICAL COMPUTATIONS

35. MA488   CRYPTOGRAPHY

36. ME484   FINITE ELEMENT ANALYSIS

37. ME482   ENERGY CONSERVATION AND MANAGEMENT

38. ME471   OPTIMIZATION TECHNIQUES (EC 363 OPTIMISATION TECHNIQUES)

39. MP482   PRODUCT DEVELOPMENT AND DESIGN

40. MP469   INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR

41. MP484   PROJECT MANAGEMENT

42. MT482   INDUSTRIAL SAFETY

43. MR482   MECHATRONICS

44. FS482   RESPONSIBLE ENGINEERING

45. SB482   DREDGERS AND HARBOUR CRAFTS

46. HS482   PROFESSIONAL ETHICS