APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Curriculum

for

B.Tech Degree

Semesters III to VIII

2016

Electrical and Electronics 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: *Electrical & Electronics Engineering*

SEMESTER - 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA201	Linear Algebra & Complex Analysis	3-1-0	4	A
EE201	Circuits and, Networks	3-1-0	4	B
EE203	Analog Electronic Circuits	3-1-0	4	C
EE205	DC Machines and Transformers	3-1-0	4	D
EE207	Computer Programming	2-1-0	3	E
HS200/ HS210	Business Economics/Life Skills	3-0-0/ 2-0-2	3	F
EE231	Electronic Circuits Lab	0-0-3	1	S
EE233	Programming 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
MA202	Probability Distributions, Transforms and Numerical Methods	3-1-0	4	A
EE202	Synchronous and Induction Machines	3-1-0	4	B
EE204	Digital Electronics and Logic Design	2-1-0	3	C
EE206	Material Science	3-0-0	3	D
EE208	Measurements and Instrumentation	3-1-0	4	E
HS210/ HS200	Life Skills/Business Economics	2-0-2/ 3-0-0	3	F
EE232	Electrical Machines Lab I	0-0-3	1	S
EE234	Circuits and Measurements Lab	0-0-3	1	T

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

BRANCH: *Electrical & Electronics Engineering*

SEMESTER - 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE301	Power Generation, Transmission and Protection	3-1-0	4	A
EE303	Linear Control Systems	2-1-0	3	B
EE305	Power Electronics	3-0-0	3	C
EE307	Signals and Systems	3-0-0	3	D
EE309	Microprocessor and Embedded Systems	2-1-0	3	E
	Elective 1	3-0-0	3	F
EE341	Design Project	0-1-2	2	S
EE331	Digital Circuits and Embedded Systems Lab	0-0-3	1	T
EE333	Electrical Machines Lab II	0-0-3	1	U

Total Credits = 23   Hours: 28   Cumulative Credits= 117

Elective 1:-   1. EE361   Object Oriented Programming

2. EE363   Computer Organization and Architecture

3. EE365   Digital System Design

4. EE367   New and Renewable Energy Systems

5.EE369   High Voltage Engineering

BRANCH: *Electrical & Electronics Engineering*

SEMESTER - 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE302	Electromagnetics	2-1-0	3	A
EE304	Advanced Control Theory	3-1-0	4	B
EE306	Power System Analysis	3-0-0	3	C
EE308	Electric Drives	3-0-0	3	D
HS300	Principles of Management	3-0-0	3	E
	Elective 2	3-0-0	3	F
EE332	Systems and Control Lab	0-0-3	1	S
EE334	Power Electronics and Drives Lab	0-0-3	1	T
EE352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23   **Hours: 27**   **Cumulative Credits= 140**

Elective 2:-

    1. EE362   Data Structures and Algorithms

    2. EE364   Switched Mode Power Converters

    3. EE366   Illumination Technology

    4. EE368   Soft Computing

    5. EE372   Biomedical Instrumentation

BRANCH:*Electrical & Electronics Engineering*

SEMESTER - 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE401	Electronic communication	2-1-0	3	A
EE403	Distributed generation and smart grids	3-0-0	3	B
EE405	Electrical system design	3-1-0	4	C
EE407	Digital Signal Processing	3-0-0	3	D
EE409	Electrical Machine Design	3-0-0	3	E
	Elective 3	3-0-0	3	F
EE451	Seminar & Project Preliminary	0-1-4	2	S
EE431	Power system Lab	0-0-3	1	T

Total Credits = 22   Hours: 27Cumulative Credits= 162

Elective 3:-

1. EE461   Modern Operating Systems

2. EE463   Computer Aided Power Systems Analysis

3. EE465   Power Quality

4. EE467   Nonlinear Control Systems

5.EE469   Electric and Hybrid Vehicles

BRANCH:*Electrical & Electronics Engineering*

SEMESTER - 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
EE402	Special Electric Machines	3-0-0	3	A
EE404	Industrial Instrumentation &Automation	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
EE492	Project		6	S

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

Elective 4:-

    1. EE462   Design of Digital Control Systems

    2. EE464   FACTS

    3. EE466   Digital Image Processing

    4. EE468   Computer Networks

    5. EE472   Internet of Things

    6. EE474   Energy Management and Auditing

ELECTIVE 5 (NON DEPARTMENTAL ELECTIVE COURSES)

(Note:- If a student has studied or chosen the elective course given within the brackets then the corresponding ND elective cannot be chosen)

1. AO482   FLIGHT AGAIST GRAVITY

2. AE484   INSTRUMENTATION SYSTEM DESIGN

3. AU486   NOISE, VIBRATION AND HARSHNESS

4. BM482   BIOMEDICAL INSTRUMENTATION(EE 372 BIOMEDICAL INSTRUMENTATION)

5. BM484   MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES

6. BT461   DESIGN OF BIOLOGICAL WASTEWATER SYSTEMS

7. BT362   SUSTAINABLE ENERGY PROCESSES

8. CH482   PROCESS UTILITIES AND PIPE LINE DESIGN

9. CH484   FUEL CELL TECHNOLOGY

10. CE482   ENVIRONMENTAL IMPACT ASSESSMENT

11. CE484   APPLIED EARTH SYSTEMS

12. CE486   GEO INFORMATICS FOR INFRASTRUCTURE MANAGEMENT

13. CE488   DISASTER MANAGEMENT

14. CE494   ENVIRONMENT HEALTH AND SAFETY

15. CS482   DATA STRUCTURES (EE 362 DATA STRUCTURES AND ALGORITHMS)

16. CS484   COMPUTER GRAPHICS

17. CS486   OBJECT ORIENTED PROGRAMMING (EE 361OBJECT ORIENTED PROGRAMMING)

18. CS488   C # AND .NET PROGRAMMING

19. EC482   BIOMEDICAL ENGINEERING

20. FT482   FOOD PROCESS ENGINEERING

21. FT484   FOOD STORAGE ENGINEERING

22. FT486   FOOD ADDITIVES AND FLAVOURING

23.IE482   FINANCIAL MANAGEMENT

24. IE484   INTRODUCTION TO BUSINESS ANALYTICS

25.IE486   DESIGN AND ANALYSIS OF EXPERIMENTS

26. IE488   TOTAL QUALITY MANAGEMENT

27.IC482   BIOMEDICAL SIGNAL PROCESSING

28. IT482   INFORMATION STORAGE MANAGEMENT

29. MA482   APPLIED LINEAR ALGEBRA

30. MA484   OPERATIONS RESEARCH

31. MA486   ADVANCED NUMERICAL COMPUTATIONS

32. MA488   CRYPTOGRAPHY

33.ME484   FINITE ELEMENT ANALYSIS

34.ME482   ENERGY CONSERVATION AND MANAGEMENT (EE474 ENERGY MANAGEMENT AND AUDITING)

35.ME471   OPTIMIZATION TECHNIQUES

36.MP482   PRODUCT DEVELOPMENT AND DESIGN

37. MP469   INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR

38. MP484   PROJECT MANAGEMENT

39. MT482   INDUSTRIAL SAFETY

40. MR482   MECHATRONICS

41. FS482   RESPONSIBLE ENGINEERING

42. SB482   DREDGERS AND HARBOUR CRAFTS

43. HS482   PROFESSIONAL ETHICS