



**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

**Curriculum**

**for**

**B.Tech Degree**

**Semesters III to VIII**

**2016**

**Electrical and Electronics Engineering**

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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**BRANCH: *Electrical & Electronics Engineering*****SEMESTER - 3**

<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Exam Slot</b>
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**

<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Exam Slot</b>
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

<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Exam Slot</b>
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
	<b>Elective 1</b>	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
	<b>Elective 2</b>	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
	<b>Elective 3</b>	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: 27 Cumulative 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

<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Exam Slot</b>
EE402	Special Electric Machines	3-0-0	3	A
EE404	Industrial Instrumentation & Automation	3-0-0	3	B
	<b>Elective 4</b>	3-0-0	3	C
	<b>Elective 5</b> (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 AGAINST 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 361 OBJECT 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