

APJ Abdul Kalam Technological University

B.Tech in Electrical and Electronics Engineering

Curriculum and Syllabus (2015 Scheme):

Click on the [Course no.](#) or [Subject](#) to view the corresponding syllabus

Semester 1					
Slot	Course No.	Subject	L-T-P	Hours	Credits
A	MA101	Calculus	3-1-0	4	4
B	PH100	Engineering Physics	3-1-0	4	4
C	BE100	Engineering Mechanics	3-1-0	4	4
D	BE101-03	Introduction to Electrical Engineering	2-1-0	3	3
E	BE103	Introduction to Sustainable Engineering	2-0-1	3	3
F	CE100	Basics of Civil Engineering	2-1-0	3	3
S	PH110	Engineering Physics Lab	0-0-2	2	1
T (2)	CE110	Civil Engineering Workshop	0-0-2	2	1
	EE110	Electrical Engineering Workshop	0-0-2	2	1
U	U100	Language lab/CAD Practice/ Bridge courses/ Micro Projects etc	0-0-(2/3)	(2/3)	

V	V100	Entrepreneurship/TBI/NCC/NSS/Physical Edn etc	0-0-2	2	Activity points
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Total Credits = 24 ----- Cumulative Credits = 24

Semester 2					
Slot	Course No.	Subject	L-T-P	Hours	Credits
A	MA102	Differential Equations	3-1-0	4	4
B	CY100	Engineering Chemistry	3-1-0	4	4
C	BE110	Engineering Graphics	1-1-3	5	3
D	BE102	Design & Engineering	2-0-2	4	3
E	ME 100	Basics of Mechanical Engineering	2-1-0	3	3
F	EC 100	Basics of Electronics Engineering	2-1-0	3	3
S	CY110	Engineering Chemistry Lab	0-0-2	2	1
T (2)	ME110	Mechanical Engineering Workshops	0-0-2	2	1
	EC110	Electronics Engineering Workshop	0-0-2	2	1
U	U100	Language lab/CAD Practice/Bridge courses/Micro Projects etc	0-0-(1/2)	(1/2)	
V	V100	Entrepreneurship/TBI/NCC/NSS/Physical Edn etc	0-0-2	2	Activity points

Total Credits = 23 ----- Cumulative Credits = 47

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
HS210	Life Skills	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 ---- 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
HS200	Business Economics	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 ---- Cumulative Credits= 94

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 ----- 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

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 & Drives Lab	0-0-3	1	T
EE352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23 ----- 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

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
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Total Credits = 22 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

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	

Total Credits = 18 ----- 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