



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

**Curriculum
for
B.Tech Degree
Semesters III to VIII
2016**

Automobile Engineering

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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BRANCH: *Automobile Engineering*

SEMESTER - 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA 201	Linear Algebra & Complex Analysis	3-1-0	4	A
ME201	Mechanics of Solids	3-1-0	4	B
ME200	Fluid Mechanics & Machinery	3-1-0	4	C
AU201	S I Engines & Combustion	3-1-0	4	D
AU203	Auto Chassis	3-0-0	3	E
HS200/ HS210	Business Economics/Life Skills	3-0-0/ 2-0-2	3	F
ME230	Fluid Mechanics & Machines Lab	0-0-3	1	S
CE230	Material Testing 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 Distribution, Transforms and Numerical Methods	3-1-0	4	A
AU202	Advanced Thermodynamics	3-1-0	4	B
AU204	C I Engines & Combustion	4-0-0	4	C
AU206	Auto Transmission	3-0-0	3	D
AU208	Computer Programming	3-0-0	3	E
HS210/ HS200	Life Skills/Business Economics	2-0-2/ 3-0-0	3	F
AU232	Computer Programming Lab	0-0-3	1	S
AU234	Vehicle Systems Lab	0-0-3	1	T

Total Credits = 23

Hours 28/27

Cumulative Credits= 94

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SEMESTER - 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
ME307	Machine Design-I	3-1-0	4	A
ME309	Metallurgy & Material Science	3-0-0	3	B
ME311	Manufacturing Processes	3-0-0	3	C
EE311	Electrical Drives and Control for Automation	3-0-0	3	D
AU307	Vehicle Body Engineering	3-0-0	3	E
	Elective 1	3-0-0	3	F
AU341	Design Project	0-1-2	2	S
ME333	Heat Engines Lab	0-0-3	1	T
ME335	Production Engineering Lab	0-0-3	1	U

Total Credits = 23

Hours: 28

Cumulative Credits= 117

- Elective 1:-**
1. AU361 Alternative Fuels and Energy Sources
 2. AU363 Plastics & Composites in Automobile
 3. AU365 Automotive Pollution and Testing
 4. ME367 Non-Destructive Testing
 5. ME369 Tribology

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SEMESTER - 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
ME302	Heat & Mass Transfer	3-1-0	4	A
ME304	Dynamics of Machinery	2-1-0	3	B
ME314	Machine Design-II	3-0-0	3	C
AU302	Automotive Electrical and Electronics	3-0-0	3	D
HS300	Principles of Management	3-0-0	3	E
	Elective 2	3-0-0	3	F
ME332	Computer Aided Design & Analysis Lab	0-0-3	1	S
AU332	Auto Electrical & Electronics Lab	0-0-3	1	T
AU352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23

Hours: 27

Cumulative Credits= 140

Elective 2:-

1. AU362 Hybrid and Fuel Cell Vehicles
2. AU364 Vehicle Performance & Testing
3. AU366 Vehicle Aerodynamics
4. ME368 Marketing Management
5. ME374 Theory of Vibration

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SEMESTER - 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
AU401	Automotive System Design	4-0-0	4	A
AU403	Vehicle Dynamics	3-0-0	3	B
AU405	Automotive Refrigeration & Air Conditioning	3-0-0	3	C
AU407	Advanced I C Engines	3-0-0	3	D
AU409	Simulation & Analysis of IC Engine Processes	3-0-0	3	E
	Elective 3	3-0-0	3	F
AU451	Seminar & Project Preliminary	0-1-4	2	S
AU431	Autotronics Lab	0-0-3	1	T

Total Credits = 22

Hours: 27

Cumulative Credits= 162

Elective 3:-

1. AU461 Automotive Comfort & Safety Engineering
2. AU463 Operation Management in Auto Industry
3. AU465 Product Design & Life Cycle Management
4. AU410 Vehicle Transport & Fleet Management

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SEMESTER - 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
AU402	Two and Three Wheelers	3-0-0	3	A
AU404	Engine & Vehicle Management Systems	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
AU492	Project		6	S

Total Credits = 18

Hours: 30 Cumulative Credits= 180

Elective 4:-

1. AU462 Vehicle Maintenance
2. AU464 Special Type of Vehicles
3. AU466 Automobile Manufacturing Technology
4. AU468 AGV and Autonomous Vehicles
5. AU472 Metrology and Instrumentation

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. AE482 INDUSTRIAL INSTRUMENTATION
3. AE484 INSTRUMENTATION SYSTEM DESIGN
4. BM482 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
16. CS484 COMPUTER GRAPHICS
17. CS486 OBJECT ORIENTED PROGRAMMING
18. CS488 C # AND .NET PROGRAMMING
19. EE482 ENERGY MANAGEMENT AND AUDITING
20. EE484 CONTROL SYSTEMS
21. EE486 SOFT COMPUTING
22. EE488 INDUSTRIAL AUTOMATION
23. EE494 INSTRUMENTATION SYSTEMS

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24. EC482 BIOMEDICAL ENGINEERING
25. FT482 FOOD PROCESS ENGINEERING
26. FT484 FOOD STORAGE ENGINEERING
27. FT486 FOOD ADDITIVES AND FLAVOURING
28. IE482 FINANCIAL MANAGEMENT
29. IE484 INTRODUCTION TO BUSINESS ANALYTICS
30. IE486 DESIGN AND ANALYSIS OF EXPERIMENTS
31. IE488 TOTAL QUALITY MANAGEMENT
32. IC482 BIOMEDICAL SIGNAL PROCESSING
33. IT482 INFORMATION STORAGE MANAGEMENT
34. MA482 APPLIED LINEAR ALGEBRA
35. MA484 OPERATIONS RESEARCH
36. MA486 ADVANCED NUMERICAL COMPUTATIONS
37. MA488 CRYPTOGRAPHY
38. ME484 FINITE ELEMENT ANALYSIS
39. ME482 ENERGY CONSERVATION AND MANAGEMENT
40. ME471 OPTIMIZATION TECHNIQUES
41. MP482 PRODUCT DEVELOPMENT AND DESIGN(AU465 PRODUCT DESIGN AND LIFE CYCLE MANAGEMENT)
42. MP469 INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
43. MP484 PROJECT MANAGEMENT
44. MT482 INDUSTRIAL SAFETY
45. MR482 MECHATRONICS
46. FS482 RESPONSIBLE ENGINEERING
47. SB482 DREDGERS AND HARBOUR CRAFTS
48. HS482 PROFESSIONAL ETHICS