



**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

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

**Civil Engineering**

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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## BRANCH: *Civil 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
CE201	Mechanics of Solids	3-1-0	4	B
CE203	Fluid Mechanics– I	3-1-0	4	C
CE205	Engineering Geology	3-0-1	4	D
CE207	Surveying	3-0-0	3	E
HS200/ HS210	Business Economics/Life Skills	3-0-0/ 2-0-2	3	F
CE231	Civil Engineering Drafting Lab	0-0-3	1	S
CE233	Surveying 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
CE202	Structural Analysis- I	3-1-0	4	B
CE204	Construction Technology	4-0-0	4	C
CE206	Fluid Mechanics- II	3-0-0	3	D
CE208	Geotechnical Engineering- I	3-0-0	3	E
HS210/ HS200	Life Skills/Business Economics	2-0-2/ 3-0-0	3	F
CE232	Materials Testing Lab I	0-0-3	1	S
CE234	Fluid Mechanics Lab	0-0-3	1	T

**Total Credits = 23**

**Hours 28/27**

**Cumulative Credits= 94**

## BRANCH: *Civil Engineering*

SEMESTER - 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE301	Design of Concrete Structures I	3-1-0	4	A
CE303	Structural Analysis- II	3-0-0	3	B
CE305	Geotechnical Engineering- II	3-0-0	3	C
CE307	Geomatics	3-0-0	3	D
CE309	Water Resources Engineering	3-0-0	3	E
	<b>Elective 1</b>	3-0-0	3	F
CE341	Design Project	0-1-2	2	S
CE331	Materials Testing Lab II	0-0-3	1	T
CE333	Geotechnical Engineering Lab	0-0-3	1	U

**Total Credits = 23**

**Hours: 28**

**Cumulative Credits= 117**

- Elective 1:-**
1. CE361      Advanced Concrete Technology
  2. CE363      Geotechnical Investigation
  3. CE365      Functional Design of Buildings
  4. CE367      Water Conveyance Systems
  5. CE369      Disaster Management
  6. CE371      Environment and Pollution
  7. CE 373      Advanced Mechanics of Materials

## BRANCH: *Civil Engineering*

SEMESTER - 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE302	Design of Hydraulic Structures	4-0-0	4	A
CE304	Design of Concrete Structures II	3-0-0	3	B
CE306	Computer Programming and Computational Techniques	3-0-0	3	C
CE308	Transportation Engineering- I	3-0-0	3	D
HS300	Principles of Management	3-0-0	3	E
	<b>Elective 2</b>	3-0-0	3	F
CE332	Transportation Engineering Lab	0-0-3	1	S
CE334	Computer Aided Civil Engineering Lab	0-0-3	1	T
CE352	Comprehensive Exam	0-1-1	2	U

**Total Credits = 23**

**Hours:27. Cumulative Credits= 140**

**Elective 2:-**

1. CE362 Ground Improvement Techniques
2. CE364 Advanced Foundation Engineering
3. CE366 Traffic Engineering and Management
4. CE368 Prestressed Concrete
5. CE372 Engineering Hydrology
6. CE374 Air Quality Management

## BRANCH: *Civil Engineering*

SEMESTER - 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
CE401	Design of Steel Structures	4-0-0	4	A
CE403	Structural Analysis- III	3-0-0	3	B
CE405	Environmental Engineering- I	3-0-0	3	C
CE407	Transportation Engineering -II	3-0-0	3	D
CE409	Quantity Surveying and Valuation	3-0-0	3	E
	<b>Elective 3</b>	3-0-0	3	F
CE451	Seminar & Project Preliminary	0-1-4	2	S
CE431	Environmental Engineering Lab	0-0-3	1	T

**Total Credits = 22**

**Hours: 27**

**Cumulative Credits= 162**

### Elective 3:-

1. CE461 Wave Hydrodynamics and Coastal Engineering
2. CE463 Bridge Engineering
3. CE465 Geo-Environmental Engineering
4. CE467 Highway Pavement Design
5. CE469 Environmental Impact Assessment
6. CE471 Advanced Structural Design
7. CE473 Advanced Computational Techniques and Optimization

## BRANCH: *Civil Engineering*

SEMESTER - 8

<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Exam Slot</b>
CE402	Environmental Engineering II	3-0-0	3	A
CE404	Civil Engineering Project Management	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
CE492	Project		6	S

**Total Credits = 18**

**Hours: 30**

**Cumulative Credits= 180**

### **Elective 4:-**

1. CE462 Town and Country Planning
2. CE464 Reinforced Soil Structures and Geosynthetics
3. CE466 Finite Element Methods
4. CE468 Structural Dynamics and Earthquake Resistant Design
5. CE472 Transportation Planning
6. CE474 Municipal Solid Waste Management

## **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. AU484 MICROPROCESSOR AND EMBEDDED SYSTEMS
5. AU486 NOISE, VIBRATION AND HARSHNESS
6. BM482 BIOMEDICAL INSTRUMENTATION
7. BM484 MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES
8. BT461 DESIGN OF BIOLOGICAL WASTEWATER SYSTEMS
9. BT362 SUSTAINABLE ENERGY PROCESSES
10. CH482 PROCESS UTILITIES AND PIPE LINE DESIGN
11. CH484 FUEL CELL TECHNOLOGY
12. CS482 DATA STRUCTURES
13. CS484 COMPUTER GRAPHICS
14. CS486 OBJECT ORIENTED PROGRAMMING
15. CS488 C # AND .NET PROGRAMMING
16. EE482 ENERGY MANAGEMENT AND AUDITING
17. EE484 CONTROL SYSTEMS
18. EE486 SOFT COMPUTING
19. EE488 INDUSTRIAL AUTOMATION
20. EE494 INSTRUMENTATION SYSTEMS
21. EC482 BIOMEDICAL ENGINEERING
22. FT482 FOOD PROCESS ENGINEERING
23. FT484 FOOD STORAGE ENGINEERING

24. FT486	FOOD ADDITIVES AND FLAVOURING
25. IE482	FINANCIAL MANAGEMENT
26. IE484	INTRODUCTION TO BUSINESS ANALYTICS
27. IE486	DESIGN AND ANALYSIS OF EXPERIMENTS
28. IE488	TOTAL QUALITY MANAGEMENT
29. IC482	BIOMEDICAL SIGNAL PROCESSING
30. IT482	INFORMATION STORAGE MANAGEMENT
31. MA482	APPLIED LINEAR ALGEBRA
32. MA484	OPERATIONS RESEARCH
33. MA486	ADVANCED NUMERICAL COMPUTATIONS
34. MA488	CRYPTOGRAPHY
35. ME484	FINITE ELEMENT ANALYSIS (CE 466 FINITE ELEMENT METHODS)
36. ME482	ENERGY CONSERVATION AND MANAGEMENT
37. ME471	OPTIMIZATION TECHNIQUES (CE 473 ADVANCED COMPUTATIONAL TECHNIQUES AND OPTIMISATION)
38. MP482	PRODUCT DEVELOPMENT AND DESIGN
39. MP469	INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
40. MT482	INDUSTRIAL SAFETY
41. MR482	MECHATRONICS
42. FS482	RESPONSIBLE ENGINEERING
43. SB482	DREDGERS AND HARBOUR CRAFTS
44. HS482	PROFESSIONAL ETHICS