



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

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

Information Technology

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: *Information Technology*

SEMESTER - 3

Course Code	Course Name	L-T-P	Credits	Exam Slot
MA201	Linear Algebra & Complex Analysis	3-1-0	4	A
CS201	Discrete Computational Structures	3-1-0	4	B
IT201	Digital System Design	3-1-0	4	C
CS205	Data Structures	3-1-0	4	D
IT203	Data Communication	3-0-0	3	E
HS200/ HS210	Business Economics/Life Skills	3-0-0/ 2-0-2	3	F
CS231	Data Structures Lab	0-0-3	1	S
IT231	Digital Circuits 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
CS202	Computer Organization and Architecture	3-1-0	4	B
IT202	Algorithm Analysis & Design	4-0-0	4	C
IT204	Object Oriented Techniques	3-0-0	3	D
CS208	Principles of Data Base Design	3-0-0	3	E
HS210/ HS200	Life Skills/Business Economics	2-0-2/ 3-0-0	3	F
IT232	Object Oriented Programming Lab	0-0-3	1	S
IT234	Algorithm Design Lab	0-0-3	1	T

Total Credits = 23

Hours 28/27

Cumulative Credits= 94

BRANCH: *Information Technology*

SEMESTER - 5

Course Code	Course Name	L-T-P	Credits	Exam Slot
IT301	Software Architecture & Design Patterns	3-1-0	4	A
IT303	Theory of Computation	3-0-0	3	B
CS305	Microprocessors & Microcontrollers	2-1-0	3	C
IT305	Operating Systems	3-0-0	3	D
IT307	Computer Networks	3-0-0	3	E
	Elective 1	3-0-0	3	F
IT341	Design Project	0-1-2	2	S
IT331	Microcontroller Lab	0-0-3	1	T
IT333	Database Lab	0-0-3	1	U

Total Credits = 23

Hours: 28

Cumulative Credits= 117

- Elective 1:-**
1. IT361 Graph Theory
 2. IT363 UNIX Shell Programming
 3. IT365 Computer Architecture & Parallel Processing
 4. IT367 Computer Graphics & Multimedia
 5. MA361 Random Process and Queuing Theory

BRANCH: *Information Technology*

SEMESTER - 6

Course Code	Course Name	L-T-P	Credits	Exam Slot
IT302	Internet Technology	4-0-0	4	A
CS304	Compiler Design	2-1-0	3	B
IT304	Data Warehousing & Mining	3-0-0	3	C
IT306	Distributed Systems	3-0-0	3	D
HS300	Principles of Management	3-0-0	3	E
	Elective 2	3-0-0	3	F
IT332	Internet Technology Lab	0-0-3	1	S
IT334	Computer Networks Lab	0-0-3	1	T
IT352	Comprehensive Exam	0-1-1	2	U

Total Credits = 23

Hours: 27

Cumulative Credits= 140

Elective 2:-

1. IT362 Information Retrieval
2. IT364 Software Project Management
3. IT366 Advanced DBMS
4. IT368 Information Theory & Coding
5. MA362 Abstract Algebra and Number Theory

BRANCH: *Information Technology*

SEMESTER - 7

Course Code	Course Name	L-T-P	Credits	Exam Slot
IT401	Embedded Systems	4-0-0	4	A
IT403	Mobile Computing	3-0-0	3	B
IT405	Internet Working with TCP/IP	3-0-0	3	C
IT407	Knowledge Engineering	3-0-0	3	D
IT409	Web Application Development	3-0-0	3	E
	Elective 3	3-0-0	3	F
IT451	Seminar & Project Preliminary	0-1-4	2	S
IT431	Web Application Development Lab	0-0-3	1	T

Total Credits = 22

Hours: 27

Cumulative Credits= 162

Elective 3:-

1. IT461 Software Testing & Quality Assurance
2. IT463 Semantic Web
3. IT465 Cyber Forensics
4. CS467 Machine Learning

BRANCH: *Information Technology*

SEMESTER - 8

Course Code	Course Name	L-T-P	Credits	Exam Slot
IT402	Cryptography & Cyber Security	3-0-0	3	A
IT404	Data Analytics	3-0-0	3	B
	Elective 4	3-0-0	3	C
	Elective 5 (Non Departmental)	3-0-0	3	D
IT492	Project		6	S

Total Credits = 18

Hours: 30

Cumulative Credits= 180

Elective 4:-

1. IT462 Internet of Things
2. CS468 Cloud Computing
3. IT464 Information Storage Management
4. IT466 Adhoc & Sensor Networks
5. IT468 Service Oriented Architecture

ELECTIVE 5 (NON DEPARTMENTAL ELECTIVE COURSES)

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

1. AO482 FLIGHT AGAINST GRAVITY
2. AE482 INDUSTRIAL INSTRUMENTATION
3. AE484 INSTRUMENTATION SYSTEM DESIGN
4. AU486 NOISE, VIBRATION AND HARSHNESS
5. BM482 BIOMEDICAL INSTRUMENTATION
6. BM484 MEDICAL IMAGING & IMAGE PROCESSING TECHNIQUES
7. BT461 DESIGN OF BIOLOGICAL WASTE WATER SYSTEMS
8. BT362 SUSTAINABLE ENERGY PROCESSES
9. CH482 PROCESS UTILITIES AND PIPE LINE DESIGN
10. CH484 FUEL CELL TECHNOLOGY
11. CE482 ENVIRONMENTAL IMPACT ASSESSMENT
12. CE484 APPLIED EARTH SYSTEMS
13. CE486 GEO INFORMATICS FOR INFRASTRUCTURE MANAGEMENT
14. CE488 DISASTER MANAGEMENT
15. CE494 ENVIRONMENT HEALTH AND SAFETY
16. CS484 COMPUTER GRAPHICS (IT 367/COMPUTER GRAPHICS AND MULTIMEDIA)
17. CS488 C # AND .NET PROGRAMMING
18. EE482 ENERGY MANAGEMENT AND AUDITING
19. EE484 CONTROL SYSTEMS
20. EE486 SOFT COMPUTING
21. EE488 INDUSTRIAL AUTOMATION
22. EE494 INSTRUMENTATION SYSTEMS
23. EC482 BIOMEDICAL ENGINEERING

- 
24. FT482 FOOD PROCESS ENGINEERING
25. FT484 FOOD STORAGE ENGINEERING
26. FT486 FOOD ADDITIVES AND FLAVOURING
27. IE482 FINANCIAL MANAGEMENT
28. IE484 INTRODUCTION TO BUSINESS ANALYTICS
29. IE486 DESIGN AND ANALYSIS OF EXPERIMENTS
30. IE488 TOTAL QUALITY MANAGEMENT
31. IC482 BIOMEDICAL SIGNAL PROCESSING
32. MA482 APPLIED LINEAR ALGEBRA
33. MA484 OPERATIONS RESEARCH
34. MA486 ADVANCED NUMERICAL COMPUTATIONS
35. ME484 FINITE ELEMENT ANALYSIS
36. ME482 ENERGY CONSERVATION AND MANAGEMENT
37. ME471 OPTIMIZATION TECHNIQUES
38. MP482 PRODUCT DEVELOPMENT AND DESIGN
39. MP469 INDUSTRIAL PSYCHOLOGY & ORGANIZATIONAL BEHAVIOUR
40. MP484 PROJECT MANAGEMENT (IT 364/ SOFTWARE PROJECT MANAGEMENT)
41. MT482 INDUSTRIAL SAFETY
42. MR482 MECHATRONICS
43. FS482 RESPONSIBLE ENGINEERING
44. SB482 DREDGERS AND HARBOUR CRAFTS
45. HS482 PROFESSIONAL ETHICS