

**APJ Abdul Kalam Technological University
B.Tech INFORMATION TECHNOLOGY**

Curriculum

SEMESTER 1					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Calculus	3	1	0	4	4
Engineering Chemistry	3	1	0	4	4
Engineering Graphics	1	1	2	4	3
Introduction To Computing And Problem Solving	2	1	0	3	3
Introduction To Sustainable Engineering	2	0	1	3	3
Basics of Electrical Engineering	2	1	0	3	3
Engineering Chemistry Lab	0	0	2	2	1
Computer Science Workshop	0	0	2	2	1
Electrical Engineering Workshop	0	0	2	2	1
Total Hours				27	
Total Credits					23
Cumulative Credits					23

**APJ Abdul Kalam Technological University
B.Tech COMPUTER SCIENCE**

Curriculum

SEMESTER 1					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Calculus	3	1	0	4	4
Engineering Physics	3	1	0	4	4
Engineering Mechanics	3	1	0	4	4
Introduction to Computing and Problem Solving	2	1	0	3	3
Introduction To Sustainable Engineering	2	0	1	3	3
Basics of Electrical Engineering	2	1	0	3	3
Engineering Physics Lab	0	0	2	2	1
Computer Science Workshop	0	0	2	2	1
Electrical Engineering Workshop	0	0	2	2	1
Total Hours				27	
Total Credits					24
Cumulative Credits					24

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SEMESTER 2					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Differential Equations	3	1	0	4	4
Engineering Physics	3	1	1	4	4
Engineering Mechanics	3	1	0	4	4
Design & Engineering	2	0	2	4	3
Basics of Mechanical Engineering	2	1	0	3	3
Basics of Electronics Engineering	2	1	0	3	3
Engineering Physics Lab	0	0	2	2	1
Mechanical Engineering Workshops	0	0	2	2	1
Electronics Engineering Workshops	0	0	2	2	1
Total Hours				28	
Total Credits					24
Cumulative Credits					47

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B.Tech COMPUTER SCIENCE**

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SEMESTER 2					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Differential Equations	3	1	0	4	4
Engineering Chemistry	3	1	1	4	4
Engineering Graphics	3	1	0	4	3
Design & Engineering	2	0	2	4	3
Basics of Mechanical Engineering	2	1	0	3	3
Basics of Electronics Engineering	2	1	0	3	3
Engineering Chemistry Lab	0	0	2	2	1
Mechanical Engineering Workshops	0	0	2	2	1
Electronics Engineering Workshops	0	0	2	2	1
Total Hours				28	
Total Credits					23
Cumulative Credits					47

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SEMESTER 3					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Linear Algebra & Complex Analysis	3	1	0	4	4
Discrete Computational Structures	3	1	0	4	4
Digital System Design	3	1	0	4	4
Data Structures	3	1	0	4	4
Data Communication (S5CSE)	3	0	0	3	3
Life Skills / Business Economics	2/0	0/0	2/3	4/3	3
Data Structures Lab	0	0	3	3	1
Digital Circuits Lab	0	0	3	3	1
Total Hours				28	
Total Credits					24
Cumulative Credits					71

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SEMESTER 3					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Linear Algebra & Complex Analysis	3	1	0	4	4
Discrete Computational Structures	3	1	0	4	4
Switching Theory and Logic Design	3	1	0	4	4
Data Structures	3	1	0	4	4
Electronics Devices & Circuits	2	1	0	3	3
Life Skills / Business Economics	2/3	0/0	2/0	4/3	3
Data Structures Lab	0	0	3	3	1
Electronics Circuits Lab	0	0	3	3	1
Total Hours				28	
Total Credits					24
Cumulative Credits					71

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SEMESTER 4					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Probability Distributions, Transforms and Numerical Methods	3	1	0	4	4
Computer Organization and Architecture	3	1	0	4	4
Algorithm Analysis & Design(S6 CSE)	4	0	0	4	4
Object Oriented Techniques	3	0	0	3	3
Principles of Database Design	3	0	0	3	3
Life Skills / Business Economics	2/0	0/0	2/3	4/3	3
Object Oriented Programming Lab	0	0	3	3	1
Algorithm Design Lab	0	0	3	3	1
Total Hours				28	
Total Credits					23
Cumulative Credits					94

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SEMESTER 4					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Probability Distributions, Transforms and Numerical Methods	3	1	0	4	4
Computer Organization and Architecture	3	1	0	4	4
Operating Systems (S5 IT)	2	0	2	4	4
Object Oriented Design and Programming	2	1	0	3	3
Principles of Database Design	2	1	0	3	3
Business Economics/Life Skills	3/2	0/0	0/2	3/4	3
Free and Open Source Software Lab	0	0	3	3	1
Digital Systems Lab	0	0	3	3	1
Total Hours				27	
Total Credits					23
Cumulative Credits					94

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SEMESTER 5

Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Software Architecture and Design Patterns (S6 CSE)	3	1	0	4	4
Theory Of Computation	3	0	0	3	3
Microprocessors and Microcontrollers	2	1	0	3	3
Operating Systems (S4 CSE)	3	0	0	3	3
Computer Networks(S6 CSE)	3	0	0	3	3
Elective 1 (Graph Theory, Unix Shell Programming, Computer Architecture & Parallel Processing, Computer Graphics & Multimedia, Random Process and Queuing Theory)	3	0	0	3	3
Design Project	0	1	2	3	2
Microcontroller Lab(S6 CSE)	0	0	3	3	1
Database Lab	0	0	3	3	1
Total Hours				28	
Total Credits					23
Cumulative Credits					117

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SEMESTER 5

Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Theory of Computation	3	1	0	4	4
System Software	2	1	0	3	3
Microprocessors and Microcontrollers	2	1	0	3	3
Data Communication(S3 IT)	3	0	0	3	3
Graph Theory and Combinatorics	2	0	2	4	3
Elective 1 (Soft Computing, Signals and Systems, Optimization Techniques, Logic for Computer Science, Digital System Testing & Testable Design)	3	0	0	3	3
Design Project	0	1	2	3	2
System Software Lab	0	0	3	3	1
Application Software Development Lab	0	0	3	3	1
Total Hours				28	
Total Credits					23
Cumulative Credits					117

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SEMESTER 6

Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Internet Technology	4	0	0	4	4
Compiler Design	2	1	0	3	3
Information Retrieval	3	0	0	3	3
Distributed Systems(S7IT)	3	0	0	3	3
Principles of Management	3	0	0	3	3
Elective 2 (Data Warehousing & Mining, Software Testing & Quality Assurance, Advanced DBMS, Information Theory & Coding, Abstract Algebra and Number Theory)	3	0	0	3	3
Internet Technology Lab	0	0	3	3	1
Computer Networks Lab	0	0	3	3	1
Comprehensive Exam	0	1	1	2	2
Total Hours				27	
Total Credits					23
Cumulative Credits					140

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SEMESTER 6

Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Design and Analysis of Algorithms (S4 IT)	3	1	0	4	4
Compiler Design	3	0	0	3	3
Computer Networks(S5 IT)	3	0	0	3	3
Software Engineering and Project Management(S5 IT)	3	0	0	3	3
Principles of Management	3	0	0	3	3
Elective 2 (Computer Vision, Mobile Computing, Natural Language Processing, Web Technologies, High Performance Computing)	3	0	0	3	3
Microprocessor Lab(S5IT)	0	0	3	3	1
Network Programming Lab	0	0	3	3	1
Comprehensive Exam	0	1	1	2	2
Total Hours				27	
Total Credits					23
Cumulative Credits					140

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SEMESTER 7					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Embedded Systems(S8 CSE)	4	0	0	4	4
Mobile Computing	3	0	0	3	3
Internetworking With TCP/IP	3	0	0	3	3
Knowledge Engineering	3	0	0	3	3
Web Application Development	3	0	0	3	3
Elective 3 (Software Project Management, Semantic Web, Cyber Forensics, Machine learning)	3	0	0	3	3
Seminar & Project Preliminary	0	1	4	5	2
Web Applications Lab	0	0	3	3	1
Total Hours				27	
Total Credits					22
Cumulative Credits					162

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SEMESTER 7					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Computer Graphics	4	0	0	4	4
Programming Paradigms	3	0	0	3	3
Computer System Architecture	3	0	0	3	3
Distributed Computing(S6 IT)	3	0	0	3	3
Cryptography and Network Security(S8 IT)	3	0	0	3	3
Elective 3 (Computational Geometry, Digital Image Processing, Bio Informatics, Machine Learning, Computational Complexity)	3	0	0	3	3
Seminar & Project Preliminary	0	1	4	5	2
Compiler Design Lab	0	0	3	3	1
Total Hours				27	
Total Credits					22
Cumulative Credits					162

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SEMESTER 8					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Cryptography & Cyber Security (S7CSE)	3	0	0	3	3
Data Analytics	3	0	0	3	3
Elective 4 (Internet of Things, Cloud Computing, Evolutionary Computing, Adhoc & Sensor Networks, Service Oriented Architecture)	3	0	0	3	3
Elective 5 (Non Departmental)	3	0	0	3	3
Project				17	6
Total Hours				29	
Total Credits					18
Cumulative Credits					180

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SEMESTER 8					
Courses	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Credits
Data Mining and Ware Housing	3	0	0	3	3
Embedded Systems(S7 IT)	3	0	0	3	3
Elective 4 (Fuzzy Set Theory and Applications, Artificial Intelligence, Data Science, Cloud Computing, Principles of Information Security)	3	0	0	3	3
Elective 5 (Non Departmental)	3	0	0	3	3
Project				17	6
Total Hours				29	
Total Credits					18
Cumulative Credits					180