

## Computer Science & Engineering (B.Tech.)

### Course Outcomes

#### CSE -3<sup>rd</sup> Semester

Course Outcomes		
Course - DATA STRUCTURE(KCS301)		
S. No.	Course Outcome/ Unit	
1	Describe how arrays, linked lists, stacks, queues, trees, and graphs are represented in memory, used by the algorithms and their common applications.	1.2
2	Discuss the computational efficiency of the sorting and searching algorithms.	2
3	Implementation of Trees and Graphs and perform various operations on these data structure.	3
4	Understanding the concept of recursion, application of recursion and its implementation and removal of recursion.	4
5	Identify the alternative implementations of data structures with respect to its performance to solve a real world problem.	5.6
Course Outcomes		
Course – Discrete Structure and Theory of Logic(KCS-303)		
S. No.	Course Outcome/ Unit	
1	Knowledge of logical notation to define and reason the fundamental mathematical concepts Such as sets, relations, functions, and integers.	1.2
2	Discuss various structures and properties of modern algebra.	1.2
3	Employ their logical ability such as reasoning able to setup mathematical model of real life problem by applying advanced counting and computing techniques like generating	3.4
4	Demonstrate problems in different areas of computer science using trees and graphs.	5.6
5	Design solution with the help of induction hypotheses, simple induction proofs and	2.3

Course Outcomes		
Course - Computer System and Security (KNC301)		
S. No.	Course Outcome/ Unit	
1	To discover software bugs that pose cyber security threats and to explain how to fix the bugs to mitigate such threats	1.2
2	To discover cyber-attack scenarios to web browsers and web servers and to explain how to mitigate such threats	2
3	To discover and explain mobile software bugs posing cyber security threats, explain and recreate exploits, and to explain mitigation techniques.	3.
4	To articulate the urgent need for cyber security in critical computer systems, networks, and world wide web, and to explain various threat scenarios	4
5	To articulate the well-known cyber-attack incidents, explain the attack scenarios, and explain mitigation techniques.	5.6
Course Outcomes		
Course – Computer Organization and architecture(KCS 301)		
S. No.	Course Outcome/ Unit	
1	Study of the basic structure and operation of a digital computer system.	2.3
2	Analysis of the design of arithmetic & logic unit and understanding of the fixed point and floating point.	3
3	Implementation of control unit techniques and the concept of Pipelining	3
4	Understanding the hierarchical memory system, cache memories and virtual memory.	3
5	Understanding the different ways of communicating with I/O devices and standard I/O interfaces	2.3

## Course Outcomes

### CSE. 4<sup>th</sup> Semester

Course Outcomes		
Course - Operating Systems (KCS- 401T)		
S. No.	Course Outcome/ Unit	
		BL
1	Understand the structure and functions of OS	2
2	Learn about Processes, Threads and Scheduling algorithms	1
3	Understand the principles of concurrency and Deadlocks	2
4	Learn various memory management scheme	1
5	Study I/O management and File systems	4

Course Outcomes		
Course - Python Programming(KNC 402)		
S. No.	Course Outcome/ Unit	
1	To read and write simple Python programs.	
2	To develop Python programs with conditionals and loops.	
3	To define Python functions and to use Python datastructures -- lists, tuple, dictionaries	
4	To do input/output with files in Python	
5	To do searching, sorting and merging in Pythons.	

Course Outcomes		
Course - Theory of Automata and Formal Languages (KCS-402)		
S. No.	Course Outcome/ Unit	
1	Understand the basic formal language and automata machine	
2	Understand basic properties and analyzing of regular language and application of finite automaton	
3	Understand and analyzing the context free grammar and Language also proof of correctness.	
4	Understand basic model of PDA. Analyzing and forming Push down automaton.	
5	Understand basic model of Turing Machine. Analyzing and forming Turing Machine and its corresponding language	

## Course Outcomes

### CSE- 5<sup>th</sup> Semester

Course Outcomes		
Course - Compiler Design(KCS-502)		
S. No.	Course Outcome/ Unit	
		BL
1	Acquire knowledge of different phases and passes of the compiler and also able to use the compiler tools like LEX, YACC, etc. Students will also be able to design different types of compiler tools to meet the requirements of the realistic constraints of compilers.	3.6
2	Understand the parser and its types i.e. Top-Down and Bottom-up parsers and construction of LL, SLR, CLR, and LALR parsing table.	2.6
3	Implement the compiler using syntax-directed translation method and get knowledge about the synthesized and inherited attributes.	4,5,
4	Acquire knowledge about run time data structure like symbol table organization and different techniques used in that.	2.3
5	Understand the target machine's run time environment, its instruction set for code generation and techniques used for code optimization.	2.4

Course Outcomes		
Course - Web Technology (KIT 501)		
S. No.	Course Outcome/ Unit	
		BL
1	Apply the knowledge of the internet and related internet concepts that are vital in understanding web application development and analyze the insights of internet programming to implement complete application over the web.	1,2,3

2	Understand, analyze and apply the role of mark up languages like HTML, DHTML, and XML in the workings of the web and web applications.	2
3	Use web application development software tools i.e. XML, Apache Tomcat etc. and identifies the environments currently available on the market to design web sites.	4.6
4	Understand, analyze and build dynamic web pages using client side programming JavaScript and also develop the web application using servlet and JSP.	5.6
5	Understand the impact of web designing by database connectivity with JDBC in the current market place where everyone use to prefer electronic medium for shopping, commerce, fund transfer and even social life also.	2.3

Course Outcomes		BL
Course - Design And Analysis Of Algorithm (KCS- 503)		
S. No.	Course Outcome/ Unit	
1	Analyze running time of algorithms using asymptotic methods, by applying knowledge of mathematics on different sorting algorithms.	2, 3, 4
2	Apply standard algorithms of advanced data structure like B-tree, RB tree, Binomial heaps, and Fibonacci heap.	3
3	Design and modify greedy and dynamic approach on algorithms and analyze them to find solutions of Optimization problems related to graphs and other fields.	5, 6
4	Recognize the general principals and good algorithm design techniques dynamic programming, backtracking and branch & bound algorithm for developing efficient ALGORITHM	1, 2, 4
5	Use string matching algorithms as well as relate the concepts of NP Completeness for analyze and understand the complexity of real life problems and developing solution using randomized and approximation algorithms.	2, 3

Course Outcomes		BL
Course - Database Management Systems (KCS- 502)		
S. No.	Course Outcome/ Unit	
1	Define database design methodology which give a good formal foundation in relational data model.	3
2	Identify and formulate information storage and derive an information model expressed in the form of ER diagram and other optional analysis forms.	3.4
3	Apply query processing techniques to automate the real time problems of databases and will be able to create relational algebra expressions for query.	2.3
4	Identify and solve the redundancy problem in database tables using normalization.	2.4
5	Understand the concepts of transactions, their processing and analyze the broad range of database management issues including data integrity, security and recovery	3.6

### Course Outcomes CSE-6th Semester

Course Outcomes		BL
Course – Data Compression (KCS-064)		
S. No.	Course Outcome/ Unit	
1	Describe the evolution and fundamental concepts of Data Compression and Coding Techniques.	1.2
2	Apply and compare different static coding techniques (Huffman & Arithmetic coding) for text compression.	2.3
3	Apply and compare different dynamic coding techniques (Dictionary Technique) for text compression.	2.3
4	Evaluate the performance of predictive coding technique for Image Compression.	2.3
5	Apply and compare different Quantization Techniques for Image Compression.	2.3

Course Outcomes	
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Course - Software Project Management(KOE-068)		BL	
S. No.	Course Outcome/ Unit		
1	Identify project planning objectives, along with various cost/effort estimation models.	2	
2	Organize & schedule project activities to compute critical path for risk analysis.	2.5	
3	Monitor and control project activities.	3.4	
4	Formulate testing objectives and test plan to ensure good software quality under SEI-CMM.	6.7	
5	Configure changes and manage risks using project management tools.	4.5	
Course Outcomes		BL	
Course- Web Technology(KCS- 602)			
S. No.	Course Outcome/ Unit		
1	Understand principle of Web page design and types of websites.		2
2	Visualize and recognize the basic concept of HTML and application in web designing.		4
3	Recognize and apply the elements of Creating Style Sheet (CSS).		3.4
4	Understand the basic concept of Java Script and its application.	2	
5	Introduce basic concept of Web Hosting and apply the concept of SEO.	2.3	
Course Outcomes		BL	
Course – Computer Networks (KCS-603)			
S. No.	Course Outcome/ Unit		
1	Define, use and implement Computer Networks and the basic components of a Network system.		1.2
2	Know and Apply pieces of hardware and software to make networks more efficient, faster, more secure, easier to use, able to transmit several simultaneous messages, and able to		2.3
3	Differentiate the various types of network configurations and applying them to meet the changing and challenging networking needs of organizations.		2.3
4	Define and analyze the circuits available for voice and data networks, their transmission speeds (bandwidth), and how they are packaged for commercial use.	4.5	
5	To implement replacement of equipment at right time and able to implement project management concepts like CPM, PERT to reduce cost and time.	5.6	
Course Outcomes		BL	
Course - Software Engineering(KCS-602)			
S. No.	Course Outcome/ Unit		
1	Students will be able to decompose the given project in various phases of a lifecycle.		1.2
2	Students will be able to choose appropriate process model depending on the user requirements		2
3	Students will be able to perform various life cycle activities like Analysis, Design, Implementation, Testing and Maintenance.		3
4	Students will be able to know various processes used in all the phases of the product.	3	
5	Students can apply the knowledge, techniques, and skills in the development of a software product.	3	

**Course Outcomes**  
**CSE- 7th Semester**

Course Outcomes		BL
Course - Mobile Computing(KCS-711)		

S. No.	Course Outcome/ Unit	
1	Explain and discuss issues in mobile computing and illustrate overview of wireless telephony and Channel allocation in cellular systems.	2.6
2	Explore the concept of Wireless Networking and Wireless LAN.	4
3	Analyze and comprehend Data management issues like data replication for mobile computers, adaptive clustering for mobile wireless networks and Disconnected operations.	4
4	Identify Mobile computing Agents and state the issues pertaining to security and fault tolerance in mobile computing environment.	3
5	Compare and contrast various routing protocols and will identify and interpret the performance of network systems using Adhoc networks.	2.5
<b>Course Outcomes</b>		
<b>Course – RENEWABLE ENERGY RESOURCES (KOE- 074)</b>		
BL		
S. No.	Course Outcome/ Unit	
1	Understand and define the Introduction and evolution of Various non- conventional energy resources	2.6
2	Understand and define the Introduction and evolution Solar Thermal Energy	4
3	Understand and define the Introduction to Geothermal Energy	4
4	Understand and define the Introduction to Thermo-electrical and thermionic Conversions	3
5	Understand and define the Introduction to Bio-mass.	2.5
<b>Course Outcomes</b>		
<b>Course – HSMC I Rural Development (KHU-701)</b>		
BL		
S. No.	Course Outcome/ Unit	
1	Students can understand the definitions, concepts and components of rural development	2.3
2	Students will know the importance, structure, significance, resources of Indian rural economy	2.4
3	Students will have a clear idea about the area development program and its impact	4.5
4	Acquire knowledge about Rural entrepreneurship.	2.4
5	Different methods for human resource planning.	3

## Course Outcomes CSE- 8th Semester

<b>Course Outcomes</b>			BL
<b>Course - Project Management &amp; Entrepreneurship (KHU-802)</b>			
S. No.	Course Outcome/ Unit		
1	Students can understand the need, scope and concept of entrepreneurship.	1.3	
2	Importance of entrepreneurial idea and innovation, management skills, creating and sustaining enterprising model.	6	
3	Meaning, scope, importance of project management and role of project manager	2.3	
4	Acquire knowledge about project financing.	5	
5	Clear Idea about social entrepreneurship	3	

<b>Course Outcomes</b>			BL
<b>Course – Cloud Computing (KOE-081)</b>			
S. No.	Course Outcome/ Unit		
1	Understand and define the Introduction and evolution of Cloud Computing in addition to the underlying principle of parallel and distributed computing	1.2	
2	Understand the importance of different Cloud enabling technologies and learn how to apply them in software industries	2.3	

3	Understand and analyze multi layered cloud architecture design along with their applications and challenges	2.4
4	Understand and Apply Resource management and analyze security systems in cloud	2.3
5	Analyze the components of open stack , Google Cloud platform, Hadoop, Virtual Box and Amazon web Service	4,5,6

Course Outcomes		BL
Course - Data Mining and Warehousing (KOE-093)		
S. No.	Course Outcome/ Unit	
1	Explain to build a Data Warehouse, it's scope, necessity and Contribution to the society.	2
2	Describe how to select hardware and O.S. for designing and managing data warehouse	2
3	Use of high-level operational skills for knowledge discovery for real world problems.	3
4	Demonstrate statistical and machine learning algorithms to underpin the knowledge discovery for an enterprise.	3
5	Discuss different types of OLAP function and tools for data visualization and decision support for computing systems.	2