



## BRILLIANT GRAMMAR SCHOOL EDUCATIONAL SOCIETY'S GROUP OF INSTITUTIONS-INTEGRATED CAMPUS

(Approved by A.I.C.T.E & P.C.I, New Delhi, Affiliated to JNTUH, Hyderabad)

Abdullapur (V), Abdullapurmet (M), R.R Dist. Hyderabad – 501505

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### Computer Science and Engineering (DATA SCIENCE) I & II Sem Course Outcomes For The Academic Year 2021-2022

1	II/I	<b>DISCRETE MATHEMATICS</b>	CO1: Ability to understand and construct precise mathematical proofs
			CO2: Ability to use logic and set theory to formulate precise statements
			CO3: Ability to analyze and solve counting problems on finite and discrete structures
			CO4: Ability to describe and manipulate sequences
			CO5: Ability to apply graph theory in solving computing problems
2	II/I	<b>DATA STRUCTURES</b>	CO1: Ability to select the data structures that efficiently model the information in a problem.
			CO2: Ability to assess efficiency trade-offs among different data structure implementations or combinations.
			CO3: Implement and know the application of algorithms for sorting and pattern matching.
			CO4: Design programs using a variety of data structures, including hash tables, binary and general tree structures, search trees, tries, heaps, graphs, and AVL-trees
3	II/I	<b>COMPUTER ORGANIZATION AND ARCHITECTURE</b>	CO1: Understand the basics of instructions sets and their impact on processor design
			CO2: Demonstrate an understanding of the design of the functional units of a digital computer system
			CO3: Evaluate cost performance and design trade-offs in designing and constructing a computer processor including memory.
			CO4: Design a pipeline for consistent execution of instructions with minimum hazards.

  
**DIRECTOR**

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4	II/I	<b>PYTHON PROGRAMMING</b>	<b>CO1:</b> Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
			<b>CO2:</b> Demonstrate proficiency in handling Strings and File Systems.
			<b>CO3:</b> Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
			<b>CO4:</b> Interpret the concepts of Object-Oriented Programming as used in Python
			<b>CO5:</b> Implement exemplary applications related to Network Programming, Web Services and Databases in Python
5	II/I	<b>BUSINESS ECONOMICS AND FINANCIAL ANALYSIS</b>	<b>CO1:</b> The students will understand the various Forms of Business and the impact of economic variables on the Business
			<b>CO2:</b> The Demand, Supply, Production, Cost, Market Structure, Pricing aspects are learnt.
			<b>CO3:</b> The Students can study the firm's financial position by analysing the Financial Statements of a Company.
6	II/I	<b>MATHEMATICAL AND STATISTICAL FOUNDATIONS</b>	<b>CO1:</b> Apply the number theory concepts to cryptography domain
			<b>CO2:</b> Apply the concepts of probability and distributions to some case studies
			<b>CO3:</b> Correlate the material of one unit to the material in other units
			<b>CO4:</b> Resolve the potential misconceptions and hazards in each topic of study
7	II/I	<b>Data Structure Lab</b>	<b>CO1:</b> Ability to develop C programs for computing and real-life applications using basic elements like control statements, arrays, functions, pointers and strings, and data structures like stacks, queues and linked lists.

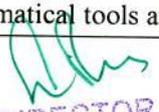
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			<b>CO2:</b> Ability to Implement searching and sorting algorithms
8	II/I	PYTHON PROGRAMMING LAB	<b>CO1:</b> Student should be able to understand the basic concepts scripting and the contributions of scripting language
			<b>CO2:</b> Ability to explore python especially the object-oriented concepts, and the built in objects of Python.
			<b>CO3:</b> Ability to create practical and contemporary applications such as TCP/IP network programming, Web applications, discrete event simulation
9	II/I	GENDER SENSITIZATION LAB	<b>CO1:</b> To develop students' sensibility with regard to issues of gender in contemporary India.
			<b>CO2:</b> To provide a critical perspective on the socialization of men and women.
			<b>CO3:</b> To introduce students to information about some key biological aspects of genders.
			<b>CO4:</b> To expose the students to debates on the politics and economics of work.
			<b>CO5:</b> To help students reflect critically on gender violence
10	II/II	FORMAL LANGUAGES & AUTOMATE THEORY	<b>CO1:</b> Able to understand the concept of abstract machines and their power to recognize the languages
			<b>CO2:</b> Able to employ finite state machines for modeling and solving computing problems
			<b>CO3:</b> Able to design context free grammars for formal languages
			<b>CO4:</b> Able to distinguish between decidability and undecidability.
			<b>CO5:</b> Able to gain proficiency with mathematical tools and formal

  
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			methods.
11	II/II	OPERATING SYSTEMS	CO1: Will be able to control access to a computer and the files that may be shared
			CO2: Demonstrate the knowledge of the components of computer and their respective roles in computing.
			CO3: Ability to recognize and resolve user problems with standard operating environments
			CO5: Understanding file system structure and directory structure.
12	II/II	SOFTWARE ENGINEERING	CO1: Ability to translate end-user requirements into system and software requirements
			CO2: Ability to generate a high-level design of the system from the software requirements
			CO3: Will have experience and/or awareness of testing problems and will be able to develop a simple testing report
13	II/II	DATABASE MANAGEMENT SYSTEMS	CO1: Gain knowledge of fundamentals of DBMS, database design and normal forms
			CO2: Master the basics of SQL for retrieval and management of data.
			CO3: Be acquainted with the basics of transaction processing and concurrency control.
			CO4: Familiarity with database storage structures and access techniques
14	II/II	JAVA PROGRAMMING	CO1: Able to solve real world problems using OOP techniques
			CO2: Able to understand the use of abstract classes.
			CO3: Able to solve problems using java collection framework and I/o classes.

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			CO4: Able to develop multithreaded applications with synchronization.
			CO5: Able to develop applets for web applications.
			CO6: Able to design GUI based applications
15	II/II	OS LAB	CO1: Simulate and implement operating system concepts
			CO2: Able to implement C programs using Unix system calls
16	II/II	DBMS LAB	CO1: Design database schema for a given application and apply normalization
			CO2: Acquire skills in using SQL commands for data definition and data manipulation.
			CO3: Develop solutions for database applications using procedures, cursors and triggers
17	II/II	JAVA LAB	CO1: Able to write programs for solving real world problems using java collection frame work
			CO2: Able to write programs using abstract classes.
			CO3: Able to write multithreaded programs
			CO4: Able to write GUI programs using swing controls in Java.
18	II/II	CONSTITUTION OF INDIA	CO1: Able to understand the concept of abstract machines and GUI based applications.
			CO2: Able to employ finite state machines for modeling and solving computing problems.
			CO3: Able to design context free grammars for formal languages.
			CO4: Able to distinguish between decidability and undecidability.
			CO5: Able to gain proficiency with mathematical tools and formal methods.

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