

**A.S.D. GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**B.Sc.(Computer Science)**  
**2023-2024**

**PROGRAMME OUTCOMES**

**Students of Undergraduate Programmes (B. Sc, B. Com, BA) at the time of graduation will be able to:**

**PO1: Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

**PO2: Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in at least one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

**PO3: Social Interaction:** Elicit views of others, mediate disagreements and help reach conclusions in group settings.

**PO4: Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

**PO5: Effective Citizenship:** Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

**PO6: Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.

**PO7: Problem solving skills:** Identify, formulate, and analyse complex problems, reaching substantiated conclusions by applying the knowledge and skills acquired during undergraduate study for the welfare of individuals and society.

**PO8: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **PO9: Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio- technological changes.

**PO10: Higher Progression, Employability and Entrepreneurship:** Progress towards higher education / become potential workforce by enhancing employability through skill-based education / become good entrepreneurs.

**PROGRAMME SPECIFIC OUTCOMES**

**PSO1:** To understand the principles and working of computer systems and be able to apply computational knowledge and project development skills to provide innovative solutions.

**PSO2:** To design and develop computer programs and understand the structure and development methodologies of software systems.

**PSO3:** To apply their skills in the field of algorithms, web design, and data analytics.

**A.S.D. GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA****DEPARTMENT OF COMPUTER SCIENCE****B.Sc.(Computer Science)****2023-2024****COURSE OUTCOMES**

<b>S. No</b>	<b>Admitted Batch</b>	<b>Year</b>	<b>Sem</b>	<b>Course Code</b>	<b>Title of the paper</b>	<b>Course Outcomes</b>
1	2023-2024	I	I	BSCM23101	ESSENTIALS AND APPLICATIONS OF MATHEMATICAL, PHYSICAL AND CHEMICAL SCIENCES	<p><b>CO1:</b> Apply critical thinking skills to solve complex problems involving complex numbers, trigonometric ratios, vectors, and statistical measures.</p> <p><b>CO2:</b> To Explain the basic principles and concepts underlying a broad range of fundamental areas of physics and to Connect their knowledge of physics to everyday situations</p> <p><b>CO3:</b> To Explain the basic principles and concepts underlying a broad range of fundamental areas of chemistry and to Connect their knowledge of chemistry to daily life.</p> <p><b>CO4:</b> Understand the interplay and connections between mathematics, physics, and chemistry in various applications.</p> <p><b>CO5:</b> Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts.</p> <p><b>CO6:</b> To explore the history and evolution of the Internet and to gain an understanding of network security concepts, including threats, vulnerabilities, and countermeasures</p>
2	2023-2024	I	I	BSCM23102	ADVANCES IN MATHEMATICAL, PHYSICAL AND CHEMICAL SCIENCES	<p><b>CO1:</b> Explore the applications of mathematics in various fields of physics and chemistry, to understand how mathematical concepts are used to model and solve real-world problems.</p> <p><b>CO2:</b> To Explain the basic principles and concepts underlying a broad range of fundamental areas</p>

						<p>of physics and to Connect their knowledge of physics to everyday situations. Understand the different sources of renewable energy and their generation processes and advances in nanomaterials and their properties, with a focus on quantum dots.</p> <p><b>CO3:</b> To study the emerging field of quantum communication and its potential applications.</p> <p><b>CO4:</b> To gain an understanding of the principles of biophysics in studying biological systems.</p> <p><b>CO5:</b> Explore the properties and applications of shape memory materials. Understand the principles and techniques used in computer-aided drug design and drug delivery systems, to understand the fabrication techniques and working principles of nanosensors.</p> <p><b>CO6:</b> Explore the effects of chemical pollutants on ecosystems and human health. Understand the interplay and connections between mathematics, physics, and chemistry in various advanced applications.</p> <p><b>CO7:</b> Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts.</p> <p><b>CO8:</b> Understand and convert between different number systems, such as binary, octal, decimal, and hexadecimal.</p>
3	2023-2024	I	II	CS23201	PROBLEM SOLVING IN C	<p><b>CO1:</b> Understand the working of a digital computer and Fundamental constructs of Programming</p> <p><b>CO2:</b> Analyze and develop a solution to a given problem with suitable control structures</p>

						<p><b>CO3:</b> Apply the derived data types in program solutions</p> <p><b>CO4:</b> Use the 'C' language constructs in the right way</p> <p><b>CO5:</b> Apply the Dynamic Memory Management for effective memory utilization</p>
4	2023-2024	I	II	CS23202	DIGITAL LOGIC DESIGN	<p><b>CO1:</b> Understand how to Convert numbers from one radix to another radix and perform arithmetic operations.</p> <p><b>CO2:</b> Simplify Boolean functions using Boolean algebra and k- maps</p> <p><b>CO3:</b> Design adders and subtractors circuits.</p> <p><b>CO4:</b> Design combinational logic circuits such as decoders, encoders, multiplexers and demultiplexers.</p> <p><b>CO5:</b> Use flip flops to design registers and counters.</p>
5	2022-2023	II	III	CS203304	DATA BASE MANAGEMENT SYSTEM	<p><b>CO1:</b> Understand DBMS concepts, data models and Architecture.</p> <p><b>CO2:</b> Understand ER concepts and ER mapping to relational model</p> <p><b>CO3:</b> Improve the database design by normalization.</p> <p><b>CO4:</b> Make use of SQL to retrieve and maintain relational database.</p> <p><b>CO5:</b> Illustrate various constructs in PL/SQL.</p>
6	2022-2023	II	IV	CS224307	OBJECT ORIENTED PROGRAMMING USING JAVA	<p><b>CO1:</b> Understand and Apply Object Oriented features and understand the basics of Java. <b>CO2:</b> Develop problem-solving and programming skills using OOP concepts.</p> <p><b>CO3:</b> Apply the concepts of inheritance and to create arrays, strings.</p> <p><b>CO4:</b> Able to demonstrate Exception Handling and Multithreading.</p> <p><b>CO5:</b> Develop efficient Java applets and applications using OOP concepts.</p>
7	2022-2023	II	IV	CS224308	OPERATING SYSTEMS	<p><b>CO1:</b> Interpret the basic structure of OS and architectural components.</p> <p><b>CO2:</b> Compare and contrast various Process scheduling algorithms.</p> <p><b>CO3:</b> Analyze various</p>

						<p>mechanisms of Synchronization and the principles of deadlock.</p> <p><b>CO4:</b> Make use of paging and segmentation in Memory management.</p> <p><b>CO5:</b> Discuss the issues related to file system interface, implementation and disk management.</p>
8	2021-2022	III	V	CS205307 6A	WEB INTERFACE DESIGNING TECHNOLOGIES	<p><b>CO1:</b> Understand and appreciate the web architecture and services.</p> <p><b>CO2:</b> Gain knowledge about various components of a website.</p> <p><b>CO3:</b> Demonstrate skills regarding creation of a static website and an interface to dynamic website.</p> <p><b>CO4:</b> Learn how to install word press and gain the knowledge of installing various plugins to use in their websites.</p>
9	2021-2022	III	V	CS205308 7A	WEB APPLICATIONS DEVELOPMENT USING PHP & MYSQL	<p><b>CO1:</b> Write simple programs in PHP.</p> <p><b>CO2:</b> Understand how to use regular expressions, handle exceptions, and validate data using PHP.</p> <p><b>CO3:</b> Apply In-Built functions and Create User defined functions in PHP programming. <b>CO4:</b> Write PHP scripts to handle HTML forms.</p> <p><b>CO5:</b> Write programs to create dynamic and interactive web based applications using PHP and MYSQL.</p> <p><b>CO6:</b> Know how to use PHP with a MySQL database and can write database driven web pages</p>
10	2021-2022	III	V		INTERNET OF THINGS	<p><b>CO1:</b> Appreciate the technology for IoT</p> <p><b>CO2:</b> Understand various concepts, terminologies and architecture of IoT systems. <b>CO3:</b> Understand various applications of IoT <b>CO4:</b> Learn how to use various sensors and actuators for design of IoT.</p> <p><b>CO5:</b> Learn how to connect various things to Internet.</p> <p><b>CO6:</b> Learn the skills to develop simple IOT Devices.</p>
11	2021-2022	III	V		APPLICATION DEVELOPMENT USING PYTHON	<p><b>CO1:</b> Understand and appreciate the web architecture and services.</p> <p><b>CO2:</b> Examine Python syntax and</p>

						<p>semantics and be fluent in the use of Python flow control and functions.</p> <p><b>CO3:</b> Demonstrate proficiency in handling Strings and File Systems.</p> <p><b>CO4:</b> Create, run and manipulate Python Programs using core data structures like Lists, x Dictionaries and use Regular Expressions.</p> <p><b>CO5:</b> Interpret the concepts of Object-Oriented Programming as used in Python.</p> <p><b>CO6:</b> Apply concepts of Python programming in various fields related to IOT, Web Services and Databases in Python</p>
12	2021-2022	III	V		DATA SCIENCE	<p><b>CO1:</b> Develop relevant programming abilities.</p> <p><b>CO2:</b> Demonstrate proficiency with statistical analysis of data.</p> <p><b>CO3:</b> Develop the ability to build and assess data-based models.</p> <p><b>CO4:</b> Demonstrate skill in data management</p> <p><b>CO5:</b> Apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively</p>
13	2021-2022	III	V		PYTHON FOR DATA SCIENCE	<p><b>CO1:</b> Identify the need for data science and solve basic problems using Python built-in data types and their methods.</p> <p><b>CO2:</b> Design an application with user-defined modules and packages using OOP concept</p> <p><b>CO3:</b> Employ efficient storage and data operations using NumPy arrays.</p> <p><b>CO4:</b> Apply powerful data manipulations using Pandas. <b>CO5:</b> Do data pre-processing and visualization using Pandas</p>

N. N. S. Eswari  
Signature of the HOD  
in CHARGE  
DEPT OF COMPUTER SCIENCE  
A.S.D. GOVT. DEGREE COLLEGE (W) AUTONOMOUS  
KAKINADA

V. N. S.  
PRINCIPAL  
A.S.D. GOVT. DEGREE COLLEGE (W)  
AUTONOMOUS  
KAKINADA