

**S.Y.B.Sc.(Computer Science) SEM III**

<b>Sr.No</b>	<b>Learning Objective</b>	<b>Learning Outcomes</b>
<b>Course: USCS301:Theory of Computation</b>		
1	To provide the comprehensive insight into theory of computation by understanding grammar, languages and other elements of modern language design.	Understand Grammar and Languages
2	To develop capabilities to design and develop formulations for computing models and identify its applications in diverse areas.	Learn about Automata theory and its application in Language Design
3		Learn about Turing Machines and Pushdown Automata
4		Understand Linear Bound Automata and its applications
<b>Course: USCS302:Core Java</b>		
1	The objective of this course is to teach the learner how to use Object Oriented paradigm to develop code and understand the concepts of Core Java and to cover-up with the pre-requisites of Core java	Object oriented programming concepts using Java.
2		Knowledge of input, its processing and getting suitable output.
3		Understand, design, implement and evaluate classes and applets.
4		Knowledge and implementation of AWT package.
<b>Course: USCS503:Operating System</b>		
1	Learners must understand proper working of operating system	To provide a understanding of operating system, its structures and functioning
2	Computer operating system, its structures, functioning and algorithms.	Develop and master understanding of algorithms used by operating systems for various purposes.
<b>Course: USCS304Database Management Systems</b>		
1	To develop understanding of concepts and techniques for data management and learn about widely used systems for implementation and usage.	Learn about using PL/SQL for data management
2		Master concepts of stored procedure and triggers and its use.

3		Understand concepts and implementations of transaction management and crash recovery
<b>Course: USCS305:Combinatorics and Graph Theory</b>		
1	To give the learner a broad exposure of combinatorial Mathematics through applications especially the Computer Science applications.	Appreciate beauty of combinatorics and how combinatorial problems naturally arise in many settings.
2		Understand the combinatorial features in real world situations and Computer Science applications.
3		Apply combinatorial and graph theoretical concepts to understand Computer Science concepts and apply them to solve problems
<b>Course: USCS306 Physical Computing and IoT Programming</b>		
1	To learn about SoC architectures; Learn how Raspberry Pi. Learn to program Raspberry Pi. Implementation of internet of Things and Protocols.	Enable learners to understand System On Chip Architectures.
2	`	Introduction and preparing Raspberry Pi with hardware and installation.
3		Learn physical interfaces and electronics of Raspberry Pi and program them using practical's Learn how to make consumer grade IoT safe and secure with proper use of protocols.
<b>Course: USCS307:Web Programming</b>		
1	To provide insight into emerging technologies to design and develop state of - the art web applications using client-side scripting, server-side scripting, and database connectivity	To design valid, well-formed, scalable, and meaningful pages using emerging technologies. Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites
2		To develop and implement client-side and server-side scripting language programs.
3		To develop and implement Database Driven Websites.
4		Design and apply XML to create a markup language for data and document centric applications.

Sr.No	Learning Objective	Learning Outcomes
<b>USCS401 Fundamentals of Algorithms</b>		
1	To understand basic principles of algorithm design and why algorithm analysis is important	Understand the concepts of algorithms for designing good program
2	To understand how to implement algorithms in Python	Implement algorithms using Python
3	To understand how to transform new problems into algorithmic problems with efficient solutions	
4	To understand algorithm design techniques for solving different problems	
<b>USCS402 Advanced JAVA</b>		
1	Explore advanced topic of Java programming for solving problems.	Understand the concepts related to Java Technology
2	To Developed platform independent application	Explore and understand use of Java Server Programming
<b>USCS403 Computer Networks</b>		
1	In this era of Information, its computation and its exchange techniques, Learner should be able to conceptualize and understand the framework and working of communication networks.	Learner will be able to understand the concepts of networking, which are important for them to be known as a 'networking professionals'.
2	on completion, will be able to have a firm grip over this very important segment of Internet.	Useful to proceed with industrial requirements and International vendor certifications
<b>USCS404 Software Engineering</b>		
1	The program's goal is to provide a professionally guided education in software engineering that prepares graduates to transition into a broad range of career options: industry, government, computing graduate program, and professional education.	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	An ability to communicate effectively with a range of audiences
3	It seeks to complement this with a	An ability to function effectively on a team

	detailed knowledge of techniques for the analysis and design of complex software intensive systems. It aims to set these techniques in an appropriate engineering and management context.	whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
<b>USCS405 Linear Algebra using Python</b>		
1	To offer the learner the relevant linear algebra concepts through computer science applications.	Appreciate the relevance of linear algebra in the field of computer science.
2		Understand the concepts through program implementation
3		Instill a computational thinking while learning linear algebra
<b>USCS406 .NET Technologies</b>		
1	To explore .NET technologies for designing and developing dynamic, interactive and responsive web applications.	Understand the .NET framework . Develop a proficiency in the C# programming language
2		Proficiently develop ASP.NET web applications using C# .Use ADO.NET for data persistence in a web application
<b>USCS407 Skill Enhancement: Android Developer Fundamentals</b>		
1	To provide the comprehensive insight into developing applications running on smart mobile devices and demonstrate programming skills for managing task on mobile	Understand the requirements of Mobile programming environment. Learn about basic methods, tools and techniques for developing Apps
2	To provide systematic approach for studying definition, methods and its applications for Mobile-App development.	Explore and practice App development on Android Platform,Develop working prototypes of working systems for various uses in daily lives