



Vidya Vikas Education Trust's  
Lords Universal College, Goregaon West, Mumbai-400104  
Affiliated to University of Mumbai

**Bachelors In Science (Computer Science)**

**Semester-III**

Course Code	Course Name	COs
USCS301 & USCSP301	Principle Of Operating System- Theory & Principle Of Operating System - Practical	<i>Students will be able to</i> 1. Aware of the variables, expressions, looping and conditions used in Python programming. 2. Implement functions, strings, lists, tuples and directories 3. Create GUI forms and add widgets. 4. Use MySQL to store data. 5. Apply the programming skill sets learnt here into various domains by having advanced programming skill sets of Python and usage of libraries.
USCS302 & USCSP302	Linear Algebra- Theory & Linear Algebra- Practical	<i>Students will be able to</i> 1. State various mathematical models and numerical methods 2. Apply various methods like interpolation, iterative methods for analysis 3. Assess various regression methods, linear programming and distribution methods which are applied in subjects like Business Intelligence in the third year.
USCS303 & USCSP303	Data Structure-Theory & Data Structure-	<i>Students will be able to</i>



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	Practical	<ol style="list-style-type: none"><li>.1. Identify and distinguish data structure classification, data types, their complexities.</li><li>2. Implement array, linked list, stack and queue.</li><li>3. Implement trees, various hashing techniques and graph for various applications.</li><li>4. Compare various sorting and searching techniques used in data structures.</li></ol>
USCS304 & USCSP304	Advanced Database Concept - Theory & Advanced Database Concept - Practical	<p><i>Students will be able to</i></p> <ol style="list-style-type: none"><li>1. Explain basics of database system and its purpose</li><li>2. Develop and Design conceptual model of a database using ER modelling for real life applications</li><li>3. Use relational algebra to construct queries and will be able to apply complex queries.</li><li>4. Build indexing mechanism for efficient retrieval of data from database systems.</li></ol>
USCS305 & USCSP305	Java Based Application Development -Theory & Java Based Application Development -Practical	<p><i>Students will be able to</i></p> <ol style="list-style-type: none"><li>1. Use matrices and complex numbers .</li><li>2. Apply Laplace and Inverse Laplace transforms to various applications</li><li>3. Apply integral, double integral to various applications.</li></ol>



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		4. Use functions to find errors.
USCS306 & USCSP306	Web Technologies– Theory & Web Technologies– Practical	<i>Students will be able to</i>  1. Identify and distinguish data structure classification, data types, their complexities  2. Implement array, linked list, stack and queue.  3. Implement trees, various hashing techniques and graph for various applications  4. Compare various sorting and searching techniques used in data structures.
USCS3071	Creative Content Writing	<i>Students will be able to</i>  1. Comprehending style in writing and its Types, Common Grammatical Errors. Best Practices for Writing for the Web:  2. Making our story Elegant, Professional, Write with an Attitude, Keep Verbs Active, List Items, Chunk Information, Title and Subtitle, Organize for Your Audience.

**Semester IV**



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<b>Course Code</b>	<b>Course Name</b>	<b>COs</b>
USCS401 & USCSP401	Theory of Computation- Theory & Theory of Computation- Practical	<i>Students will be able to</i> <ol style="list-style-type: none"><li>1. Explain the history and architecture of Java.</li><li>2. Identify data types, control flow, classes, inheritance, exceptions and event handling.</li><li>3. Use object-oriented concepts for problem solving real-life applications.</li><li>4. Use IDE to test java programs.</li></ol>
USCS402 & USCSP402	Computer Networks- Theory & Computer Networks- Practical	<i>Students will be able to</i> <ol style="list-style-type: none"><li>1. Identify various data communication standards, topologies and terminologies</li><li>2. Describe how signals are used to transfer data and communication aspects between nodes</li><li>3. Demonstrate the TCP/IP protocol suite</li></ol>
USCS403 & USCSP403	Software Engineering - Theory & Software Engineering - Practical	<i>Students will be able to</i> <ol style="list-style-type: none"><li>1. Use various statistical techniques like mean, median, mode, skewness, kurtosis for data analysis Apply R programming language for various statistical findings.</li><li>2. Experiment with statistical theory, least square methods and correlation theory.</li></ol>
USCS404 & USCSP404	IoT Technologies - Theory & IoT Technologies -	<i>Students will be able to</i> <ol style="list-style-type: none"><li>1. Describe the design and architecture of IoT.</li></ol>



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	Practical	<ol style="list-style-type: none"><li>2. Interpret and analyze various IoT enabled and connected devices .</li><li>3. Discuss the ethical factors with respect to IoT devices.</li></ol>
USCS405 & USCSP405	Android Application Development- Theory & Android Application Development- Practical	<p><i>Students will be able to</i></p> <ol style="list-style-type: none"><li>1. Explain and understand the various basic concepts in graphics like viewing, projection, transformation, scan conversion.</li><li>2. Build simple animation projects by implementing various color models, concepts of planar surfaces and animation.</li></ol>
USCS406 & USCSP406	Advanced Application Development- Theory & Advanced Application Development- Practical	<p><i>Students will be able to</i></p> <ol style="list-style-type: none"><li>1. Store the data in NoSQL, a document-oriented MongoDB database that brings performance and scalability.</li><li>2. Use Node.js and Express Framework for building fast, scalable network applications</li><li>3 Use AngularJS framework that offers declarative, two-way data binding for web applications.</li><li>4. Integrate the front-end and back-end components of the MEAN stack.</li><li>5. Develop robust mobile applications using Flutter.</li></ol>
USCS4072	Management and Entrepreneurship	<p><i>Students will be able to</i></p> <ol style="list-style-type: none"><li>1. Understand the meaning of management, functions, administration and its process.</li><li>2. Understand the foundation of entrepreneurship and its theory, types and its process.</li></ol>



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		<ol style="list-style-type: none"><li>3. Identify the steps involved in an entrepreneurial venture (SSI)</li><li>4. Understand the way an entrepreneur is converting his business ideas into running concerns by selecting the project.</li></ol>
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