



# Maharashtra Institute of Technology

## Chhatrapati Sambhajnagar

**An Autonomous Institute Affiliated to  
Dr. Babasaheb Ambedkar Marathwada University,  
Chhatrapati Sambhajnagar, Maharashtra (India)**

### **Third Year B. Voc. Syllabus (Software Development)**

**Under Choice Based Credit System (CBCS)**

**Under Faculty of Science and Technology**

**(Effective from 2022-23 and onwards)**

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## Curriculum for B. Voc Software Development

NSQF Level -5						Semester -I				
Sr. No.	Course Code	Course Title	Credit	Contact Hr per Week		Evaluation Scheme				ESE Hour
				L	P	MSE	TA	ESE	Total	
<b>Theory</b>										
1.	VSD101	IT Foundation and Programming Concepts	3	3	-	10	15	25	50	1.5
2.	VSD102	Professional Communication	3	3	-	10	15	25	50	1.5
3.	VSD103	Programming in C++	3	3	-	10	15	25	50	1.5
4.	VSD104	Operating System (OS)	3	3	-	10	15	25	50	1.5
<b>Lab/Practical</b>										
5.	VSD121	Professional Communication Lab	1.5	-	2	-	25	25	50	-
6.	VSD122	C++ Programming Lab	1.5	-	2	-	25	25	50	-
<b>On Job Training (OJT)/Qualification Packs*</b>										
7.	VSD131	Allied skill Sector Council Qualification Pack /Job role - NSQF level 5	15	-	7-8 weeks	--	50	150	200	-
<b>Total</b>			<b>30</b>	<b>12</b>	<b>4+</b>	<b>40</b>	<b>160</b>	<b>300</b>	<b>500</b>	

\*Any one On-Job-Training as per guidelines of AICTE & SSC for the given skill sets for 150 Marks External Assessment by NSDC/SSC

NSQF Level -5						Semester -II				
Sr. No.	Course Code	Course Title	Credit	Contact Hr per Week		Evaluation Scheme				ESE Hour
				L	P	MSE	TA	ESE	Total	
<b>Theory</b>										
1.	VSD151	Web Designing	3	3	-	10	15	25	50	1.5
2.	VSD152	Object Oriented Modelling and Design	3	3	-	10	15	25	50	1.5
3.	VSD153	Core Java	3	3	-	10	15	25	50	1.5
4.	VSD154	Linux Operating System – Operations and Management	3	3	-	10	15	25	50	1.5
<b>Lab/Practical</b>										
5.	VSD171	Web Designing Lab	1.5	-	2	-	25	25	50	-
6.	VSD172	Core Java Lab	1.5	-	2	-	25	25	50	-
<b>On Job Training (OJT)/Qualification Packs*</b>										
7.	VSD181	Allied skill Sector Council Qualification Pack /Job role - NSQF level 5	15	-	7-8 weeks	--	50	150	200	-
<b>Total</b>			<b>30</b>	<b>12</b>	<b>4+</b>	<b>40</b>	<b>160</b>	<b>300</b>	<b>500</b>	

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Page 2 of 20

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## Curriculum for B. Voc Software Development

NSQF Level -6						Semester -I				
Sr. No.	Course Code	Course Title	Credit	Contact Hr per Week		Evaluation Scheme				ESE Hour
				L	P	MSE	TA	ESE	Total	
<b>Theory</b>										
1.	VSD201	Software Engineering	3	3	-	10	15	25	50	1.5
2.	VSD202	Relational Database Management System	3	3	-	10	15	25	50	1.5
3.	VSD203	Advanced Java Programming	3	3	-	10	15	25	50	1.5
4.	VSD204	Window Configuration and Server Administration	3	3	-	10	15	25	50	1.5
<b>Lab/Practical</b>										
5.	VSD221	Relational Database Management System Lab	1.5	-	2	-	25	25	50	-
6.	VSD222	Advanced Java Programming Lab	1.5	-	2	-	25	25	50	-
<b>On Job Training (OJT)/Qualification Packs*</b>										
7.	VSD231	Allied skill Sector Council Qualification Pack /Job role - NSQF level 6	15	-	7-8 weeks	--	50	150	200	-
<b>Total</b>			<b>30</b>	<b>12</b>	<b>4+</b>	<b>40</b>	<b>160</b>	<b>300</b>	<b>500</b>	

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NSQF Level -6						Semester -II				
Sr. No.	Course Code	Course Title	Credit	Contact Hr per Week		Evaluation Scheme				ESE Hour
				L	P	MSE	TA	ESE	Total	
<b>Theory</b>										
1.	VSD251	Software Testing and Project Management	3	3	-	10	15	25	50	1.5
2.	VSD252	Android Application Development	3	3	-	10	15	25	50	1.5
3.	VSD253	Web Development using PHP	3	3	-	10	15	25	50	1.5
4.	VSD254	Cyber Security	3	3	-	10	15	25	50	1.5
<b>Lab/Practical</b>										
5.	VSD271	Android Application Development Lab	1.5	-	2	-	25	25	50	-
6.	VSD272	Web Development using PHP Lab	1.5	-	2	-	25	25	50	-
<b>On Job Training (OJT)/Qualification Packs*</b>										
7.	VSD281	Allied skill Sector Council Qualification Pack /Job role - NSQF level 6	15	-	7-8 weeks	--	50	150	200	-
<b>Total</b>			<b>30</b>	<b>12</b>	<b>4+</b>	<b>40</b>	<b>160</b>	<b>300</b>	<b>500</b>	

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## Curriculum for B. Voc Software Development

NSQF Level -7						Semester -I				
Sr. No.	Course Code	Course Title	Credit	Contact Hr per Week		Evaluation Scheme				ESE Hour
				L	P	MSE	TA	ESE	Total	
<b>Theory</b>										
1.	VSD301	Introduction to AI and Data Mining	3	3	-	10	15	25	50	1.5
2.	VSD302	Advanced PHP	3	3	-	10	15	25	50	1.5
3.	VSD303	Management Information Systems	3	3	-	10	15	25	50	1.5
4.	VSD304	Introduction to Python Programming	3	3	-	10	15	25	50	1.5
<b>Lab/Practical</b>										
5.	VSD321	Advanced PHP Lab	1.5	-	2	-	25	25	50	-
6.	VSD322	Introduction to Python Programming Lab	1.5	-	2	-	25	25	50	-
<b>On Job Training (OJT)/Qualification Packs*</b>										
7.	VSD331	Allied skill Sector Council Qualification Pack /Job role - NSQF level 7	15	-	7-8 weeks	--	50	150	200	-
<b>Total</b>			<b>30</b>	<b>12</b>	<b>4+</b>	<b>40</b>	<b>160</b>	<b>300</b>	<b>500</b>	

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NSQF Level -7						Semester -II				
Sr. No.	Course Code	Course Title	Credit	Contact Hr per Week		Evaluation Scheme				ESE Hour
				L	P	MSE	TA	ESE	Total	
<b>Theory</b>										
1.	VSD351	Current Computing Trends	3	3	-	10	15	25	50	1.5
2.	VSD352	Cloud Computing	3	3	-	10	15	25	50	1.5
<b>Lab/Practical</b>										
3.	VSD371	Project	9	-	4	-	100	100	200	-
<b>On Job Training (OJT)/Qualification Packs*</b>										
4.	VSD381	Allied skill Sector Council Qualification Pack /Job role - NSQF level 7	15	-	7-8 weeks	--	50	150	200	-
<b>Total</b>			<b>30</b>	<b>6</b>	<b>4+</b>	<b>20</b>	<b>180</b>	<b>300</b>	<b>500</b>	

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## **Semester-V** **(NSQF Level 7, Semester-I)** **Detail Course Curriculum**

**Third Year B. Voc. Syllabus**  
**(Software Development)**

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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level-7		VSD301: Introduction to AI and Data Mining		Semester-I	
Teaching Scheme		Examination Scheme			
Lectures	03 hrs/Week	MSE	10 Marks		
Practical	-	TA	15 Marks		
Credits	03	ESE	25 Marks		
		Duration of ESE	1.5 hours		
<b>Course Outcomes (CO)</b>					
Students will be able to					
1.	Understand the concepts of Artificial Intelligence.				
2.	Identify real-world problems where AI techniques can be effectively applied				
3.	Apply Data Mining Techniques to real world problem.				
Unit	Course Content				Hours
<b>Unit 1</b>	<b>Introduction to Artificial Intelligence</b> Introduction Artificial Intelligence, History of Artificial Intelligence, Turing Test, Advantages and Disadvantages of Artificial Intelligence and Applications of Artificial Intelligence, Capability-Based types of AI: Narrow AI, General AI and Super AI, Functionality-Based types of AI: Reactive Machine, Limited Memory, Theory of Mind and Self Awareness, Branches of AI - Machine Learning, Deep Learning, Robotics, Expert Systems, Natural Language Processing and Fuzzy Logic				08
<b>Unit 2</b>	<b>Problem Solving</b> Terminologies: AI problem, State, State change, State Space, State Space Search and Optimal Solution, Examples of Problems and their solutions: Water-Jug Problem, Missionaries and Cannibals Problem, 8-Queen Problem, 8-Puzzle Problem, Monkey Banana Problem, Tower of Hanoi Problem, Travelling Salesman Problem				07
<b>Unit 3</b>	<b>Agent and Environment</b> Agent, Types of agent: Simple Reflex Agents, Model-Based Reflex Agents, Goal-Based Agents, Utility-Based Agents and Learning Agent, Intelligent Agents and Rational Agent, Environments, Types of Environments: Fully observable vs Partially Observable, Static vs Dynamic, Discrete vs Continuous, Deterministic vs Stochastic, Singleagent vs Multi-agent, Episodic vs Sequential and Known vs Unknown				07
<b>Unit 4</b>	<b>Search algorithms</b> Concept of Search algorithms, Properties of search algorithms - Completeness, Optimality, Time complexity and Space complexity, Types: Uninformed search and Informed search, Uninformed search algorithms: Breadth First Search, Depth First Search				07
<b>Unit 5</b>	<b>Data Mining</b> Data Mining: Concept, Advantages, Disadvantages and Applications Types of Data Mining - Descriptive Data Mining and Predictive Data Mining Data Mining Techniques: Classification, Clustering, Regression, Association Rules, Outer detection, Sequential Patterns and Prediction				07



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## Text/Reference Books

Sr. No.	Book	Author	Publisher
1	Artificial Intelligence	Parag Kulkarni, Prachi Joshi	PHI
2.	Artificial Intelligence For Dummies	J Paul Mueller, Luca Massaron	Wiley
3.	Data Mining Concepts and Techniques.	Han, Kamber, Pei	Morgan Kaufmann

  
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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level-7		VSD302-Advanced PHP		Semester-I	
Teaching Scheme		Examination Scheme			
Lectures	03 hrs/Week	MSE	10 Marks		
Practical	-	TA	15 Marks		
Credits	03	ESE	25 Marks		
		Duration of ESE	1.5 hours		
<b>Course Outcomes (CO)</b>					
Students will be able to					
1.	Understand foundations of AJAX and object-oriented programming.				
2.	Utilize PDO and identify various types of errors and exceptions in PHP.				
3.	Identify common security threats in web applications.				
Unit	Course Content				Hours
<b>Unit 1</b>	<b>AJAX</b> Ajax, Ajax Architecture, Overview of Important Concepts of Javascript, XMLHttpRequest, Onreadystatechange, Ajax using HTML, Javascript & DOM, Ajax using PHP & MySQL, Live Search using Ajax, Important Examples with Implementation using Ajax, Introduction to JSON.				07
<b>Unit 2</b>	<b>Classes &amp; Objects (OOP's)</b> Class and Objects, Features of OOP's, Abstraction, Encapsulation, Inheritance, Polymorphism, new keyword, Scope-resolution operator, Access Specifiers (public/private/protected), Method Overriding, Why PHP does not support Method Overloading, Constructor, Destructor, __autoload (), Functions, How to use & call a function, Abstract Class, Interface, Connecting with MySQL				08
<b>Unit 3</b>	<b>PHP Database Objects (PDO)</b> PDO, getAvailableDrivers, exec, beginTransaction, commit, rollback, query, Difference between exec & query, Connecting with MySQL using PDO, Inserting Values in table, Transaction, Fetch Values from MySQL, prepare, bindParam, execute, setAttribute, Introduction to Datable (Server/Client Side)				07
<b>Unit 4</b>	<b>Error Handling and Exception Handling in PHP</b> Understanding Errors and Exceptions, Using try, catch, and finally blocks, Throwing Custom Exceptions, Handling Different Types of Errors (Parse, Fatal, Warning, etc.), Error Reporting and Logging				07
<b>Unit 5</b>	<b>Security in PHP</b> Common Security Threats (SQL Injection, Cross-Site Scripting (XSS), Cross-Site Request Forgery (CSRF), etc.), Sanitizing User Input, Validating and Escaping Data, Implementing Prepared Statements and Parameterized Queries, Password Hashing and Salting, Session Management and Security, Securing File Uploads.				07





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Text/Reference Books			
Sr. No.	Book	Author	Publisher
1.	Ajax: The Definitive Guide	Anthony T. Holdener III	O'Reilly Media
2.	Pro JavaScript Techniques: Second Edition	John Resig	Apress
3.	Learning PHP, MySQL & JavaScript: With JQuery, CSS & HTML	Robin Nixon	O'Reilly Media

  
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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level-7		VSD303 : Management Information Systems		Semester-I	
Teaching Scheme		Examination Scheme			
Lectures	03 hrs/Week	MSE	10 Marks		
Practical	-	TA	15 Marks		
<b>Total Credits</b>	<b>03</b>	ESE	25 Marks		
		Duration of ESE	1.5 hours		
<b>Course Outcomes (CO)</b>					
Students will be able to					
1.	Understand the role and importance of information systems in organizations for decision-making.				
2.	Demonstrate awareness of current information technologies and their applications in business.				
3.	Analyze the relationship between information systems, business processes, and organizational strategy.				
Unit	Course Content				Hours
<b>Unit 1</b>	<b>Information System I</b> Concept of Management, Functions of Management, Levels of Management, Concept of a System, Components of a System - Input, Processing and Output				07
<b>Unit 2</b>	<b>Information System II</b> Concept of Information system, Components of information system - Hardware, Software, Data, People and Process, Types of Information System - Transaction Processing System, Management Information System, Decision Support System and Executive information systems, Advantages and disadvantages of Information System				08
<b>Unit 3</b>	<b>MIS</b> Concept of MIS, Objectives of MIS - Data Capturing, Processing of Data, Storage, Retrieval & Dissemination, Functions of MIS, Types of MIS, Advantages and Limitations of MIS.				07
<b>Unit 4</b>	<b>Business Applications of MIS</b> Customer Relationship Management (CRM) systems, Enterprise Resource Planning (ERP) systems, Supply Chain Management (SCM) systems, Business Intelligence (BI) and Analytics, E-commerce and m-commerce				07
<b>Unit 5</b>	<b>Decision Support System</b> Decision Support System: Introduction, Characteristics and Capabilities, Components of Decision Support System, Advantages and Disadvantages of Decision Support System, Intelligent Decision Support Systems				07
<b>Reference Book</b>					
Sr. No.	Book	Author	Publisher		
1.	Management Information Systems	Bagchi Nirmalya	Vikas Publishing House		
2.	Management Information Systems	Goyal D.P.	Vikas Publishing House		
3.	Management Information Systems	James A. O'Brien	McGraw-Hill/Irwin		



## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level-7	VSD304: Introduction to Python Programming	Semester-I	
Teaching Scheme		Examination Scheme	
Lectures	03 hrs/Week	MSE	10 Marks
Practical	-	TA	15 Marks
<b>Total Credits</b>	<b>03</b>	ESE	25 Marks
		Duration of ESE	1.5 hours

### Course Outcomes (CO)

Students will be able to

1. Demonstrate understanding of fundamental programming concepts like variables, data types, operators, expressions and utilize Decision making and looping statements.
2. Design and implement functions to modularize code and improve program reusability.
3. Utilize exceptional handling and File I/O.

Unit	Course Content	Hours
<b>Unit 1</b>	<b>Introduction to Python</b> Python: Introduction, History, Features, Applications, Python IDEs, Identifiers, Reserved words, Indentation and Comments, Data Types: Number, String, List, Tuple, Dictionary and Set, Type conversion	07
<b>Unit 2</b>	<b>Decision making and looping</b> Input output operations in python, Python basic operators: arithmetic, comparison, assignment, logical, membership and identity, Python decision making: if statements, if...else statements, and nested if statements, Python loops: while loop, for loop and nested loops, Loop control statements: break statement, continue statement and pass statement	08
<b>Unit 3</b>	<b>Python Function</b> Python function: definition, defining the function, Calling a function, function argument - pass by value and pass by reference, Local and Global variables, Python Modules, import standard library module, from...import statement, Python packages, Built-in functions: mathematical, string and lists functions, lambda function	07
<b>Unit 4</b>	<b>Exception Handling</b> Exception Handling meaning and uses, Exception handling using Try, except, else and finally, User-defined Exception, Assertions in python	07
<b>Unit 5</b>	<b>File I/O</b> Reading a Text File, Writing to a Text File, Creating a Text File, Checking If a File Exists, Renaming a File, Delete a File	07

### Reference Book

Sr. No.	Book	Author	Publisher
1.	Python Programming An Introduction to Computer Science	John M. Zelle	Franklin, Beedle & Associates Inc
2.	Python in a Nutshell	Alex Martelli	O'Reilly Media
3.	Learning Python	Mark Lutz	O'Reilly Media



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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level -7		VSD321Advanced PHPLab		Semester-I	
Teaching Scheme				Examination Scheme	
Practical	2 Hours/week			TA	25 Marks
Credits	1.5			ESE/PE	25 Marks
Sr. No.	List of Experiments				
1	Create a simple HTML form with JavaScript to perform AJAX request and use XML Http Request to send data to a PHP script and display the response.				
2	Build a webpage with dynamic content loading using AJAX.				
3	Develop a live search functionality using AJAX.				
4	Create a class representing a basic object with properties and methods. Instantiate the class, set properties, and call methods.				
5	Experiment based on Inheritance and Polymorphism.				
6	Develop Registration form with Db Connectivity (CRUD Operation & Search/Sort/Pagination).				
7	Experiment based on Error Handling.				
8	Experiment based on Exceptional Handling.				
9	Experiment based on security measures implementation.				
10	Experiment based on file upload security.				

  
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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level -7	VSD322:Introduction to Python Programming Lab	Semester-I	
Teaching Scheme		Examination Scheme	
Practical	2 Hours/week	TA	25 Marks
Credits	1.5	ESE/PE	25 Marks
Sr. No.	List of Experiments		
1	List out Different IDEs. Download and install python.		
2	Write a python program to print formatted input/output statements.		
3	Write a python program to perform use of Arithmetic, relational and logical operators.		
4	Write a python program to demonstrate use of decision making.		
5	Write a python program to demonstrate use of looping.		
6	Write a python program to demonstrate use functions.		
7	Write a python program to demonstrate use modules.		
8	Write a python program to demonstrate use mathematical, string and lists functions.		
9	Write a python program to Handle Exceptions.		
10	Write a python program to perform File operations.		

  
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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level -7	VSD331: On Job Training/Qualification Packs*	Semester-I	
Teaching Scheme		Examination Scheme	
Practical	7-8 weeks	TA	50 Marks
Credits	15	ESE/PE	150 Marks
VSD331	Allied skill Sector Council Qualification Pack /Job role - NSQF level 7		
*Any one On-Job-Training as per guidelines of AICTE & SSC for the given skill sets for 150 Marks External Assessment by NSDC/SSC			

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## **Semester-VI** **(NSQF Level 7, Semester-II)** **Detail Course Curriculum**

**Third Year B. Voc. Syllabus**  
**(Software Development)**

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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level-7		VSD351: Current Computing Trends		Semester-II	
Teaching Scheme				Examination Scheme	
Lectures	03 hrs/Week			MSE	10 Marks
Practical	-			TA	15 Marks
Credits	03			ESE	25 Marks
				Duration of ESE	1.5 hours
<b>Course Outcomes (CO)</b>					
Students will be able to					
1.	Understand the concept of Big Data and Tools.				
2.	Learn applications of IOT and Edge Computing.				
3.	Understand Web 3.0 and Emerging Technologies.				
Unit	Course Content				Hours
Unit 1	<b>Big Data</b> Concept of Big Data, Types of Big Data: Structured data, Unstructured data and Semi-structured data, Characteristics of Big Data: Volume, Variety, Veracity, Value and Velocity, Importance of Big Data, Big Data Tools: Apache Hadoop, Apache Cassandra, Apache Spark, Mongo DB, KNIME, Rapid Miner and Tableau, Advantages and Disadvantages of Big data, Case studies: Google, Facebook, Netflix, Uber, Walmart and American Express				08
Unit 2	<b>Internet of Things</b> Concept of IoT 2.2 Characteristics of IoT 2.3 Architecture of Internet of Things 2.4 Advantages and Disadvantages of IoT 2.5 Challenges in IoT 2.6 Industrial IoT and Artificial Intelligence of Things				07
Unit 3	<b>Web 3.0</b> Concept of Web 3.0, Features of Web 3.0, Advantages and Challenges of Web 3.0, Applications of Web 3.0, Concept of Blockchain Technology, Types of Blockchain Technology: Public Blockchain, Private Blockchain, Consortium Blockchain and Hybrid Blockchain, Working of Blockchain Technology, Advantages and Disadvantages of Blockchain Technology, Applications of Blockchain Technology				07
Unit 4	<b>Augmented Reality &amp; Virtual Reality</b> Concept of AR, Advantages and Disadvantages of AR, Applications of Augmented Reality, Concept of VR, Advantages and Disadvantages of VR, Applications of Virtual Reality, Mixed Reality				07
Unit 5	<b>Edge Computing</b> Concept of Edge Computing, Working of Edge Computing, Examples of Edge Computing, Advantages and Disadvantages of Edge Computing				07





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Reference Book			
Sr. No	Book	Author	Publisher
1.	Big Data and Hadoop	V. K. Jain	Khanna Book Publishing
2.	Internet of Things (IoT)	Dr Kamlesh Lakhwani, Dr Hemant Kumar Gianey, Joseph Kofi Wireko, Kamal Kant Hiran	BPB Publications
3.	Web3 Made Easy	Liew Voon Kiong	Liew Voon Kiong
4.	Virtual & Augmented Reality For Dummies	Paul Mealy	Wiley
5.	Edge Computing: Fundamentals, Advances and Applications	K. Anitha Kumari, G. Sudha Sadasivam, D. Dharani, M. Niranjnamurthy	CRC Press

  
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# Maharashtra Institute of Technology

Chhatrapati Sambhajnagar  
(An Autonomous Institute)

## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level-7	VSD352: Cloud Computing		Semester-II	
Teaching Scheme		Examination Scheme		
Lectures	03 hrs/Week	MSE	10 Marks	
Practical	-	TA	15 Marks	
Credits	03	ESE	25 Marks	
		Duration of ESE	1.5 hours	
<b>Course Outcomes (CO)</b>				
Students will be able to				
1.	Understand Distributed computing and Cloud computing.			
2.	Develop proficiency in Cloud Architecture and Service Models.			
3.	Understand Virtualization and Cloud Security.			
Unit	Course Content			Hours
<b>Unit 1</b>	<b>Introduction</b> History of Centralized and Distributed Computing, Overview of Distributed Computing, Cluster computing and Grid computing, Concept of Cloud Computing, Characteristics of Cloud Computing, Advantages and disadvantages of Cloud Computing, Applications of Cloud Computing			07
<b>Unit 2</b>	<b>Cloud Architecture</b> Cloud Computing Architecture, Types of Clouds: Private Cloud, Public Cloud, Hybrid Cloud & Community Cloud, Cloud Service Providers: Amazon Web Services, Microsoft Azure and Google Cloud Platform			07
<b>Unit 3</b>	<b>Cloud Service Models</b> SaaS - Introduction, characteristics, Advantages disadvantages and Applications, PaaS - Introduction, characteristics, Advantages disadvantages and Applications, IaaS - Introduction, characteristics, Advantages disadvantages and Applications, XaaS - Storage as a service, Network as a Service, Database as a Service etc.			08
<b>Unit 4</b>	<b>Virtualization</b> Concept of Virtualization, Characteristics of Virtualization, Types of Virtualization: Data, Desktop, Application, CPU, Network, Storage & Server, Advantages and disadvantages of Virtualization, Virtualization in Cloud			07
<b>Unit 5</b>	<b>Cloud Security</b> Concept of Cloud Security, Cloud CIA security model, Threats to Cloud, Cloud best practices, Cloud Scalability and Fault Tolerance			07
<b>Reference Book</b>				
Sr. No.	Book	Author	Publisher	
1	Cloud Computing	Ruchi Doshi, Temitayo Fagbola, Mehul Mahrishi	BPB Publications	
2.	Cloud Computing	Sandeep Bhowmik	Cambridge University Press	
3.	Cloud Computing For Dummies	Judith S. Hurwitz, Daniel Kirsch	Wiley	

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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level -7	VSD371:Project		Semester-II	
Teaching Scheme		Examination Scheme		
Practical	4 Hours/week	TA	100 Marks	
Credits	9	ESE/PE	100 Marks	

On the basis of learning in the B. Voc. Programme, i.e. Level 5 to Level 7, a project to be taken up by the student strengthening his/ her vocational skills and prepare a report in following format:

### Formatting:

- The font for chapter number should be in Calibri 16 and chapter title should be in upper case with Bold Calibri 20. Use after paragraph spacing should be 6 pts.
- The font for sub-title like (1.1) should be in Bold Calibri 14 and chapter title should be in upper case with Calibri 20. Use text font as Calibri 12 for a text with 1.5 line spacing. The text should be aligned with justify setting.

### Report:

- Student has to submit a detailed report in two copies which shall be used for evaluation.

### Evaluation:

Teachers Assessment will be based on the presentation of project in periodic reviews (like Review 1 and Review 2) during the semester.

  
Chairman Board of Studies  
Vocational Education  
MIT, Chh. Sambhajanagar-431010  
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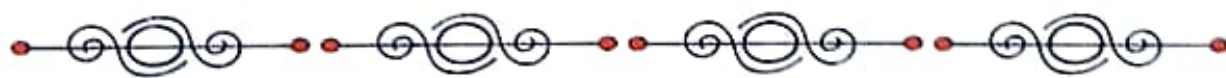
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## Syllabus for Third Year B. Voc. (Software Development)

NSQF Level -7	VSD381: On Job Training/Qualification Packs*	Semester-I	
Teaching Scheme		Examination Scheme	
Practical	7-8 weeks	TA	50 Marks
Credits	15	ESE/PE	150 Marks
VSD381	Allied skill Sector Council Qualification Pack /Job role - NSQF level 7		
*Any one On-Job-Training as per guidelines of AICTE & SSC for the given skill sets for 150 Marks External Assessment by NSDC/SSC			

  
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Dr. Anil D. Deshpande

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