



Mahavir Education Trust's
Shah & Anchor Kutchhi Engineering College,
 Chembur, Mumbai 400 088
UG Program in Information Technology

Academic Year 2020-21
Semester – VI

Information Technology Academic Year 2020-21				
VI	ITC 601	Software Engineering with Project Management	9.ITC 601.1	To understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices.
			9.ITC 601.2	To Explain methods of capturing, specifying, visualizing and analyzing software requirements
			9.ITC 601.3	To understand concepts and principles of software design and user-centric approach and principles of effective user interfaces
			9.ITC 601.4	To know basics of testing and understanding concept of software quality assurance and software configuration management process.
			9.ITC 601.5	To understand need of project management and project management life cycle.
			9.ITC 601.6	- To understand project scheduling concept and risk management associated to various type of projects.
VI	ITC602	Database Mining and Business Intelligence	3.ITC602.1	Demonstrate an understanding of the importance of data mining and the principles of business intelligence
			3.ITC602.2	Organize and Prepare the data needed for data mining using pre preprocessing techniques
			3.ITC602.3	Perform exploratory analysis of the data to be used for mining
			3.ITC602.4	Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets
			3.ITC602.5	Define and apply metrics to measure the performance of various data mining algorithms.
			3.ITC602.6	Apply BI to solve practical problems : Analyze the problem domain, use the data collected in enterprise apply the appropriate data mining technique, interpret and isualize the results and provide decision support.
VI	ITC603	Cloud Computing & Services	4. ITC603.1	Define Cloud Computing and memorize the different Cloud service and deployment models.
			4. ITC603.2	Describe importance of virtualization along with their technologies.



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			4. ITC603.3	Use and Examine different cloud computing services.
			4. ITC603.4	Analyze the components of open stack & Google Cloud platform and understand Mobile Cloud Computing.
			4. ITC603.5	Describe the key components of Amazon web Service.
			4. ITC603.6	Design & develop backup strategies for cloud data based on features.
			5.ITC604.1	Explain the basic concepts of wireless network and wireless generations.
			5.ITC604.2	Demonstrate the different wireless technologies such as CDMA, GSM, GPRS etc.
			5.ITC604.3	Appraise the importance of Ad-hoc networks such as MANET and VANET and Wireless Sensor networks
			5.ITC604.4	Describe and judge the emerging wireless technologies standards such as WLL, WLAN, WPAN, WMAN.
			5.ITC604.5	Explain the design considerations for deploying the wireless network infrastructure
VI	ITC604	Wireless Network	5.ITC604.6	Differentiate and support the security measures, standards. Services and layer wise security considerations.
			7.ITDLO6023.1	Define the concept of ethical hacking and its associated applications in Information Communication Technology (ICT) world.
			7.ITDLO6023.2	Underline the need of digital forensic and role of digital evidences.
			7.ITDLO6023.3	Explain the methodology of incident response and various security issues in ICT world, and identify digital forensic tools for data collection.
			7.ITDLO6023.4	Recognize the importance of digital forensic duplication and various tools for analysis to achieve adequate perspectives of digital forensic investigation in various applications /devices like windows/Unix system.
			7.ITDLO6023.5	Apply the knowledge of IDS to secure network and performing router and network analysis.
VI	ITDLO6023	Digital Forensics	7.ITDLO6023.6	List the method to generate legal evidence and supporting investigation reports and will also be able to use various digital forensic tools.
VI	ITDLO6025	Green IT	9. ITDLO6025.1	Describe awareness among stakeholders and promote green agenda and green initiatives in their working environments leading to



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				green movement
			9. ITDLO6025.2	Identify IT Infrastructure Management and Green Data Centre Metrics for software development
			9. ITDLO6025.3	Recognize Objectives of Green Network Protocols for Data communication
			9. ITDLO6025.4	Use Green IT Strategies and metrics for ICT development.
			9. ITDLO6025.5	Illustrate various green IT services and its roles.
			9. ITDLO6025.6	Use new career opportunities available in IT profession, audits and others with special skills such as energy efficiency, ethical IT assets disposal, carbon footprint estimation, reporting and development of green products, applications and services.
VI	ITL601	Software Design Lab	ITL601.1	To understand the statement of problem its feasibility, specifications and process model used
			ITL601.2	Deploy Structural Modeling.
			ITL601.3	Deploy Behavioral Modeling
			ITL601.4	Deploy Architectural Modeling
			ITL601.5	Examine estimation about schedule and cost for project development
			ITL601.6	Select project management tool and design test cases.
VI	ITL602	Business Intelligence Lab	ITL602.1	Identify sources of Data for mining and perform data exploration
			ITL602.2	Organize and prepare the data needed for data mining algorithms in terms of attributes and class inputs, training, validating, and testing files
			ITL602.3	Implement the appropriate data mining methods like classification, clustering or association mining on large data sets using open source tools like WEKA
			ITL602.4	Implement various data mining algorithms from scratch using languages like Python/ Java etc
			ITL602.5	Evaluate and compare the performance of some available BI packages
			ITL602.6	Apply BI to solve practical problems : Analyze the problem domain, use the data collected in enterprise apply the appropriate data mining technique, interpret and visualize the results and provide decision support.
VI	ITL603	Cloud Service Design Lab	ITL603.1	Define & implement Virtualization using different types of Hypervisors
			ITL603.2	Describe steps to perform on demand Application delivery using Ulteo .



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			ITL603.3	Examine the installation and configuration of Open stack cloud
			ITL603.4	Analyze and understand the functioning of different components involved in Amazon web services cloud platform.
			ITL603.5	Describe the functioning of Platform as a Service
			ITL603.6	Design & Synthesize Storage as a service using own Cloud
VI	ITL604	Sensor Network Lab	5.ITL604.1	Study open source WSN simulators.
			5.ITL604.2	Discuss the requirements for the real-world problems
			5.ITL604.3	Explore basic programs for connecting sensors.
			5.ITL604.4	Demonstrate and build the project successfully by hardware/sensor requirements, coding, emulating and testing.
			5.ITL604.5	Documents and Validate the findings of the study conducted in the Preferred Domain
			5.ITL604.6	Cultivate an ability to work in teams and manage the conduct of the research study.
VI	ITM605	Mini-Project	ITM605.1	Discover potential research areas in the field of IT
			ITM605.2	Conduct a survey of several available literature in the preferred field of study
			ITM605.3	Compare and contrast the several existing solutions for research challenge
			ITM605.4	Demonstrate an ability to work in teams and manage the conduct of the research study
			ITM605.5	Formulate and propose a plan for creating a solution for the research plan identified
			ITM605.6	To report and present the findings of the study conducted in the preferred domain