

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
III	24UCSVAC1	VALUE ADDED COURSE	6	-	-	100	100
Course Title		NoSQL Database					

SYLLABUS		
Unit	Contents	Hours
I	Introduction to NoSQL – RDBMS Characteristics – ACID properties – NoSQL – Where does NoSQL comes from – Dynamo and BigTable – NoSQL and Bigdata – Why RDBMS not suitable for Bigdata – NoSQL Distinguishing Characteristics – NoSQL VS. SQL	6
II	NoSQL Datatypes - Sorted ordered Column Store – Document Databases – Key Value Store – Graph Databases – Dealing with Bigdata and Scalability – NoSQL No ACID	6
III	BASE Transactions – CAP Theorem – Performance – Uses of NoSQL – Getting Initial Hands-on Experience	6
IV	CQL Console – CQL Data Definition Commands – CQL Data Manipulation Commands – Interfacing and Interacting with NoSQL	6
V	REDIS – Advantages – Applications – Structures – Hands-on Experience – NEO4J Database – Advantages	6

Text Book(s):
Pramod J. Sadalage, Martin Fowler, “NoSQL Distilled”, Addison Wesley, 2017.
Web Resource(s):
1. https://www.ibm.com/cloud/learn/nosql-databases 2. https://www.coursera.org/lecture/nosql-databases/introduction-to-nosql-VdRNp 3. https://www.geeksforgeeks.org/introduction-to-nosql/ 4. https://www.javatpoint.com/nosql-databases

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Explain the underlying concepts of NoSQL	K2
CO2	Make use of the various NoSQL Datatypes	K3
CO3	Influence the knowledge on the BASE transaction	K5
CO4	Analyze the classification of different consoles	K4
CO5	Determine the concept of REDIS in the real world scenarios.	K5

Course Coordinator: Dr. S. Mohamed Iliyas

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
V	24UCSVAC2	VALUE ADDED COURSE	6	-	-	100	100
Course Title		Web Design					

SYLLABUS		
Unit	Contents	Hours
I	Getting Started with HTML – Doctypes – Headings – Paragraphs – Text Formatting – Anchors and Hyperlinks	6
II	Lists – Tables – Comments – Classes and IDs – Linking Resources – Include JavaScript Code in HTML	6
III	Using HTML and CSS – Images – Image Maps – Input Control Elements – Forms	6
IV	Div Element – Sectioning Elements – Navigation Bars – Label Element – Output Element	6
V	Bootstrap Framework – Introduction – Download – Customize – Layout – Content – Forms – Components	6

Text Book(s):
HTML5 Notes for Professionals, GoalKicker.com
Web Resource(s):
1. https://www.tutorialspoint.com/html5/index.htm
2. https://html5-tutorial.net/
3. https://getbootstrap.com/docs/5.3/getting-started/introduction/

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Define the basics of HTML5	K1
CO2	Relate the various techniques in HTML5	K2
CO3	Experiment with HTML and CSS	K3
CO4	Discover the basics of HTML Forms	K4
CO5	Evaluate the knowledge of HTML with real world problems	K5

Course Coordinator: Dr. S. Mohamed Ilyas

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
III	24PCSVAC1	VALUE ADDED COURSE	6	-	-	100	100
Course Title		Scilab Programming					

SYLLABUS		
Unit	Contents	Hours
I	Introduction to Scilab – Basic elements of Scilab – Variables-Constants- Operators - Elementary mathematical functions – Functions to manage Complex numbers – String – Matrices – Operations on Vectors- The Colon operator.	6
II	Two-Dimensional Matrices-Functions on matrices. Programming Elements – Branching statements- The select statement – Looping Statements – Functions – Defining and calling functions.	6
III	Plotting – The 2-dimensional Plot – Contour Plot – 3-Dimensional Plot - Titles, axis, legends and Style options – Scilab functions: Analysis, Probability and Statistics functions, Utility functions, Display and Plots- Programs using GUI Builder.	6
IV	Programming Examples : Reading and Displaying different format of Images – Image Transformation- Histogram display and Histogram Equalization – Image Enhancement using mean filtering - Low-pass filtering.	6
V	Huffman Encoding and Decoding – Color images manipulations - reading and writing of color images - Color Image Enhancements- Color Image Histogram manipulation.	6

Text Book(s):
1. Rajan Goyal, Mansi Dhingra, Programming in Scilab, Alpha Science International, Limited, 2019
2. Vinu V. Das, Programming In Scilab 4.1, New Age International (P) Ltd., 2008
Web Resource(s):
1. https://mars.uta.edu/mae3183/simulation/introscilab_baudin.pdf
2. https://www.scilab.org/sites/default/files/Scilab_beginners.pdf
3. http://www.aagasc.edu.in/Scilab-Book-Akhilesh.pdf

Course Outcomes		
Upon successful completion of this course, the students will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Understand the basic operations on matrices	K2
CO2	Analyze the fundamentals of image representation in Scilab	K3
CO3	Apply the 2-D and 3-D plots on statistical data for real world problems	K4
CO4	Evaluate the function of loops and commands in Scilab	K5
CO5	Test the various image processing operations	K6

Course Coordinator: Dr. S. Abdul Saleem