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		Online Class Links
		2021-22

You Tube URLs for Online teaching during Lockdown


Subject: Complex Analysis, Probability & Statistical Methods

Sub. Code: 18MAT41


Sem: IV(CSE)

Name of Faculty: Prof. S. S.Thabaj

Modul Topic	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Calculus of complex functions: Review of function of a complex variable, limits, continuity, and differentiability. Analytic functions: Cauchy-Riemann equations in Cartesian and polar forms and consequences. Construction of analytic functions: Milne-Thomson method-Problems.	08	20	Classroom Teaching (Off line)
II	Conformal transformations: Introduction Discussion of transformations $w = z^2$, $w = e^z, w = z + \frac{1}{z}$ ($z \neq 0$). Bilinear transformations- Problems. Complex integration: Line integral of a complex function-Cauchy's theorem and Cauchy's integral formula and \ Problems	08	20	Classroom Teaching (Off line)
III	Probability Distributions: Review of basic probability theory. Random variables (discrete and continuous), Probability mass/density functions. Binomial, Poisson, exponential and normal distributions- problems (No derivation for mean and standard deviation)-Illustrative examples.	08	20	https://youtu.be/qhqdDkGJyAs https://youtu.be/8lEWpNcrr1Q https://youtu.be/p15-BivCL6M https://youtu.be/_SprSHgDfhw https://youtu.be/SFq8W4hWINA https://youtu.be/JBixP0RXO1E https://youtu.be/OwC2o5PzCO4 https://youtu.be/QMPxqOArIWI https://youtu.be/srW5Ryiy0TQ
IV	Statistical Methods: Correlation and regression-Karl Pearson's coefficient of correlation and rank correlation -problems. Regression analysis- lines of regression -problems.	08	20	https://youtu.be/pg1zjfQHOB1 https://youtu.be/0HMFkxEsk5w https://youtu.be/eZ_2y9QVK1E https://youtu.be/F-b8hMJjRFg https://youtu.be/-Y0lraqnDt-M https://youtu.be/2i34Kj71jOw

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	Curve Fitting: Curve fitting by the method of least squares- fitting the curves of the form- $y = ax + b, y = ax^b$ and $y = ax^2 + bx + c$			https://youtu.be/OzsOWCmATZ4
V	Joint probability distribution: Joint Probability distribution for two discrete random variables, expectation and covariance. Sampling Theory: Introduction to sampling distributions, standard error, Type-I and Type-II errors. Test of Hypothesis for means, student's t-distribution, Chi-square distribution as a test of goodness of fit	08	20	https://youtu.be/Ahp2xbmQawA https://youtu.be/4EHvwVoLzag https://youtu.be/oTuYWjQWkkw https://youtu.be/M9jXh300fRc https://youtu.be/PviYpwffago https://youtu.be/JZNbob6Wa_E https://youtu.be/1W06f3UmdYI https://youtu.be/sTk4xsshLE https://youtu.be/dVXq8LjHtig https://youtu.be/YvHAacmsVeY
	Total	40	100	

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		Online Class Links
		2021-22

You Tube URLs for Online teaching during Lockdown

Class: 2nd Year

Sem.: IV

Subject: DAA

Sub. Code: 18CS42

Name of Faculty: Prof. C.R. Belavi

Mo To	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Introduction: What is an Algorithm? Algorithm Specification Analysis Framework Performance Analysis: Space complexity, Time complexity Asymptotic Notations: Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o). Mathematical analysis of Non-Recursive and recursive Algorithms with Examples Important Problem Types: Sorting, Searching, String processing, Graph Problems, Combinatorial Problems. Fundamental Data Structures: Stacks, Queues, Graphs, Trees, Sets and Dictionaries.	10	20	Before lock down offline (Class Room Teaching)
II	Divide and Conquer: General method. Binary search, Recurrence equation for divide and conquer. Finding the maximum and minimum Merge sort, Quick sort Strassen's matrix multiplication Advantages and Disadvantages of divide and conquer. Decrease and Conquer Approach: Topological Sort.	10	20	Before lock down offline (Class Room Teaching)
III	Greedy Method: General method. Coin Change Problem, Knapsack Problem, Job sequencing with deadlines (T2:4.1, 4.3, and 4.5). Minimum cost spanning trees: Prim's Algorithm, Kruskal's	10	20	https://www.youtube.com/watch?v=BJ34T6vPIOM https://www.youtube.com/watch?v=Wbfh0QtOINE https://www.youtube.com/watch?v=1LNnyf0Knrw



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	<p>Algorithm (T1:9.1, 9.2). Single source shortest paths: Dijkstra's Algorithm (T1:9.3). Optimal Tree problem: Huffman Trees and Codes (T1:9.4). Transform and Conquer Approach: Heaps and Heap Sort (T1:6.4).</p>			<p>https://www.youtube.com/watch?v=inveiDvw5eQ https://www.youtube.com/watch?v=9IT5CxQscnY https://www.youtube.com/watch?v=gU9hsG_qBtk https://www.youtube.com/watch?v=mLMTEdy1USc https://www.youtube.com/watch?v=EA7SDV3ual</p>
IV	<p>Dynamic Programming: General method with Examples. Multistage Graphs Transitive Closure: Warshall's Algorithm All Pairs Shortest Paths: Floyd's Algorithm, Optimal Binary Search Trees, Knapsack problem Bellman-Ford Algorithm Travelling Sales Person problem Reliability design</p>	10	20	<p>https://www.youtube.com/watch?v=sKyonZizcEM https://www.youtube.com/watch?v=TIMUnrOmPaQ https://www.youtube.com/watch?v=l-gCgMHC_kM https://www.youtube.com/watch?v=pQNI1FuHQz8 https://www.youtube.com/watch?v=46iWrCibvE https://www.youtube.com/watch?v=oKW Ccszc9nU https://www.youtube.com/watch?v=ORLWm2V3TAc</p>
V	<p>Backtracking: General method N-Queens problem Sum of subsets problem Graph coloring Hamiltonian cycles. Branch and Bound: Assignment Problem, Travelling Sales Person problem 0/1 Knapsack problem LC Branch and Bound solution, FIFO Branch and Bound solution NP-Complete and NP-Hard problems: Basic concepts, non-deterministic algorithms, P, NP, NP-Complete, and NP-Hard classes</p>	10	20	<p>https://www.youtube.com/watch?v=qY4D6nxhKn4&t=75s https://www.youtube.com/watch?v=KZQSFNGjIEo https://www.youtube.com/watch?v=B2pduHjMnZ0&t=4s https://www.youtube.com/watch?v=HoBA AHbXV_w&t=5s https://www.youtube.com/watch?v=xuOwyJRD0WQ&t=10s https://www.youtube.com/watch?v=_4ZBgY4vKvE&t=481s https://www.youtube.com/watch?v=73JwgVhmAGE&t=65s https://www.youtube.com/watch?v=YfSvSo7vXlc&t=10s https://www.youtube.com/watch?v=6RtTzcQ1FJ0&t=5s https://www.youtube.com/watch?v=DDbN9M2bJ2c&t=10s</p>
	TOTAL	50	100	

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You Tube URLs for Online teaching during Lockdown

Class: 2nd Year

Sem.: IV

Subject: Operating Systems

Sub. Code: 18CS43

Name of Faculty: Prof. S. V. Manjaragi

Module/ Topic No.	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
II	Process Scheduling: Basic concepts, Scheduling Criteria, Scheduling Algorithms,	8	20	https://youtu.be/NcuQTacX6t0
	Multiple-processor scheduling			https://youtu.be/K8VkB5E8KyU
	Process Synchronization: Synchronization: The critical section problem, Peterson's solution, Synchronization hardware			https://youtu.be/_727LXqn93s
	Semaphores, Classical problems of synchronization, Monitors.			https://youtu.be/txKJSCxqHpk
III	Deadlocks, System model, Deadlock characterization, handling deadlocks, Deadlock prevention.	8	20	https://youtu.be/LMNjlXclDfI
	Deadlock avoidance; Deadlock detection and recovery from deadlock.			https://youtu.be/K6ge2FrCsxs
	Memory management strategies, Background, Swapping, Contiguous memory allocation			https://youtu.be/bSqY39CJ-xY
	Paging, Structure of page table, Segmentation			https://youtu.be/VDP3_EusZUQ



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IV	Virtual Memory Management: Background; Demand paging; Copy-on-write	8	20	https://youtu.be/ZhWUWsgiMvk
	Page replacement; Allocation of frames; Thrashing			https://youtu.be/7g5ra7j_jfg https://youtu.be/o-uks2gXpis
	File system: File concept; Access methods; Directory structure			https://youtu.be/SkgJJK_dt7g
	File system mounting; File sharing; Protection			https://youtu.be/SuG6UO8RiFo
	File system structure; File system implementation			https://youtu.be/amrg3As5Cx4
	Directory implementation; Allocation methods; Free space management.			https://youtu.be/sl4OAD4QxBU
V	Mass storage structures; Disk structure; Disk attachment	8	20	https://youtu.be/mQvt3Gnm7-8
	Disk scheduling; Disk management; Swap space management.			https://youtu.be/daCDKWY7mao
	Protection: Goals of protection, Principles of protection, Domain of protection, Access matrix			https://youtu.be/sPn1o0_N5TE
	Implementation of access matrix, Access control, Revocation of access rights, Capability- Based systems.			https://youtu.be/VtsLM-ANymY
	The Linux Operating System: Linux history; Design principles; Kernel modules;			https://youtu.be/-jFcCt3Se5k

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	Process management; Scheduling;			https://youtu.be/9qAvX0D2LVs
	Memory Management			https://youtu.be/8SjEJO7hlhA
	File systems, Input and output, Inter-process communication			https://youtu.be/lvRxl7ti5GM
	Total	40	100	

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		Online Class Links
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You Tube URLs for Online teaching during Lockdown

Class: II Year


Sem.: IV

Subject: Microcontroller&embedded System Lab


Sub. Code: 18CSL48

Name of Faculty: Prof. N.K.Honnagoudar

Module / Topic No	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Before Lockdown	08	20	Off-Line
II	Before Lockdown	08	20	Off-Line
III	Embedded system components General computing system and History of embedded. Classification of embedded system. Application areas of embedded system. Purpose of embedded system Core of an embedded system All types of processors and controllers. Memory, sensors, activators 7 segment LED display and Stepper motor interfacing. Key board interfacing Push button switches interfacing. Embedded firmware	08	20	https://youtu.be/E11u3pnHvd8 https://youtu.be/pffu-vkDLSE https://youtu.be/JCk-H3KYAs https://youtu.be/btdZINa270Q https://youtu.be/xcYYxz_G114 https://youtu.be/2_pVP_9LD1E https://youtu.be/77p2FSGh4bg https://youtu.be/iGjvuj6jJgQ https://youtu.be/2P4vqHk1Aw

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		<p>Online Class Links</p>
		<p>2021-22</p>

IV	<p>Embedded System Design Concepts</p> <p>Characteristics of Embedded system</p> <p>Quality attributes of embedded system</p> <p>Application specific embedded system</p> <p>Domain specific embedded system</p> <p>Interworking of automotive system and busses. H/W & software co design</p> <p>Programs Embedded firmware Design Embedded</p> <p>firmware development language and development models</p> <p>C language v/s embedded C</p>	08	20	<p>https://youtu.be/syDdUkeuwLO</p> <p>https://youtu.be/gPBzIEHoQSA</p> <p>https://youtu.be/2P4vqHk1Aw</p> <p>https://youtu.be/wZXvVMEBizo</p> <p>(27sec)</p> <p>https://youtu.be/SLNSWg5fQ28</p> <p>https://youtu.be/gPBzIEHoQSA</p> <p>(duplicate)</p>
V	<p>RTOS And IDE for embedded sys</p> <p>Tem Design</p> <p>Operating systems basics</p> <p>Types of O.S</p> <p>Basic design using RTOS</p> <p>Task, process and Threads.</p> <p>Thread preemption, multiprocessing and</p> <p>Multitasking</p> <p>Task communication and task synchronization</p> <p>Racing and deadlock, concept of binary Semaphore, selection of RTOS.</p> <p>Integration and testing of embedded H/W and,F/W</p> <p>Embedded development environment</p> <p>Block diagram assembler/disassemble</p> <p>Emulator and Debug techniques.</p>	08	20	<p>https://youtu.be/aVexZY9PIU</p> <p>https://youtu.be/55c2JcrnBTg</p> <p>https://youtu.be/DT4ssR1jzXw</p> <p>https://youtu.be/fp03vQZ-kwo</p> <p>https://youtu.be/g1BbYGCNiSA</p> <p>https://youtu.be/R7js-20211</p> <p>https://youtu.be/F57BL-Q4N4Q</p> <p>https://youtu.be/384D-QfxcAM</p>
	Total	40	100	

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You Tube URLs for Online teaching during Lockdown

Class: 2nd Year

Sem.: IV

Subject: Object Oriented Concepts

Sub. Code: 18CS45

Name of Faculty: Prof. A. A. Daptardar

Module/ Topic No.	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Introduction to Object Oriented Concepts	8	20	Class Room Teaching
II	Introduction to Java	8	20	Class Room Teaching
III	Classes: Classes fundamentals; Declaring objects; Constructors, this keyword	8	20	https://www.youtube.com/watch?v=n8R1DG5w82Y&t=168s
	Inheritance: Inheritance basics, using super, creating multilevel hierarchy, method overriding.			1. https://www.youtube.com/watch?v=hrPL1MIgVMA&t=14s 2. https://www.youtube.com/watch?v=BNNbGEGO3Vo 3. https://www.youtube.com/watch?v=FnbAsJfZVNM
	Exception handling: Exception handling in Java. garbage collection			1. https://www.youtube.com/watch?v=wnKWupaSSGk 2. https://www.youtube.com/watch?v=fOICr8yfHvE 3. https://www.youtube.com/watch?v=m6fHx7Axgb0
IV	Packages and Interfaces			https://www.youtube.com/watch?v=X8uEv_WxHo
	MultiThreaded Programming: What are threads? How to make the classes threadable ;	8	20	1. https://www.youtube.com/watch?v=BS4YbC70yNc 2. https://www.youtube.com/watch?v=eIv



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	<p>Extending threads; Implementing runnable;</p> <p>Synchronization; Changing state of the thread;</p> <p>Bounded buffer problems, readwrite problem, producer consumer problems</p>			<p>3sto_LEI</p> <p>https://www.youtube.com/watch?v=69uV94p0Ei0</p> <p>https://www.youtube.com/watch?v=Kr4FIY3YobQ</p>
V	<p>Event Handling: Two event handling mechanisms; The delegation event model; Event classes;</p> <p>Sources of events; Event listener interfaces;</p> <p>Using the delegation event model; Adapter classes; Inner classes.</p> <p>Swings: Swings: The origins of Swing; Two key Swing features; Components and Containers; The Swing Packages;</p> <p>A simple Swing Application; Create a Swing Applet; JLabel and ImageIcon;</p> <p>JTextField;The Swing Buttons</p> <p>JTabbedPane;</p> <p>JScrollPane; JTable. JList; JComboBox;</p>	8	20	<p>https://www.youtube.com/watch?v=08D59OCSjP4&t=290s</p> <p>https://www.youtube.com/watch?v=JSsAIecFjGI</p> <p>https://www.youtube.com/watch?v=hm4R1_u5Ag0</p> <p>https://www.youtube.com/watch?v=1u7GAtCGzu4</p> <p>https://www.youtube.com/watch?v=dm9UGErToAw</p> <p>https://www.youtube.com/watch?v=e2p41edpfZc&t=37s</p> <p>https://www.youtube.com/watch?v=T7_AaY6-6aE</p> <p>https://www.youtube.com/watch?v=Ji8fL-kvruk</p>

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Experiment No.	Name of Experiment	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
1	Create Java class to read and display Student details	1	8.3	Lab Teaching offline
2	a. Java superclass called Staff and extend class by writing three subclasses as Teaching, Technical, Contract b. Java class called Customer to store name and dob and apply tokenizer	1	8.3	Lab Teaching offline
3	a. Java program to compute a/b and raise exception b. Java program to implement multithread application	1	8.3	Lab Teaching offline
4	Sort given set of n integers using quicksort	1	8.3	Lab Teaching offline
5	Sort given set of n integers using mergesort	1	8.3	https://www.youtube.com/watch?v=8xgehC_pT4k
6	Implement in java, the 0/1 knapsack problem using a) Dynamic Programming b) Greedy Method	1	8.3	https://www.youtube.com/watch?v=ifEnqG7HrF4 https://www.youtube.com/watch?v=Q17u_y0i-5w
7	Java program to implement Dijkstra's Algorithm	1	8.3	https://www.youtube.com/watch?v=nBk-a3C-sZM
8	Java program to implement Kruskal's algorithm	1	8.3	https://www.youtube.com/watch?v=Jc-dA4WXtUI
9	Java program to implement Prim's algorithm	1	8.3	https://www.youtube.com/watch?v=o-xOwd383Uk

10	Java program to implement- a)Floyd's Algorithm b) Travelling Sales Person Problem	1	8.3	https://www.youtube.com/watch?v=f-cBdkira0k https://www.youtube.com/watch?v=GD-EPN8IkE&t=55s
11	Java program to implement sum of subset problem	1	8.3	https://www.youtube.com/watch?v=SQ-KGNtmr-s&t=329s
12	Java program to implement Hamiltonian Cycle	1	8.3	https://www.youtube.com/watch?v=2o4LER6g6Lk
	Total	12	100	

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You Tube URLs for Online teaching during Lockdown

Class: 3rd Year CSE


Sem.: VI

Subject: Cryptography, Network Security and Cyber Law


Sub. Code: 17CS61

Name of Faculty: Prof. A. A. Daptardar


Modu Topic No.	Details of Syllabus covered	No. of Hrs mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Introduction Mathematical Background for Cryptography Basics of Cryptography Secret Key Cryptography	10	20	Class Room Teaching
II	Public Key Cryptography and RSA Cryptographic Hash Discrete Logarithm and its Applications	10	20	Class Room Teaching
III	Key Management	10	20	1. https://www.youtube.com/watch?v=kQz73eCCa0M
	Authentication-I			2. https://www.youtube.com/watch?v=S1vKZI2T1ZA
	Authentication – II			https://www.youtube.com/watch?v=Zpg2gCo21Hs
	IPSec Security at the Network Layer			1. https://www.youtube.com/watch?v=JeDq6JtXK6w
	Security at the Transport Layer			2. https://www.youtube.com/watch?v=AEbmWOUkWxA
	IEEE 802.11 Wireless LAN Security			https://www.youtube.com/watch?v=AKqaaH5cJb0
IV	Viruses, Worms, and	10	20	https://www.youtube.com/watch?v=QAb6_91och0
				https://www.youtube.com/watch?v=LWKgGgH3xZk
				1. https://www.youtube.com/watch

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	Other Malware			?v=9WWuBsIp52k	
	Firewalls			2. https://www.youtube.com/watch?v=C-y7HIAJduU	
	Intrusion Prevention and Detection			https://www.youtube.com/watch?v=0ls-zhDXwyQ	
	Web Service Security			1. https://www.youtube.com/watch?v=3pbX-FSmA4s	
				2. https://www.youtube.com/watch?v=5IO-j3YMUTE	
				3. https://www.youtube.com/watch?v=oHOhMYIB9so	
				1. https://www.youtube.com/watch?v=q88mCRZtAQ0	
				2. https://www.youtube.com/watch?v=Fvf8fiVdS0g&t=666s	
V	IT act aim and objectives, Scope of the act, Major Concepts, Important provisions			https://www.youtube.com/watch?v=ba7wiuRISk8	
	Attribution, acknowledgement, and dispatch of electronic records, Secure electronic records and secure digital signatures		10	20	https://www.youtube.com/watch?v=PL2lksPvR1s
	Regulation of certifying authorities: Appointment of Controller and Other officers, Digital Signature certificates, Duties of Subscribers,				https://www.youtube.com/watch?v=RmWc2-5pY-8
	Penalties and adjudication				https://www.youtube.com/watch?v=nLFWWhX493Sw
	The cyber regulations appellate tribunal, Network service				https://www.youtube.com/watch?v=OQ92y_QjH1w&t=4s

	<p style="text-align: center;">S J P N Trust's</p> <p style="text-align: center;">Hirasugar Institute of Technology, Nidasoshi.</p> <p style="text-align: center;"><i>Inculcating Values, Promoting Prosperity</i></p> <p style="text-align: center;">Approved by AICTE, New Delhi, Permanently Affiliated to VTU, Belagavi</p> <p style="text-align: center;">Recognized under 2(f) & 12B of UGC Act, 1956</p> <p style="text-align: center;">Accredited at 'A' Grade by NAAC & Programmes Accredited by NBA: CSE, ECE, EEE & ME</p>	CS Engg. Dept
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	providers not to be liable in certain cases				
	Offences				https://www.youtube.com/watch?v=sIQ2u81DIag&t=14s
	Miscellaneous Provisions				https://www.youtube.com/watch?v=WsF8ruhusee&t=8s

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You Tube URLs for Online teaching during Lockdown

Class: Computer Science and Engineering


Sem.: VI

Subject: Computer Graphics and Visualization

Sub. Code: 17CS62

Name of Faculty: Prof. Ravindra R. Patil

Module	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Overview: Computer Graphics and OpenGL:Computer Graphics:Basics of computer graphics, Application of Computer Graphics, Video Display Devices: Random Scan and Raster Scan displays, color CRT monitors, Flat panel displays. Raster-scan systems: video controller, raster scan Display processor, graphics workstations and viewing systems, Input devices, graphics networks, graphics on the internet, graphics software. OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL, OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions, OpenGL line attribute functions, Line drawing algorithms(DDA, Bresenham's), circle generation algorithms (Bresenham's).	10	20	Before lock down offline (Class Room Teaching)
II	Fill area Primitives, 2D Geometric Transformations and 2D viewing: Fill area Primitives: Polygon fill-areas, OpenGL polygon fill area functions, fill area attributes, general scan line polygon fill algorithm, OpenGL fill-area attribute functions.	6	12	Before Lock Down offline (Class Room Teaching)

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II (Contd.)	2D Geometric Transformations: Basic 2D Geometric Transformations, matrix representations and homogeneous coordinates.	4	8	1. https://youtu.be/WUiWRwcnXc
	Inverse transformations, 2D Composite transformations, other 2D transformations, raster methods for geometric transformations, OpenGL raster transformations, OpenGL geometric transformations function, 2D viewing: OpenGL 2D viewing functions.			2. https://youtu.be/FMCf_rSdFHs
III	Clipping, 3D Geometric Transformations, Color and Illumination Models: Clipping algorithms, 2D point clipping, 2D line clipping algorithms: Cohen-Sutherland line clipping only.	2	4	Before Lock Down Offline (Class Room Teaching)
III (Contd.)	Clipping window, 2D viewing pipeline, normalization and viewport transformations, Sutherland-Hodgeman polygon clipping algorithm only.	8	16	1. https://youtu.be/Idmb9topm14
	3D Geometric Transformations: 3D translation, rotation, scaling, composite 3D transformations, other 3D transformations,			2. https://youtu.be/X6NxJpWwAOw
	Affine transformations,			3. https://youtu.be/WVlu9MccvtQ
	Color Models: Properties of light, color models, RGB and CMY color models.			4. https://youtu.be/WwFZz8WlZA8
	Illumination Models: Light sources, basic illumination models- Ambient light, diffuse reflection, specular and Phong model.			5. https://youtu.be/hN4jCN7gMIY
IV	3D Viewing and Visible Surface Detection: 3D Viewing: 3D viewing concepts, 3D viewing pipeline, 3D viewing coordinate parameters,	10	20	1. https://youtu.be/YwyhppCku6M
	Transformation from world to viewing coordinates, Projection transformation, orthogonal projections.			2. https://youtu.be/XyMsUCMkB7g
	Perspective projections.			3. https://youtu.be/ZL7H22jaTvQ



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	<p>Perspective projections, The viewport transformation and 3D screen coordinates.</p> <p>OpenGL 3D viewing functions. and OpenGL visibility detection functions</p> <p>Visible Surface Detection Methods: Classification of visible surface Detection algorithms, back face detection, depth buffer method</p>			<p>4. https://youtu.be/Q4MBD G6j9E</p> <p>5. https://youtu.be/g20iIozF SXM</p> <p>6. https://youtu.be/GwGM-T3Zx2Q</p>
V	<p>Input & interaction, Curves and Computer Animation: Input and Interaction: Input devices, clients and servers, Display Lists, Display Lists and Modelling.</p> <p>Programming Event Driven Input, Menus Picking, Building Interactive Models.</p> <p>Animating Interactive programs, Design of Interactive programs, Logic operations.</p> <p>Curved surfaces, quadric surfaces.</p> <p>OpenGL Quadric-Surface and Cubic-Surface Functions,</p> <p>Bezier Spline Curves, Bezier surfaces,</p> <p>Bezier Spline Curves, Bezier surfaces,</p> <p>OpenGL curve functions.</p>	10	20	<p>1. https://www.youtube.com/watch?v=nAqzORFMD 7A&t=18s</p> <p>2. https://www.youtube.com/watch?v=ipJ41fGJJQI&t=4s</p> <p>3. https://www.youtube.com/watch?v=DAoEFGo2N hQ&t=13s</p> <p>4. https://www.youtube.com/watch?v=vWXd00QQ Mw&t=5s</p> <p>5. https://www.youtube.com/watch?v=kpQ0Nurj1y8 &t=5s</p> <p>6. https://www.youtube.com/watch?v=z6s0cccUZFc &t=21s</p> <p>7. https://www.youtube.com/watch?v=PcoC1hEtjM &t=661s</p> <p>8. https://youtu.be/0ZUtlUL1 -UM</p>
	Total	50	100	

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You Tube URLs for Online Teaching during Lockdown

Class: 2nd Year

Sem.: VI

Subject: Operating Systems

Sub. Code: 17CS64

Name of Faculty: Prof. Mohan A. Gholap

Module No.	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Introduction to operating systems , System structures: What operating systems do; Computer System organization; Computer System architecture; Operating System structure; Operating System operations; Process management; Memory management; Storage management; Protection and Security; Distributed system; Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface; System calls; Types of system calls; System programs; Operating system design and implementation; Operating System structure; Virtual machines; Operating System generation; System boot. Process Management Process concept; Process scheduling; Operations on processes; Inter process communication	10	20%	Classroom teaching
II	Multi-threaded Programming: Overview; Multithreading models; Thread Libraries; Threading issues. Process Scheduling: Basic concepts; Scheduling Criteria; Scheduling Algorithms; Multiple-processor	10	20%	Classroom teaching



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	<p>scheduling; Thread scheduling.</p> <p>Process Synchronization: Synchronization: The critical section problem; Peterson's solution; Synchronization hardware; Semaphores; Classical problems of synchronization; Monitors.</p>			
III	<p>Deadlocks: Deadlocks; System model; Deadlock characterization Methods for handling deadlocks; Deadlock prevention; Deadlock avoidance;</p> <p>Deadlock detection and recovery from deadlock.</p> <p>Memory Management: Memory management strategies: Background; Swapping; Contiguous memory allocation; Paging; Structure of page table; Segmentation.</p>	10	20%	<p>https://www.youtube.com/watch?v=hrieFcH-sUc</p> <p>https://www.youtube.com/watch?v=Xw7Fp0OrdYk</p> <p>https://www.youtube.com/watch?v=RS46N9NiRr0</p> <p>https://www.youtube.com/watch?v=4cavzSodVTs</p> <p>https://www.youtube.com/watch?v=6eAzEMd-Xfw</p> <p>https://www.youtube.com/watch?v=omg96lbXSvc</p>
IV	<p>Virtual Memory Management: Background; Demand paging; Copy-on-write; Page replacement</p> <p>Allocation of frames; Thrashing.</p> <p>File System, Implementation of File System: File system: File concept;</p> <p>Access methods; Directory structure;</p> <p>File system mounting; File sharing; Protection:</p> <p>Implementing File system: File system structure; File system implementation; Directory implementation; Allocation methods; Free space management.</p>	10	20%	<p>https://www.youtube.com/watch?v=jnQVH0i43B4&t=41s</p> <p>https://www.youtube.com/watch?v=IyXc0b9c3jY&t=39s</p> <p>https://www.youtube.com/watch?v=Ed-zsUc7eZM</p> <p>https://www.youtube.com/watch?v=_P0Rv1s-KSM&t=2s</p> <p>https://www.youtube.com/watch?v=QGaCkYRGt-Y&t=16s</p> <p>https://www.youtube.com/watch?v=Z3tKqH4tN4M&t=5s</p> <p>https://www.youtube.com/watch?v=cWqO9SjoQSw&t=3s</p>

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V	Secondary Storage Structures, Protection: Mass storage structures; Disk structure; Disk attachment;	10	20%	https://www.youtube.com/watch?v=USZGLSpwAFY&t=5s
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	Disk scheduling;			https://www.youtube.com/watch?v=7f794NvNY6c&t=12s
	Disk management; Swap space management.			https://www.youtube.com/watch?v=0KG-z4nNTvw&t=19s
	Protection: Goals of protection, Principles of protection, Domain of protection			https://www.youtube.com/watch?v=LSx3U3vdd1Y&t=79s
	Access matrix,			https://www.youtube.com/watch?v=TngPdddaA8Q&t=15s
	Implementation of access matrix, Access control, Revocation of access rights, Capability- Based systems.			https://www.youtube.com/watch?v=wo4BjnRK0vQ&t=331s
	Case Study: The Linux Operating System: Linux history; Design principles; Kernel modules			https://www.youtube.com/watch?v=JOA7RcPs2Uk
	Process management; Scheduling;			https://www.youtube.com/watch?v=SqcfCA4WjpM
	Memory Management; File systems; Input and output; Inter-process communication.			https://www.youtube.com/watch?v=2YRGxqwCRlo
	Total	50	100	

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You Tube URLs for Online teaching during Lockdown


Class: 3st Year

Sem.: VI


Subject: System Software and Compiler Design **Sub. Code:** 17CPS63

Name of Faculty: S G Gollagi

Module/ Topic No.	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Assemblers, Macroprocessors	10	20	Offline: e-Notes/text extract
II	Loaders and Linkers	10	20	Offline: e-Notes, ppt
III	Introduction to Compiler Lexical Analysis, grammars	10	20	https://drive.google.com/file/d/1hH0Yz2jNkcoJqoloRGBvWhIH16?usp=sharing https://www.youtube.com/watch?v=yQpKb3O8 https://youtu.be/n6daUMnzV20 -e-Notes,PPT
IV	Introduction of Parser,CFG, Wriring CFG, Top-Down Parser Design, Bottom-Up parser Design	10	20	https://www.youtube.com/watch?v=j8ontK8bc&t=43s https://www.youtube.com/watch?v=YeNwvZ2A&t=10s https://youtu.be/2M3A_144bOI https://youtu.be/d4zpp4O2y4s https://youtu.be/4KwQ3TcRv0U https://youtu.be/fHXQ6bPjfOM https://youtu.be/rge6Shqzltk https://youtu.be/KeSDcJkI_aw https://youtu.be/G8yPupzkEyw -e-Notes,PPT
V	Syntax Directed Definition, Evaluation order, Applications Intermediate Code generation, Codegeneration, Issues	10	18	https://www.youtube.com/watch?v=x7Z6BzQ3A&t=3s https://www.youtube.com/watch?v=4gNUdEzOE&t=4s https://www.youtube.com/watch?v=

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				UJGTW3ek&t=8s https://www.youtube.com/watch?v=pZ1oicI6s&t=1206s https://www.youtube.com/watch?v=WVzCuK6Nw&t=13s https://www.youtube.com/watch?v=WVzCuQ8N -e-Notes, PPT
	Total	50	98	

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You Tube URLs for Online teaching during Lockdown

Class: 3rd Year

Sem.: VI

Subject: Python Application Programming

Sub. Code: 17CS664

Name of Faculty: Prof. Mahesh G. Huddar

Module/ Topic No.	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	<u>e-content/Video/PPT link</u>
I	Why should you learn to write programs, Variables, expressions and statements, Conditional execution, Functions.	08	20	<u>Offline Mode</u>
II	Iteration, Strings, Files	08	20	<u>Offline Mode</u>
III	Lists	08	20	https://www.youtube.com/watch?v=cA-fs6aM-uQ https://www.youtube.com/watch?v=QAS7vxT9Tul https://www.youtube.com/watch?v=Vk9NTT5Pgkk https://www.youtube.com/watch?v=PQR3zE6qu6o https://www.youtube.com/watch?v=PrdQe6avZBc https://www.youtube.com/watch?v=i1NG0dxCLv8



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	Dictionaries			https://www.youtube.com/watch?v=0C_jlL4biew&t=61s https://www.youtube.com/watch?v=D34zlyl1xtE https://www.youtube.com/watch?v=4bFMpWevr4A https://www.youtube.com/watch?v=MCxF_gFOCDE
	Tuples			https://www.youtube.com/watch?v=ZLBcvn1l4oM https://www.youtube.com/watch?v=UW_wJo3d9_o
	Regular Expressions			https://www.youtube.com/watch?v=VNHGfXneHc https://www.youtube.com/watch?v=g9rgemHueUU https://www.youtube.com/watch?v=LM7NVHYds4Y&t=5s https://www.youtube.com/watch?v=UncBwQf7EGo https://www.youtube.com/watch?v=AYa4V33JhAY https://www.youtube.com/watch?v=nH8HuCW-qRM&t=2s https://www.youtube.com/watch?v=EJ4H_XZlge&t=7s
IV	Classes and objects	08	20	https://www.youtube.com/watch?v=wYnX39lZd2U
	Classes and functions			https://www.youtube.com/watch?v=TEiHLJrw4sY
	Classes and methods			https://www.youtube.com/watch?v=QIXcKxsDoeI
	Example Programs			https://www.youtube.com/watch?v=J6TmrgSMFMc https://www.youtube.com/watch?v=5RWWIsEYHiA&t=8s https://www.youtube.com/watch?v=JtQpMttb0JY&t=9s https://www.youtube.com/watch?v=q_Vo1q4SPtQ&t=1s https://www.youtube.com/watch?v=HYUT00F2gxk&t=29s https://www.youtube.com/watch?v=e9jXngbW1RM&t=120s https://www.youtube.com/watch?v=3Aovl7cusYg&t=431s https://www.youtube.com/watch?v=TNZEW7wzRUK&t=113s https://www.youtube.com/watch?v=WcoWFB477i8&t=354s https://www.youtube.com/watch?v=fxnnnEvcU_A&t=174s https://www.youtube.com/watch?v=ZQkA44IDtlk&t=64s https://www.youtube.com/watch?v=gw-vkRpyeYA&t=155s
V	Networked	08	20	https://www.youtube.com/watch?v=sFDKmylrekw&t=10s



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	programs			https://www.youtube.com/watch?v=tsLGrx8milw&t=18s https://www.youtube.com/watch?v=ujA8tnCrXE8 https://www.youtube.com/watch?v=MjvKbJ50d1M
	Using Web Services			https://www.youtube.com/watch?v=FJUfa7bYpsQ https://www.youtube.com/watch?v=T9PkS5zaJf8&t=9s https://www.youtube.com/watch?v=o99sVld99Pc&t=471s https://www.youtube.com/watch?v=o6QtEjqEYM4&t=19s https://www.youtube.com/watch?v=bPGXiR5mfX8 https://www.youtube.com/watch?v=bltppzNtKwA&t=5s
	Using databases and SQL			https://www.youtube.com/watch?v=cMuoSufJzMg&t=931s https://www.youtube.com/watch?v=EtC5TH5VrpE&t=10s https://www.youtube.com/watch?v=XO5tbAHefww https://www.youtube.com/watch?v=zuDtWDACKGw&t=530s https://www.youtube.com/watch?v=j654LAQdh9g
	Total	40	100	

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You Tube URLs for Online teaching during Lockdown

Class: 3rd Year CSE

Sem.: VI

Subject: Data Mining and Data Warehousing

Sub. Code: 17CS651

Name of Faculty: Prof. Nyamatulla M Patel

Module/ Topic No	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Data Warehousing & Modeling Basic Concepts, Data Warehousing, Data Warehouse Models, Data Cube, Dimensions & Measures.	8	20	Class Rooms Teaching (Before Lockdown-Offline)
II	Efficient Data Cube Computation, Indexing OLAP Data, Data Mining, Challenges and Data Mining Tasks.	8	20	Class Rooms Teaching (Before Lockdown-Offline)
	Data Mining Types of Data, Data Quality.			https://youtu.be/9ccylYIHx28
	Data Preprocessing and Measures of Similarity and Dissimilarity.			https://youtu.be/ufJL-jHIUzA
III	Association Analysis Basic Concepts Frequent Item Set Generation, Apriori Principle and Candidate Generation.	8	20	https://youtu.be/WF8vVcmBfCc
	Support Counting of candidate item set, Support Counting using Hash tree with an example.			https://youtu.be/egbNiEgluTY
	FP Growth Algorithm with an example.			https://youtu.be/f72-lntDQ9Q
	Rule Generation, pruning of association rules, , Maximal Frequent item set, Closed item set.			https://youtu.be/kH3cOT5mvMQ



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IV	Basic Concepts, classification techniques, Decision Tree.	8	20	https://youtu.be/hY94skIgTdQ
	Hunt's Algorithm and Attribute Test Conditions.			https://youtu.be/iT50uO4muyg
	Model Over-Fitting, Rule Based Classifiers, Nearest Neighbor Classifier.			https://youtu.be/9jPXqQFDXlk
	Bayes Theorem, Naïve Bayes Classifier, Bayesian Belief Networks.			https://youtu.be/EMm17hNneto
V	Clustering Analysis, Types of Clustering, K-Means.	8	20	https://youtu.be/5KhX1ueqTZU
	K-Means Additional Issues Evaluating K-Means, Bisecting K-Means, Numerical on K-Means.			https://youtu.be/FLLJntP2FkQ
	Agglomerative Hierarchical Clustering, Numerical, Single, Complete & Average link, DBSCAN.			https://youtu.be/tgh-k3m8K4w
	Clustering Evaluation, Supervised Based, Graph Based and Prototype Based, Confusion Matrix and Measures.			https://youtu.be/5EHVD_2nA9c
	Density Based Clustering, Grid Based, Subspace Based, CLIQUE, DENCLUE Based Clustering.			https://youtu.be/QIMQ8f9CBSA
	Total	40	100	

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You Tube URLs for Online teaching during Lockdown

Class: II year

Sem.: VIII

Subject: Internet of Things and Technology

Sub. Code: 15CS81

Name of Faculty: Prof N.K.Honnagoudar

Module/ Topic No.	Details of Syllabus covered	No. of Hrs mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Before Lockdown	08	20	Off-Line
II	Before Lockdown	08	20	Off-Line
III	Embedded system components General computing system and History of embedded. Classification of embedded system. Application areas of embedded system. Purpose of embedded system Core of an embedded system All types of processors and controllers. Memory,sensors,actuators 7 segment LED display and Stepper motor interfacing. Key board interfacing Push button switch interfacing. Embedded firmware.	08	20	https://youtu.be/E11u3pnHvd8 https://youtu.be/pffu-vkDLSE https://youtu.be/JCk-H3KYAs https://youtu.be/btdZINa270Q https://youtu.be/xcYYxz_G114 https://youtu.be/2_pVP_9LD1E https://youtu.be/77p2FSGh4bg https://youtu.be/iGjvuj6jJgQ https://youtu.be/2P4vqHktlAw



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<p>IV</p>	<p>Embedded System Design Concepts</p> <p>Characteristics of Embedded system</p> <p>Quality attributes of embedded system</p> <p>Application specific embedded system</p> <p>Domain specific embedded system</p> <p>Interworking of automotive system and busses.H/W& software co design</p> <p>Programs Embedded firmware Design Embedded</p> <p>firmware development language and development models</p> <p>C language v/s embedded C</p>	<p>08</p>	<p>20</p>	<p>https://youtu.be/syDdUkeuwLO</p> <p>https://youtu.be/gPBzIEHoQSA</p> <p>https://youtu.be/2P4vqHktlAw</p> <p>https://youtu.be/wZXvVMEBizo</p> <p>https://youtu.be/SLNSWg5fQ28</p> <p>https://youtu.be/gPBzIEHoQSA</p>
<p>V</p>	<p>RTOSAnd IDE for embedded sys</p> <p>Tem Design</p> <p>Operating systems basics</p> <p>Types of O.S</p> <p>Basic design using RTOS</p> <p>Task,process and Threads.</p> <p>Thread preemption,multiprocessing and</p> <p>Multitasking</p> <p>Task communication and task synchronization</p> <p>Racing and deadlock,concept of binary and</p> <p>Semaphore, selection of RTOS.</p> <p>Intigration and testing of embedded H/W,F/W</p> <p>Embedded development environment</p> <p>Block diagram assembler/disassemble</p> <p>Emulator and Debug techniques.</p>	<p>08</p>	<p>9</p>	<p>https://youtu.be/aVexZY9PIU</p> <p>https://youtu.be/55c2JcmBTg</p> <p>https://youtu.be/DT4ssR1jzXw</p> <p>https://youtu.be/fp03vQZ-kwo</p> <p>To be prepared</p>



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	Total	40	90	

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You Tube URLs for Online teaching during Lockdown

Class: 4th Year

Sem.: VIII

Subject: Big Data Analytics

Sub. Code: 15CS82

Name of Faculty: Prof. Mahesh G. Huddar

Module/ Topic No.	Details of Syllabus covered	No. of Hrs. mentioned in syllabus	% of syllabus Covered	e-content/Video/PPT link
I	Hadoop Distributed File System Basics	10	20	https://www.youtube.com/watch?v=EBqYeeW5Z7U https://www.youtube.com/watch?v=jpa04ZxFotM https://www.youtube.com/watch?v=WqVQXQiuu9U&t=1s https://www.youtube.com/watch?v=2tcjHB4j6Yw&t=996s https://www.youtube.com/watch?v=OqgY1sBbrbk https://www.youtube.com/watch?v=Il7lqBotZm4
	Running Example Programs			https://www.youtube.com/watch?v=ueOTn1QU7i8&t=243s https://www.youtube.com/watch?v=ySOCJNSnzBE&t=170s
	Running Benchmarks			https://www.youtube.com/watch?v=Xu_nndrJoLs&t=95s
	Hadoop MapReduce Framework			https://www.youtube.com/watch?v=WIO2qt1x-Bk
	MapReduce Programming			https://www.youtube.com/watch?v=9EfSEZ4kzW0 https://www.youtube.com/watch?v=VQs5frn8cho https://www.youtube.com/watch?v=uH5y6nTo_04 https://www.youtube.com/watch?v=Mmd9jnNjSpE
II	Essential Hadoop Tools	10	20	https://www.youtube.com/watch?v=L3wUv4VhIHl https://www.youtube.com/watch?v=4oKOhOQd4xk



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				https://www.youtube.com/watch?v=PcYAbO2G3Lg https://www.youtube.com/watch?v=RexvKZHWw3s https://www.youtube.com/watch?v=iSS_OjMat08&t=4s https://www.youtube.com/watch?v=avjQOnuZOkA&t=29s https://www.youtube.com/watch?v=zNh6Jj6TtXk&t=149s
	Hadoop YARN Applications			https://www.youtube.com/watch?v=1fPszGxTzU&t=918s
	Managing Hadoop with Apache Ambari			https://www.youtube.com/watch?v=QgAqIQgv2nl
	Basic Hadoop Administration Procedures			https://www.youtube.com/watch?v=vxday4o8Xiw
III	Business Intelligence Concepts and Application, Data Warehousing, Data Mining, Data Visualization	10	20	Offline Mode
IV	Decision Trees, Regression, Artificial Neural Networks, Cluster Analysis, Association Rule Mining	10	20	Offline Mode
V	Text Mining, Naïve-Bayes Analysis, Support Vector	10	20	Offline Mode

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			Online Class Links
			2021-22

	Machines, Web Mining, Social Network Analysis			
	Total	50	100	