University of Science & Technology Meghalaya

Department of Computer Science & Electronics
Lesson Plan

Session: 2021-2022(Odd Semester)

Program: Bachelor of Computer Application   Semester: 3rd

Name of the Course: Software Engineering   Course Code: BCA302

Name of the Faculty: Dr. Kanak Chandra Bora.

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule Unit wise (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
I	Software : Software Characteristics and Applications, Software Engineering - A Layered Technology, Software Process Models - Linear Sequential Model,	4	Date of commencement 22/09/2021 Date of Ending 09/10/2021	Theoretical explanation along with case studies	Test-I	
I	Prototype & RAD Model, Incremental Model and Spiral Model.	3			Unit-I & Unit-II	
I	Project Metrics : Software Measurement--Size Oriented, Function Oriented Metrics, Extended Function Point Metrics.	3				
II	Software Project Planning: Objectives, Decomposition Techniques, and Empirical Estimation Models.	4	Date of commencement 16/10/2021 Date of Ending 26/10/2021			
II	Analysis Concept and Principles: Requirement Analysis, Analysis Principles.	3				
III	Design Concepts and Principles: Design Process, Design Concepts,	2	Date of commencement 27/10/2021 Date of Ending 10/11/2021			

III	Design Principles, Effective Modular Design,	3			Test-II	
III	Human Computer Interface Design, Interface Design Guidelines.	4			Unit-III	
IV	S/W Quality Assurance : Quality Concepts, Reliability S/W	2	Date of commencement 11/11/2021 Date of Ending 23/11/2021			
IV	Testing Models : S/W Testing Fundamentals, White and Black Box Testing, Basic Path Testing,	2				
IV	Testing Strategies: Strategic Approach to S/W Testing.	2				
IV	Unit Testing, Integration Testing, Validation Testing, System Testing.	2				
V	S/W Reuse : Reuse Process, Classification and Retrieving Components	3	Date of commencement 24/11/2021 Date of Ending 03/12/2021		Test-III	
V	Economics of S/W Reuse CASE : Introducing to CASE, Taxonomy of Case Tools.	3			Unit-IV & Unit-V	

Suggested Books/Reference Books:

1.Fundamentals of Software Engineering by Rajib Mall (Text book)

2. Software Engineering By R.S.Pressman

3. An Integrated Approach To Software Engineering By Pankaj Jalote

Program: Bachelor of Computer Application   Semester: 5th

Name of the Course: **E-Commerce & Digital Marketing**   Course Code: BCA503.1

Name of the Faculty: Dr. Kanak Chandra Bora.

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule Unit wise (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
I	E-Commerce an Introductions, Concepts, Advantages and Disadvantages, Technology in E-Commerce	2	Date of commencement 25/09/2021 Date of Ending 09/10/2021	Theoretical explanation along with case studies	Test-I	
I	Benefits and impact of E-commerce on travel industry, Goals of E-Commerce,	2			Unit-I & Unit-II	
I	Difference between E-Commerce and E-Business, Models of E-Commerce,Limitati ons and Advantages of E-Commerce.	3				
II	Electronic Payment Systems-Introduction, Types of Electronic Payment Systems,	2	Date of commencement 16/10/2021 Date of Ending 26/10/2021			
II	Smart Cards and Electronic Payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic Payment Systems.	3				
III	E-Security Network and Web Site Risk for E-Business	2	Date of commencement 27/10/2021 Date of Ending 10/11/2021			
III	Information Technology Act 2000 and its Highlights Related to E-commerce	3			Test-II	
III	E-Security,	4			Unit-III	

	Firewalls, Electronic Market / E- Shop, Introduction to Security, Types of Securities, Security Tools, Network Security				
IV	E-Governance, E-democracy, Government Efforts to Encourage Citizen Participation, Privacy and Security Issues	2	Date of commencement 11/11/2021 Date of Ending 23/11/2021		
IV	Information Security Management Digital Divide. Applications in Governance,	2			
IV	E-government, Government –to-business, Business-to-Government and Citizen-to-Government, E-Governance Models.	2			
V	Digital marketingdefinition, different medium of digital marketing(PPC, search engine optimization, websites, social media marketing , email flipping , customized apps); advantages and disadvantages of digital marketing,	3	Date of commencement 24/11/2021 Date of Ending 04/12/2021		Test-III
V	Digital Advertising, digital security, digital payment method, digital signing.	3			Unit-IV & Unit-V
V	Cyber Crime, Categorizing Cyber Crime, Information Warfare- Concept, information as an Intelligence Weapon, Attacks and Retaliation, Attack and	2			

	Defense. Cyber Law.					

TEXT BOOKS:

- Digital Marketing and Practice By Dutta & Srivastav
- E-Commerce An Indian Perspective By P. Tjoseph, S.J. Prentice-Hall Of India

REFERENCE BOOKS:

- Frontiers Of Electronic Commerce, By- Kalakota, Ravi; Stone, Tom; Whinston, Andrew B, Addison Wesley Publishing Co,

HOD Computer Science and Technology
University of Science and Technology Meghalaya

Approved by HoD

Signature of the Faculty

....

Verified by DUC

University of Science & Technology Meghalaya

Department of CS&E

Lesson Plan

Session: 2021-22(Odd Semester)

Program: MCA

Semester: 3rd sem

Name of the Course : Introduction to Machine Learning

Course Code:MCA305.3

Name of the Faculty: Daisy Kalita

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
UNIT 1 Introduction	Towards Intelligent Machines, Well posed Problems, Example of Applications in diverse fields,	3		PPT presentation, Video Lecture	Test-1 UNIT 1, 2	
	Data Representation, Domain Knowledge for Productive use of Machine Learning, Diversity of Data: Structured / Unstructured,,	3				
	Forms of Learning, Machine Learning and Data Mining, Basic Linear Algebra in Machine Learning Techniques.	5				
UNIT 2 Supervised Learning	Rationale and Basics: Learning from Observations, Bias and Why Learning Works: Computational Learning Theory,	4		PPT presentation, Video Lecture		
	Occam's Razor Principle and Over fitting Avoidance Heuristic Search in inductive Learning	3				
	Estimating Generalization Errors	2				
	Metrics for assessing regression, Metris for assessing	3				

	classification.					
UNIT 3 Statisti cal Learnin g	Machine Learning and Inferential Statistical Analysis, Descriptive Statistics in learning techniques,	3		PPT presentation, Video Lecture,	Test-II Unit-3,4	
	Bayesian Reasoning: A probabilistic approach to inference, K-Nearest Neighbor Classifier.	3				
	Discriminant functions and regression functions, Linear Regression with Least Square Error Criterion,	3				
	Logistic Regression for Classification Tasks, Fisher's Linear Discriminant and Thresholding for Classification, Minimum Description Length Principle.	4				
UNIT 4 Suppor t Vector Machin es (SVM)	Introduction, Linear Discriminant Functions for Binary Classification, Perceptron Algorithm,	3		PPT presentation, Video Lecture		
	Large Margin Classifier for linearly seperable data,	3				
	Linear Soft Margin Classifier for Overlapping Classes, Kernel Induced Feature Spaces,	4				
	Nonlinear Classifier, Regression by Support vector Machines.	2				
UNIT 5 Learnin g with Neural Networ ks	Towards Cognitive Machine, Neuron Models, Network Architectures, Perceptrons,	3		PPT presentation, Video Lecture.	Test-III Unit 5	
	Linear neuron and the Widrow-Hoff Learning Rule, The error correction delta rule.	3				
	Multilayer Perceptron Networks	3				

	and error back propagation algorithm, Radial Basis Functions Networks.					
	Decision Tree Learning: Introduction, Example of classification decision tree, measures of impurity for evaluating splits in decision trees,	3				
	ID3, C4.5, and CART decision trees, pruning the tree, strengths and weakness of decision tree approach	2				

Suggested Books:

1. Tom M. Mitchel ; Machine Learning
2. M. Gopal; Applied Machine Learning

Approved by HoD

Signature of the Faculty

Verified by DUC

University of Science & Technology Meghalaya

Department of CS&E

Lesson Plan

Session: 2021-22(Odd Semester)

Program: BCA

Semester: 3rd sem

Name of the Course: Object Oriented Programming with C++

Course Code:BCA301

Name of the Faculty: Daisy Kalita

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
UNIT 1	Object Oriented Programming, Concepts, Advantages, Usage.	2		PPT presentation, Video Lecture	Test-I UNIT 1, 2	
	C++ Environment: Program Development Environment,	2				
	C++ language standards. Introduction to Various C++Compilers, C++ Standard Libraries, Prototype of main() Function,	2				
	Data types. Classes & Objects- Classes, Structure & classes, Union & Classes,	3				
	Friend Function, Friend Classes, Inline Function,	3				
	Scope Resolution Operator, Static Class Members, Static Data Member, Static Member Function,	2				
	Passing Objects to Function, Returning Objects, Object Assignment.	3				
UNIT 2	Array, Pointers References & The Dynamic Allocation operators Array of	3		PPT presentation, Video Lecture		

		objects,					
		Pointers to Object; Type Checking C++ Pointers, The This pointer, Pointer to Derived Types,	3				
		Pointer to Class Members, Reference parameter, Passing references to Objects, Returning Reference, Independent Reference,	3				
		'Dynamic Allocation Operators, Initializing Allocated Memory, Allocating Array, Allocating Objects.	3				
UNIT 3		Constructor & Destructor - Introduction, Constructor,	2		PPT presentation, Video Lecture,	Test-II Unit-3,4	
		Parameterized constructor, Multiple Constructor in a class, Constructor with Default Argument,	2				
		Copy Constructor, Default Argument, Destructor, Function & Operator Overloading Function Overloading,	3				
		Overloading Constructor Function Finding the address of an Overloaded function.	3				
UNIT 4		Operator Overloading: Creating a member, Operator Function	2		PPT presentation, Video Lecture		
		Creating Prefix &Postfix forms of the increment & decrement operation, Overloading the shorthand operation (i.e. +=,-=., etc),	2				
		Operator overloading restriction, Operator overloading using friend function, Overloading	5				
		New & Delete, Overloading some	2				

	special operators, Overloading [ ], ( ),-, comma operator, Overloading <<.					
UNIT 5	Inheritance -Base Class Access Control, Protected Members, Protected Base Class Inheritance,	2		PPT presentation, Video Lecture.	Test-III Unit 5	
	Inheriting Multiple Base Classes, Constructors, Destructors &Inheritance,	2				
	Uses of Constructor & Destructor Function, Passing parameters to base	2				
	Virtual base classes. Virtual functions & Polymorphism: Virtual function, Pure Virtual functions, Early vs. Late binding.	4				

Suggested Books:

1. K R Venugopal, Rajkumar Buyya; Mastering C++
2. E Balagurusamy; ANSI C++

HOD Computer S. and Technology
University Approved by HoD

....

Verified by DUC

Signature of the Faculty

University of Science & Technology Meghalaya

Department of Computer Science & Electronics

Lesson Plan

Session: 2022-22(Odd Semester)

Program : BCA.................. ....   Semester: 3RD SEM..........................

Name of the Course: DBMS   Course Code: BCA-304....................

Name of the Faculty: DAISY SHARMAH..

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
I	Introduction To Database Systems Purpose of Database System, View Of Data, Characteristics of Database Approach, Architecture for a Database System, Advantages and Disadvantages Of DBMS, Database Users and Administrator, Database Design and ER Model, Data Model Classification	15	20/10/21 to 10/11/21	Presentation, Assignments & Integrative Approach	Test-I	
II	Structure of Relational Database Database Schema, Key, Relational Operations, Formal Relational Query Languages	13	11/11/21 to 25/11/21	Practical Implementation, Assignments & Reflective Approach	Test-II	
III	Features of Good Database Design, Universal Relation, Anomalies in A Database Atomic Domain and 1NF, Functional Dependency Theory, Decomposition Using Functional Dependency Algotithm for Decomposition, Decomposition Using Multivalued Dependency More Normal Forms, Database Design Process	12	26/11/21 to 10/12/21	Presentation , Assignments & Constructive Approach		
IV	Basic Concepts Of Indexing and Hashing Query Processing, Measures Of Query Cost, Query Processing for Select, Sort Join Operations, Basics of Query	12	11/12/21 to 31/12/21	Presentation, Assignments & Collaborative Approach		

	Optimization, Transformation of Relational Expression Estimating Statistics of Expression, Choice of Evaluation Plan					
V	Transaction Concepts, Features of Database Transaction, Concurrency Control in Database - Lock Base, Time Stamp Base, Validation Base Protocols, Database Recovery System	20	1/1/22 to 25/1/22	Practical Implementation, Assignments & Inquiry Based Approach	Test-III	

Suggested Books:

1. Database System Concepts By Silverschatz Korth And Sudarshan, 6 Th Ed. Tata Mc-Graw Hill.
2. Fundamentals Of Database Systems By R. Elmasri Et. Al , 3rd Edition – Addison Wesley, (Indian Reprint), New Delhi.
3. Database Management Systems By Raghu Rama Krishnan,2 Nd Ed. Tata Mc-Graw Hill
4. Database Management System By Rajesh Narang ,2nd Ed.PHI
5. Data Base Systems By C.J.Date, Vol I & II

....
Approved by HoD

....
Signature of the Faculty

....
Verified by DUC

University of Science & Technology Meghalaya

Department of Computer Science & Electronics

Lesson Plan

Session: 2022-22(Odd Semester)

Program: BCA   Semester: 5ᵗʰSEM

Name of the Course: **Python**   Course Code:**BCA-503.3**
Name of the Faculty:**PRIYANKA SARMA**

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
I	Basic python Programming : Features of python, history, python constant, python strings, variables and identifiers, data types, operators and expressions.	25	10/9/2021 to 9/10/2021	Assignments & Practical Implementation	Test-I	
II	Decission Control Statement : Selection / conditional branching, if, if-else, if-elif statement, lops in python	25	10/9/21 to 5/11/21	Presentation & Practical Implementation		
III	Functons : function definition, function call, variable scope and lifetime, return statement, arguments of python.	23	6/11/21 to 11/12/21	Presentation, Practical Implementation	Test-II	
IV	Modules : name of modules, making own modules, python modules, ,modules and namespaces, standard library modules.	25	12/10/2021 to 15/11/2021	Assignments & Practical Implementation		

| V | File Handling : Introduction, types of files, opening and closing of files, reading and writing of files. | 25 | 16/12/21 to 25/1/22 | Presentation, Practical Implementation | Test-III | |

Suggested Books:

- Programming Python: Powerful Object Oriented Programming By Mark Lutz
- Python Programming By Bruce Rogers
- Python Programming for Beginners By Joseph Joyner

....

Approved by HoD

....

Signature of the Faculty

....

Verified by DUC

University of Science & Technology Meghalaya

Department of Computer Science & Electronics

Lesson Plan

Session: 2022-22(Odd Semester)

Program: **BCA**   Semester:**3ʳᵈSEM**

Name of the Course: **Statistical Tool (MatLab)**   Course Code:MCA-307
Name of the Faculty:**PRIYANKA SARMA**

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
I	**Data Import and Export:** Data I/O via the Command Line, Data Objects in Base MATLAB, Accessing Data Elements, Data Types in the Statistics Toolbox, Arithmetic Operators, Functions in MATLAB.	25	5/10/2021 to 6/11/2021	Assignments & Practical Implementation	Test-I	
II	**Programming in MATLAB: Scripts and Functions** Script Files, Function Files ,Language specific Features,Loop, branch, control flow, Advanced data objects: multidimensional metrices, structure.	25	7/11/21 to 6/12/21	Presentation & Practical Implementation		
III	**Applications:** Metrics and Vectors manipulation/ operation ,Linear Algebra, Curve Fitting and interpolation, Ordinary differential equations, Data Analysis and Statistics.	20	7/12/21 to 21/12/21	Presentation, Practical Implementation	Test-II	

| IV | Visualizing Data and statistics: Plotting 2-D Data, Plotting 3-D Data, Handle Graphics, Animation | 25 | 22/12/2021 to 15/1/2022 | Assignments & Practical Implementation | Test III | |

Suggested Books:

- Programming Python: Powerful Object Oriented Programming By Mark Lutz
- Python Programming By Bruce Rogers
- Python Programming for Beginners By Joseph Joyner

....

Approved by HoD

Signature of the Faculty

....

Verified by DUC

University of Science & Technology Meghalaya

Department of Computer Science & Electronics

Lesson Plan

Session: 2022-22(Odd Semester)

Program: BCA Semester:1STSEM

Name of the Course: PMCP Course Code:BCA-102.

Name of the Faculty: DAISY SHARMAH& PRIYANKA SARMA

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
I	Program Concept, Characteristics of Programming, Stages in Program Development, Algorithms, Flow Charts, Programming Techniques – Top Down, Bottom Up, Modular, Structured, Features, Merits, Demerits and Their Comparative Study, Programming logic - simple, branching, looping, recursion, programming testing & debugging.	25	10/9/2021 to 9/10/2021	Assignments & Practical Implementation	Test-I	
II	Introduction to C Language, C Language Standards, Features of C, Structure of C Program, Introduction to C Compilers, Creating and Compiling C Programs, IDE, Features of Turbo C Compiler, Keywords, Identifiers, Variables, Constants, Scope and Life of Variables, Local and Global Variable, Data Types, Expressions, Operators - Arithmetic, Logical, Relational, Conditional and Bit Wise Operators, Precedence and Associativity of Operators, Type Conversion, Basic Input/Output Library Functions ,Character Input/Output getch(), getchar().	25	10/9/21 to 5/11/21	Presentation & Practical Implementation		

		Getche(), putchar(). Formatted Input/Output - printf() and scanf(), Mathematical & Character Functions.				
III		Declaration Statement, Conditional Statement - if Statement, if else Statement, Nesting of if... .else Statement, else if Ladder, The ?: Operator, switch Statement, Iteration Statements - for Loop, while Loop, do-while Loop. Jump Statements: break, continue, goto, exit(),Arrays - Concept of Single and Multi Dimensional Arrays Strings : Declaration, Initialization, Functions.	23	6/11/21 to 11/12/21	Presentation, Practical Implementation	Test-II
IV		The Need of C Functions, User Defined and Library Function, Prototype of Functions, Prototype of main() Function, Calling of Functions, Function Arguments Passing: Call By Value and Call By Reference, Return Values. Nesting of Function, Recursion, Array as Function Argument, Command Line Arguments, Storage Class Specifier - Auto, Extern, Static, Register.	28	10/10/20 21 to 17/11/20 21	Assignments & Practical Implementation	
V		Defining Structure, Declaration of Structure Variable, Type def, Accessing Structure Members, Nested Structures, Array of Structure, Structure Assignment, Structure as Function Argument, Function that Return Structure, Union.	20	13/12/21 to 25/1/22	Presentation, Practical Implementation	Test-III

Suggested Books:

1. Programmingin in ANSI C By Balagurusamy, TMH Publications.
2. Programming With C By Gottfried Schaums Outline Series, TMH Publications
3. Thinking In C By Mahapatra, PHI Publications
4. Introduction To Computers And Information Technology By Anurag Seetha, Rain Prasad & Sons,
5. Computers Today By S.K. Basandra, Galgotia Publications.
6. Program Design By Peter Juliff, PHI Publications.

University of Science & Technology Meghalaya

Department of Computer Science & Electronics

Lesson Plan

<u>Session: 2021-22 (Even Semester)</u>

Program: MCA Semester:…III
Name of the Course: Cryptography & Network Security Course Code: MCA 302
Name of the Faculty: Dr. Bhairab Sarma

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
Test-I					
1	**Conventional Cryptography** : Definitions, Classical Cryptography, Galois Field, Unicity Distance, Entropy, Perfect	9	22/9/21-15/10/21	Lectures & Presentations	Unit I, II, III	Number of sessions may be varied based on Holiday
	Secrecy DES, AES and others symmetric cryptography	3	16/10/21-20/10/21	Lectures & Presentations		
2	**Asymmetric Cryptography:** Number Theory, public key cryptography, RSA and Elliptic Curve Cryptography,	6	21/10/21-12/11/21	Lectures & Presentations		
	Key management using symmetric and asymmetric key	4	13/11/21-20/11/21	Lectures & Presentations		
3	**Authentication:** Message authentications and hash functions, hash algorithms, Digital Signatures and	7	21/11/21-10/12/21	Lectures & Presentations		

	Authentication Protocols.					
			Test-II			
4	Operating System security : Computer systems overview, Buffer overflow, Securing UNIX	7	16/12/21-27/1/22	Lectures & Presentations	Unit IV, V	Number of sessions may be varied based on Holiday
5	Network and System Security: Vulnerability, Monitoring/Sniffing, Spoofing	7	28/1/22-12/1/22	Lectures & Presentations		
	b. Firewalls, Intrusion Detection PGP, Kerberos ,IPSec, SSL	4	13/1/22-20/1/22	Lectures & Presentations		

Suggested Books:

- Atul Kahate:Cryptography and Network Security, 2nd Edition, MGH Higher Education
- W Stallings: Cryptography and Network Security: Principles and Practice, 4/e, Prentice Hall, 2006.
- Menezes, P. van Oorshot and S. Vanstone : Handbook of Applied Cryptogrphy, CRC Press, 1997
- Schneier : Applied Cryptography, 2nd Ed, John Wiley & Sons, Inc., 1996.
- Kauffman, R. Perham and M. Speciner: Network Security: Private 4.Communication in a Public World, Prentice-Hall, 1994

HOD Computer Science and Electronics
University of Science and Technology
Approved by HoD

......(Dr. Bhairab Sarma)..........
Signature of the Faculty

....
Verified by DUC

University of Science & Technology Meghalaya

Department of CS&E

Lesson Plan

Session: 2021-22(Odd Semester)

Program: BCA

Semester: 5th sem

Name of the Course: Linux & Shell Programming

Course Code:BCA501

Name of the Faculty: Sangeeta Borkakoty

Details Plan

Unit	Topic	Targeted No. of classes	Tentative Schedule (DoC-DoE)	Tentative Pedagogy	Unit Allotted for Sessional Test	Remarks
UNIT 1	Basic Features, Different flavors of Linux. Advantages,	3		PPT presentation, Video Lecture, Practical	Test-I	
	Installing requirement, Basic Architecture of Unix/Linux system, Kernel,	3			UNIT 1, UNIT 2	
	Linux File system- Boot block, super block, Inode table, data blocks,	2				
	How Linux access files, storage files, Linux standard directories.	3				
	Shell. Commands for files and directories cd, ls, cp, md, rm, mkdir, rmdir, pwd, file, more, less, creating and viewing files using cat, file	3				
	comparisons – cmp&comm, View files, disk related commands, checking disk free spaces.	3				
	Partitioning the Hard drive for Linux, Installing the Linux system, System startup and shut-down process. Primitive Operations on Queues Queue as an Abstract Data type	3			Test-II UNIT 3,UNIT 4,UNIT 5	

	Circular Queue De-queue Priority Queue, Applications of Queue.				
UNIT 2	process fundamentals, connecting processes with pipes, Redirecting input output, manual help, Background processing, managing multiple processes,	3		PPT presentation, Video Lecture, Practical	
	changing process priority with nice, scheduling of processes at command, cron commands,	4			
	kill, ps, who, sleep, Printing commands, touch, file related commands - wc, cut, dd, etc.	3			
	Mathematical commands- bc, expr. Creating and editing files with vi& vim editor	3			
UNIT 3	Common administrative tasks, configuration and log files, Creating and managing groups, modifying group attributes,	2		PPT presentation, Video Lecture,	
	Representations as Array & Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships,	2			
	Temporary disable user's accounts, creating and mounting file system, file security & Permissions, becoming super user using su.	4			
	Getting system information with uname, host name, disk partitions & sizes, users, kernel.	3			
	Backup and restore	3			

	files, installing and removing packages with rpm command. KDE & Gnome graphical interfaces.					
UNIT 4	Shell programming- Basic of shell programming, read command,	3	DoE:10th May	PPT presentation, Video Lecture, Practical		
	Various types of shell available in Linux, comparisons between various shells, shell programming in bash,	2				
	conditional and looping statements, case statements, parameter passing and arguments,	2				
	Shell variables, system shell variables, shell keywords, Creating Shell programs for automate system tasks.	2				
	Simple filter commands – pr, head, tail, cut, paste, sort, uniq, tr. Filter using regular expressions – grep, egrep, and sed.	2				
UNIT 5	Basic networking administration: Setting up a LAN using Linux, choosing peer to peer vs client/server model, setting up an Ethernet	2	DoE: 20th July	PPT presentation, Video Lecture.		
	Lan, configuring host computers, checking Ethernet connecting, connecting to Internet,	2				
	common networking administrative tasks,	2				
	configuring Ethernet, initializing Ethernet Interface, ifconfig, netstat and netconfig commands, TCP/IP network, DNS services,	2				
	routing using Linux Installation & Administration of mail server, ftp server	2				

	and Apache web server.					

Suggested Books:

1. UNIX - Concepts & Applications (Third Ed.) By Sumitabha Das, Tata McGraw Hill Publications.

Approved by HoD

Signature of the Faculty

Verified by DUC