Punjab Association's

ANNA ADARSH COLLEGE FOR WOMEN

(Affiliated to University of Madras)

ANNA NAGAR, CHENNAI 600040

CRITERION 1

1.1.1 Curriculum Planning and Implementation

LESSON PLAN

COMPUTER SCIENCE

ANNA ADARSH COLLEGE FOR WOMEN

POST GRADUATE DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN 2021-2022

ODD SEMESTER

Head of the Department

Dr. HANNAH VIJAYKUMAR M.C.A.,M.Phil.,Ph.D.
HEAD, DEPARTMENT OF COMPUTER SCIENCE
ANNA ADARSH COLLEGE FOR WOMEN
ANNA NAGAR, CHENNAI-600040.

Principal

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9th Main Road, Anna Nagar
CHENNAI-40

Name of the Faculty : Dr. Hannah Vijaykumar

Course : PG **SEMESTER : III**

Subject Name : Information Security **Total Hours: 30 hrs**
Subject Code:PSD3B

Class : M.Sc **Section: -**

Objectives : This subject makes the students to understand the vulnerability behind the Information Systems and the ways of mitigating the risks and avoiding the issues related to these threats.

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	**UNIT I**: Introduction to Security Is there a problem in computing? What does Secure Mean Protecting variables Characteristics of Computer Intrusion **Attacks** Vulnerabilities, Threats, Attacks and Controls Method, Opportunity and Motive **Meaning of Computer Security** Security Goals Vulnerabilities **Computer Criminals** Amateurs Crackers and Malicious hackers Career Criminals Terrorists	✓					✓	✓	**Materials posted in GCR**
3	**Method of Defence Program Security** Hacking and Defence Mechanism Methodology of Hacking Classification of Hackers **Controls** Effective of controls Secure Programs Fixing faults Unexpected behaviour Types of Flaws	✓			✓		✓		
3	**Non-Malicious program Errors** Buffer overflow Incomplete mediation Time-of-check to Time-of-Use error Combination of non-malicious program flaws	✓		✓		✓	✓	✓	

	Virus and other malicious code Kind of malicious codes How virus attack, Document virus, How virus gain control, homes for viruses, virus signature, source of viruses, prevention of virus infections, examples.								
3	**Targeted Malicious code** Trojans, Trapdoors, Salami Attack, Rootkit and the Sony XCP, privilege escalation, interface illusions, keystroke logging, Man in the Middle Attack, Timing Attacks **Control Against Program Threats** Developmental Controls Program controls in general	✓			✓		✓		**Assignment posted in GCR**
3	**UNIT II**: Protection in General Purpose Operating System **Protected objects and Methods of Protection** A Bit of History Protected objects Security Methods of Operating Systems **Memory and Address Protection** Fence, Relocation, Base/Bounds Registers, Tagged Architectures, Segmentation, Paging, Combined Paging with Segmentation	✓	✓		✓		✓	✓	**Materials posted in GCR**
3	**Control of Access to General Objects** Directory, Access Control List, Access Control Matrix, Capabilities, Kerberos, Procedure Oriented Access Control, Role-Based Access Control	✓			✓		✓		
3	**File Protection Mechanism** Basic Forms of Protection Individual Permissions Per-Object and Per-User Protection	✓	✓			✓	✓	✓	**Assignment posted in GCR**
3	**Authentication Basics:** Password Authentication Additional Authentication Information, Attacks on Passwords, Password Selection Criteria, The Authentication Process Challenge Response Bio-Metric Authentication	✓	✓		✓		✓		

3	**UNIT V** **Administrating Security: Security planning** Contents of a Security Plan Contents of a Security Plan Assuring Commitment to a Security Plan Business Continuity Plans Incident Response Plans **Risk analysis** The Nature of Risk Steps of a Risk Analysis Arguments For and Against Risk Analysis	✓	✓				✓		**Materials posted in GCR**
3	**Organizational security policies** Purpose Audience Contents Characteristics of a Good Security Policy Policy Issue Example: Government E-mail	✓					✓	✓	**Assignment posted in GCR**
3	**Physical security** Natural Disasters Power Loss Surge Suppressor Human Vandals Interception of Sensitive Information	✓	✓					✓	
3	**Legal Privacy and Ethical Issues in Computer Security** Protecting Programs and Data Copyrights Patents Trade Secrets	✓			✓		✓	✓	
3	**Protecting programs and data** **Information and law** Protection for Computer Objects Information and the Law Legal Issues Relating to Information Protecting Information **Rights of employees and employers** Ownership of Products								
3	**Software failures** Redress for Software Failures Selling Correct Software Reporting Software Flaws	✓				✓	✓	✓	
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text:

1) C. P. Pfleeger, and S. L. Pfleeger, Security in Computing, Pearson Education, 4th Ed, 2003
2) Matt Bishop, Computer Security: Art and Science, Pearson Education, 2003.

Reference Books:

1) Stallings, Cryptography & N/w Security: Principles and practice, 4th Edition, 2006
2) Kaufman, Perlman, Speciner, Network Security, Prentice Hall, 2nd Edition, 2003
3) Eric Maiwald, Network Security : A Beginner's Guide, TMH, 1999
4) Macro Pistoia, Java Network Security, Pearson Education, 2nd Edition, 1999
5) Whitman, Mattord, Principles of information security, Thomson, 2nd Edition, 2005

Websites:

1) http://www.cs.gsu.edu/~cscyqz/courses/ai/aiLectures.html
2) http://www.eecs.qmul.ac.uk/~mmh/AINotes/

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Name of the Faculty : **Dr.Hannah Vijaykumar**

Course : **UG** **SEMESTER** : **III**

Total Hours: 66

Subject Name : **Statistics - I**

Subject code: SP3AA

Class : **II B.Sc** **Section: A**

Objective : **This subject will make the students to understand data collection and classification methods and the various representations of classified data.**

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
6	**UNIT I**: Methods Of Collection Complete enumeration Sample survey Collection of Data - Introduction, Nature of Data Types of Data Time series Data Spatial Data, Spacio-temporal Data Categories of Data Primary Data, Secondary Data	✓	✓				✓		**Materials posted in GCR**
6	**PRIMARY DATA:** Direct personal interviews Indirect Oral interviews Information from Correspondents Mailed Questionaire method Schedules sent through Enumerators **SECONDARY DATA:** Published Sources Unpublished Sources **Types of Variables -** Nominal Data, Ordinal Data, Scale Data	✓	✓	✓					
6	Classification of Data Objects of classification **Types of classification** Chronological classification Geographical classification Qualitative classification Quantitative classification Tabulation - Grouping and tabulation of data Meaning of Statistics Need and importance of Statistics Importance of organisation of data	✓	✓		✓		✓	✓	**Assignments in GCR**
6	**Methods of presentation of data:** (a)Tabular Presentation	✓	✓	✓				✓	

	(b)Diagrammatic Presentation (c)Graphical representation **Construction of Tables (Univariate and BI-variate)**								
6	**Frequency table:** (i) Series of Individual observations (ii) Discrete frequency distribution (iii) Continuous frequency distribution. **Exclusive and inclusive method** **Contingency Table**	✓	✓	✓				✓	
6	**Unit II:** **Diagrammatic Representation of Data:** Meaning, Importance and Limitations of Diagrammatic Representation of data **Types of Diagrams** One dimensional Diagrams Two Dimensional Diagrams Three Dimensional Diagrams Pictographs	✓						✓	
6	**ONE DIMENSIONAL DIAGRAMS** Meaning of onedimensional Diagrams Features of one dimensionaldiagrams Types of one dimensional diagrams (a)Simple bar diagrams (b)Multiple bar diagrams (c)Sub divided bar diagrams	✓	✓			✓		✓	**Assignments in GCR**
6	**TWO DIMENSIONAL DIAGRAMS** Meaning of Twodimensional diagrams Types of Two dimensional diagrams (a)Rectangle diagrams (b)sub-divided Rectangle (c)Squares diagrams (d)Circles diagrams (e)Pie diagrams	✓	✓		✓		✓		
6	**GRAPHICAL REPRESENTATION OF A FREQUENCY DISTRIBUTION -** Histogram ➢ Frequency polygon ➢ Frequency Curve ➢ Ogive ➢ Lorenz curve	✓	✓	✓		✓			
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text :

3) Fundamentals of Mathematical Statistics, Gupta, S.C and Kapoor, V. K (2002), Sultan Chand and Sons, New Delhi
4) Fundamentals of Statistics, Vol. I & II, 8th Edn., Goon A.M., Gupta M.K. and Dasgupta B. (2002): The World Press, Kolkata
5) Mathematical Statistics with Applications, (7th Edn.), Irwin Miller, Marylees Miller (2006): John E. Freund's Prentice Hall International INC
6) Introduction to the Theory of Statistics, 3rd Edn., (Reprint), Mood, A.M. Graybill, F.A. and Boes, D.C.(2007): Tata McGraw-Hill Pub. Co. Ltd

Reference Books :

Saxena H.C.: Elementary Statistics. S. Chand & Co., 2009.

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Name of the Faculty : LAKSHMI. A

Course : UG **SEMESTER : V**

Subject Name : Database Management Systems **Total Hours:100**
Subject Code:SAE5B

Class : III B.Sc. Computer Science **Section: A**

Objectives : To understand how to create and maintain databases, query languages for data retrival and basic concepts of client/server in distributed environment.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
6	Unit 1: Advantages and Components of a Database Management Systems-Feasibility Study	✓		✓					Study material Posted in GCR
6	Class Diagrams : Classes and entities, Associations and Relationships – Data Types – Events	✓		✓					Study material Posted in GCR
6	Normal Forms – Integrity – Converting Class Diagrams to Normalized Table - Data Dictionary	✓		✓					CIA 1 conducted in GCR
6	Unit 2 : Query Basics-Computation Using Queries – Subtotals and GROUP BY Command	✓		✓					Study material Posted in GCR
6	Queries with Multiple Tables – Subqueries – Joins – DDL & DML – Testing Queries	✓		✓					Study material Posted in GCR
6	Unit 3: Effective Design of Forms and Reports – Form Layout	✓		✓		✓			Seminar conducted in GCR
6	Creating Forms – Graphical Objects – Reports – Procedural Languages	✓		✓		✓			Seminar conducted in GCR
3	Data on Forms – Programs to Retrieve and Save Data – Error Handling	✓	✓	✓		✓			Seminar conducted in GCR
6	Unit-4: Power of Application Structure – User Interface Features – Transaction-Form Events	✓	✓	✓		✓	✓		Seminar conducted in GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
6	Custom Reports – Distributing Application-Table Operations-Data Storage Methods	✓	✓	✓		✓	✓		Assignment Posted in GCR
3	Storing Data Columns-Data Clustering and Partitioning	✓	✓	✓		✓			GCR
6	Unit 5 : Database Administration - Development Stages – Application Types-Backup and Recovery-Security and Privacy,Distrbuted Databases	✓	✓	✓					Study material Posted in GCR
6	Client/Server Databases – Web as a Client/Server System –Objects-Object Oriented Databases-Integrated Applications	✓	✓			✓			GCR

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Recommended Text :

G. V. Post – Database management Systems Designing and Building Business Application – McGraw Hill International edition – 1999

Reference Books :

1.Raghu Ramakrishnan – Database Management Systems – WCB/ McGraw Hill – 1998.

2.C.J. Date – An Introduction to Database Systems – 7th Edition – Addison Wesley-2000.

Websites :

https://www.tutorialspoint.com/dbms/index.htm

https://www.w3schools.com/sql/

https://www.tutorialspoint.com/sql/sql-rdbms-concepts.htm

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Name of the Faculty : LAKSHMI. A

Course : PG **SEMESTER : I**

Total Hours: 85

Subject Name : Advanced Java Programming **Subject Code:PSD1B**

Class : I M.Sc. Computer Science

Objectives : To obtain knowledge in advanced java programming concepts such as servlet, EJB, PERL, RMI and JSP and to develop Java Web Applications.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
5	Unit 1: **Servlet** overview – the Java web server – your first servlet	✓		✓					GCR
5	servlet chaining – server side includes- Session management – security	✓		✓					GCR
5	HTML forms – using JDBC in servlets – applet to servlet communication.	✓		✓	✓				Study material posted in GCR
5	Unit 2 : **Java Beans:** The software component assembly model: Javabeans architecture, Javabeans life cycle, advantages	✓		✓					GCR
5	The java beans development kit-developing beans – notable beans,- using infobus-Glasgow developments, Application Builder tool	✓		✓		✓			Seminar conducted in GCR
5	JAR files -Introspection, Bound Properties-Persistence-customizers-java beans API.	✓		✓		✓			Seminar conducted in GCR
5	Unit 3: **EJB:** EJB architecture- EJB requirements – design and implementation	✓		✓		✓			Seminar conducted in GCR
5	EJB session beans- EJB entity beans- EJB Clients – deployment tips, tricks and traps for building distributed and other systems- implementation and future directions of EJB	✓		✓		✓			Seminar conducted in GCR
5	**PERL**: Variable in perl, looping structure - Perl conditional structures - operators – functions and scope	✓	✓	✓		✓			Seminar conducted in GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
5	Unit 4:**RMI** – Overview – Developing applications with RMI:Declaring & Implementing remote interfaces	✓	✓	✓		✓	✓		Seminar conducted in GCR
5	stubs & skeletons,Registering remote objects,writing RMI clients –Pushing data from RMI Servlet – RMI over Inter- ORB Protocol	✓	✓	✓		✓	✓		GCR
5	Unit 5 : **JSP** –Introduction JSP-Examining MVC and JSP	✓	✓						GCR
5	JSP scripting elements & directives-Working with variables scopes-Error Pages - using Java Beans in JSP Working with Java Mail	✓	✓		✓				GCR
5	Understanding Protocols in Javamail-Components-Javamail API- Integrating into J2EE-Understanding Java Messaging Services-Transactions	✓	✓	✓					GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :

1) James McGovern, Rahim , Adatia, Yakor Fain, 2003, J2EE 1.4 Bible, Wiley-dreamtech India Pvt. Ltd, New Delhi
2) Herbert Schildt, 2002, Java 2 Complete Reference, 5th Edition, Tata McGraw Hill, New Delhi.
3) Jamie Jaworski, 1999, Java 2 Platform – Unleashed, First Edition, Techmedia-SAMS.

Reference Books :

1) K. Moss, 1999, Java Servlets, Second edition, Tata McGraw Hill, New Delhi.
2) D. R.Callaway,1999, Inside Servlets, Addison Wesley, Boston
3) Joseph O'Neil, 1998, Java Beans from the Ground Up, Tata McGraw Hill, New Delhi.
4) T. Valesky, T.C. Valesky, 1999, Enterprise JavaBeans, Addison Wesley.
5) Cay S Horstmann & Gary Cornell, 2013, Core Java Vol II Advanced Features, 9th Edition, Addison Wesley.

Websites :

https://www.javatpoint.com/servlet-tutorial

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Name of the Faculty : A.P.Tharani

Course : UG **Semester: III**

Subject Name : Java and Data Structures **Total Hours:85**
Subject Code:SE23A

Class : II B.Sc **Section : A**

OBJECTIVES:

To enable the students to learn the basic concepts of Java programming ·
To use class and objects to create applications.
To have an overview of interfaces, packages, multithreading and exceptions. ·
To familiarize students with basic data structures and their use in algorithms.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
2	**UNIT – I :** History and Evolution of Java Features of Java	✓		✓					
2	Object Oriented Concepts Byte code Lexical Issues	✓		✓					Assignment in GCR
2	Data Types Variables Type Conversion and Casting	✓					✓		
2	Operators - Arithmetic Operators Bitwise ,Relational Operators , Assignment Operator , The conditional Operator, Operator Precedence	✓					✓		
2	Control Statements Arrays	✓			✓				Online C++ Compiler and editor
3	**UNIT – II :** Classes and Objects: Constructors	✓		✓	✓				Material posted in GCR
2	Operator Methods Static and fixed methods	✓							Online C++ Compiler and editor
2	Inner Classes String Class	✓		✓	✓				Online C++ Compiler and editor

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
2	Overriding methods Using super Abstract class this keyword	✓		✓					
2	finalize() method Garbage Collection	✓					✓		
3	**UNIT – III :** Packages Access Protection Importing Packages Interfaces	✓				✓	✓		
3	Exception Handling Throw and Throws	✓	✓		✓				Online C++ Compiler and editor
3	The Java Thread Model Creating a Thread and Multiple Threads, Thread Priorities	✓	✓						Online C++ Compiler and editor
2	Synchronization Inter thread Communication	✓	✓		✓				Online C++ Compiler and editor
2	Deadlock - Suspending, Resuming and stopping threads Multithreading	✓	✓			✓			
4	I/O Streams File Streams Applets	✓		✓	✓	✓			
2	**UNIT – IV :** Abstract Data Types(ADTs) List ADT-Array based implementation Linked list implementation	✓		✓					
4	Singly linked list Doubly linked list Circular linked list	✓	✓	✓	✓				Online C++ Compiler and editor
5	Stack ADT operations Applications-Evaluating arithmetic expressions Conversion of infix to postfix expression	✓	✓	✓	✓		✓		Online C++ Compiler and editor Material posted in GCR

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
3	Queue ADT-operations-Applications of Queues.	✓	✓	✓	✓				Online C++ Compiler and editor Material posted in GCR
2	**UNIT – V :** Trees Binary Trees Representation Operations on Binary Trees	✓	✓	✓					Online C++ Compiler and editor
2	Traversal of a Binary Tree Binary Search Trees	✓	✓				✓		Material posted in GCR
2	Graphs Representation of Graphs	✓	✓				✓		
2	Traversal in Graph Dijkstra's Algorithm, Depth-First vs Breadth-First Search.	✓	✓						Online C++ Compiler and editor

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

TEXT BOOKS:

1. E.Balagurusamy," *Programming with Java: A Primer*", Tata McGraw Hill 2014, 5th Edition.
2. Mark Allen Weiss, "*Data Structures and Algorithms Analysis in C++*", Person Education 2014, 4th Edition.

REFERENCES:

1. Herbert Schildt, "*JAVA 2: The Complete Reference*", McGraw Hill 2018, 11th Edition.
2. Aho, Hopcroft and Ullman, "*Data Structures and Algorithms* ", Pearson Education 2003.
3. S. Sahni, "*Data Structures, Algorithms and Applications in JAVA*", Universities Press 2005, 2nd Edition

WEB REFERENCES:

- NPTEL & MOOC courses titled Java and Data Structures
- https://nptel.ac.in/courses/106106127/
- https://nptel.ac.in/courses/106105191/

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Name of the Faculty : A.P.Tharani

Course : UG **Semester : III**

Subject Name : Statistics - I **Total Hours:66**
Subject Code:SP3AA

Class : II B.Sc **Section : B**

Objective : This course introduces the basic concepts of Statistics , its various measures and its applications

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
6	**UNIT I**: Methods Of Collection Complete enumeration Sample survey Collection of Data - Introduction, Nature of Data Types of Data Time series Data Spatial Data, Spacio-temporal Data Categories of Data Primary Data, Secondary Data	✓				✓	✓		Materials posted in GCR
6	PRIMARY DATA: Direct personal interviews Indirect Oral interviews Information from Correspondents Mailed Questionnaire method Schedules sent through Enumerators SECONDARY DATA: Published Sources Unpublished Sources Types of Variables - Nominal Data, Ordinal Data, Scale Data	✓		✓		✓			
6	Classification of Data Objects of classification Types of classification Chronological classification Geographical classification Qualitative classification Quantitative classification Tabulation - Grouping and tabulation of data Meaning of Statistics Need and importance of Statistics Importance of organisation of data	✓			✓	✓	✓		

10	Methods of presentation of data: (a)Tabular Presentation (b)Diagrammatic Presentation (c)Graphical representation Construction of Tables (Univariate and Bi-variate) Frequency table: (i) Series of Individual observations (ii) Discrete frequency distribution (iii) Continuous frequency distribution. Exclusive and inclusive method Contingency Table	✓	✓	✓		✓			
4	**<u>Unit II:</u>** Diagrammatic Representation of Data: Meaning, Importance and Limitations of Diagrammatic Representation of data Types of Diagrams One dimensional Diagrams Two Dimensional Diagrams Three Dimensional Diagrams Pictographs	✓	✓	✓				✓	
6	ONE DIMENSIONAL DIAGRAMS Meaning of one dimensional Diagrams Features of one dimensional diagrams Types of one dimensional diagrams (a)Simple bar diagrams (b)Multiple bar diagrams (c)Sub divided bar diagrams TWO DIMENSIONAL DIAGRAMS Meaning of Two dimensional diagrams Types of Two dimensional diagrams (a)Rectangle diagrams (b)sub-divided Rectangle (c)Squares diagrams (d)Circles diagrams (e)Pie diagrams	✓	✓				✓	✓	Assignments
6	GRAPHICAL REPRESENTATION OF A FREQUENCY DISTRIBUTION - Histogram ➢ Frequency polygon ➢ Frequency Curve ➢ Ogive ➢ Lorenz curve	✓	✓	✓			✓		Material posted in GCR

5	**UNIT IV** Partition Values Quartiles Deciles Percentiles	✓	✓						
5	MEASURES OF DISPERSION: Range Absolute range Coefficient of range Quartile Deviation Coefficient of Quartile Deviation	✓	✓		✓	✓			
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text :

1) Fundamentals of Mathematical Statistics, Gupta, S.C and Kapoor, V. K (2002), Sultan Chand and Sons, New Delhi
2) Fundamentals of Statistics, Vol. I & II, 8th Edn., Goon A.M., Gupta M.K. and Dasgupta B. (2002): The World Press, Kolkata
3) Mathematical Statistics with Applications, (7th Edn.), Irwin Miller, Marylees Miller (2006): John E. Freund's Prentice Hall International INC
4) Introduction to the Theory of Statistics, 3rd Edn., (Reprint), Mood, A.M. Graybill, F.A. and Boes, D.C. (2007): Tata McGraw-Hill Pub. Co. Ltd

Reference Books :

1) Saxena H.C.: Elementary Statistics. S. Chand & Co., 2009.

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Name of the Faculty : PARAMESWARI A

Course : UG **SEMESTER : V**

Subject Name : DATABASE MANAGEMENT SYSTEMS **Total Hours:100**
Subject Code:SAE5B

Class : III **SECTION : B**

Objectives : Upon completion of this course, students will be able tounderstand the refinement of tables by applying normalization techniques. They can able to write complex queries using SQL.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
6	Unit 1: Advantages and Components of a Database Management Systems	✓	✓						QUIZ
6	Feasibility Study – Class Diagrams – Data Types – Events	✓	✓	✓				✓	ASSIGNMENT
6	Normal Forms – Integrity – Converting Class Diagrams to Normalized	✓	✓	✓				✓	
6	Tables – Data Dictionary- Unit 2 : Query Basics	✓	✓		✓	✓	✓		MS Office - Tables & Shapes
6	Computation Using Queries – Subtotals and GROUP BY Command	✓	✓		✓	✓			SQL tryit Editor
6	Queries with Multiple Tables – Subqueries – Joins	✓	✓		✓			✓	SQL tryit Editor
6	DDL & DML – Testing Queries	✓	✓		✓			✓	SQL tryit Editor
6	Unit 3: Effective Design of Forms and Reports – Form Layout	✓	✓			✓	✓		Power Point Board
6	Creating Forms – Graphical Objects – Reports – Procedural Languages	✓	✓		✓	✓	✓		
6	Data on Forms – Programs to Retrieve and Save Data – Error Handling	✓	✓				✓		Google Slides

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
6	Unit-4: Power of Application Structure – User Interface Features – Transaction-Form Events	✓	✓		✓		✓		
6	Custom Reports – Distributing Application-Table Operations-Data Storage Methods	✓	✓	✓	✓	✓	✓		
6	Storing Data Columns-Data Clustering and Partitioning-Unit 5 : Database Administration-Development Stages – Application Types-	✓	✓	✓				✓	
6	Backup and Recovery-Security and privacy, Distributed Databases-Client /Server Databases-Web as a Client/Server System –Objects-Object Oriented Databases-Integrated Applications	✓	✓		✓		✓		

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : G. V. Post – Database management Systems Designing and Building Business Application – McGraw Hill International edition – 1999

Reference Books : 1.Raghu Ramakrishnan – Database Management Systems – WCB/ McGraw Hill – 1998.

2.C.J. Date – An Introduction to Database Systems – 7th Edition – Addison Wesley-2000.

Websites : https://www.tutorialspoint.com/dbms/index.htm
https://www.tutorialspoint.com/sql/sql-rdbms-concepts.htm
https://www.w3schools.com/sql/

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Name of the Faculty: PARAMESWARI A

Course : PG SEMESTER: I

Subject Name : DESIGN AND ANALYSIS OF ALGORITHMS

Total Hours: 85
Subject Code:PSD1A

Class : I M.Sc Computer Science

Objectives : Upon completion of this paper, students can able to understand problems by applying appropriate algorithms. They can able to analyze the efficiency of various algorithms. They can solve a problem by applying a suitable method.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
5	Unit I :- Introduction- Definition of Algorithm- Pseudo code conventions - Recursive Algorithms	✓							GCR
5	Time and Space Complexity, Big-O notation-Practical Complexities- Randomized Algorithms.	✓		✓			✓	✓	GCR
5	Repeated Element-Primality Testing, Divide & Conquer:- - General Method- Finding Maximum and Minimum- Merge Sort	✓		✓				✓	GCR
5	Unit II- Quick Sort- Selection Sort-Strassen's Matrix Multiplication- Greedy Method	✓			✓		✓		GCR
5	Knapsack Problem- Tree Vertex Splitting-Job Sequencing with deadlines- Optimal storage on tapes	✓	✓	✓				✓	GCR
5	Unit III-Dynamic Programming:- General Method- Multistage Graphs-All Pairs shortest paths- String Editing	✓	✓	✓	✓		✓		GCR
5	0/1 Knapsack- Search Techniques for Graphs- BFS-DFS- Connected components –Bi connected Components	✓	✓	✓	✓		✓	✓	
5	Unit IV-Back Tracking:-General Method-8 Queens- Sum of Subsets-Graph Coloring, Hamiltonian Cycles	✓	✓	✓			✓		

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
5	Branch and Bound-General Method,Traveling Salesperson problem- Unit V- Lower Bound Theory:- Comparison Trees-Oracles & advisory arguments	✓	✓	✓	✓	✓	✓	✓	
5	Lower Bound through reduction-Basic concepts of NP Hard and NP Complete problems	✓		✓		✓	✓		
5	Client /Server Databases Web as a Client/Server System – Objects Object Oriented Databases Integrated Applications	✓		✓		✓		✓	

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : Computer Algorithms-E. Horowitz, S.Sahni and S.Rajasekaran, 1999, Galgotia, New Delhi.

Reference Books : G Brasard and P.Bratley, 1997, Fundamentals of Algorithms, PHI, New Delhi
A V Aho, J E Hopcroft, J D Ullman,1974,The Design and Analysis of Computer Algorrithms, Addison Wesley, Boston

R. Shanthi

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A. Parameswari

Hannah Vijaykumar

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Name of the Faculty : M.Revathy Meenal

Course :PG **SEMESTER :III**

Subject Name :Big data and Analytics **Total Hours:100**
Subject Code:PSDED

Class : II MSc Computer science Section:

Objectives : Big Data analytics is a process used to extract meaningful insights, such as hidden patterns, unknown correlations, market trends, and customer preferences. Big Data analytics provides various advantages. It can be used for better decision making, preventing fraudulent activities, among other things.

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 1 3 hrs	**Unit 1:** Basic nomenclature • Analytics process model • Analytics model requirements	✓			✓				Test given through GCR , Jamboard
2hrs	Types of datasources • Data Collection • Sampling • Pre processing Types of data elements • Visual Data Exploration and Exploratory Statistical Analysis	✓				✓			Jamboard
Week 2 3 hrs	Missing Values • Outlier Detection and Treatment Standardizing Data • Categorization • weights of evidence coding • Variable selection Segmentation.	✓							Jamboard
2hrs	**Unit 2:** Predictive Analytics: • Target Definition • Linear Regression – • Logistic Regression • Decision trees	✓			✓	✓			Test given through GCR , Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 3 2hrs	Neural Networks • Support Vector machines • Ensemble Methods • Multiclass ClassificationTechniques Evaluating Predictive Models.	✓							
3hrs	**Unit 3:** Descriptive Analytics: • Association Rules • Sequence Rules • Segmentation • Survival Analysis: Survival Analysis Measurements Parametric Survival Analysis.	✓			✓	✓			Jamboard
Week 4 2hrs	**Unit 4:** Social Network Analytics: • Social Network Definitions – • Social Network Metrics - SocialNetwork Learning Relational Neighbor Classifier • Probabilistic Relational Neighbor Classifier Relational logistic Regression Collective Inference.	✓							Jamboard

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
week5 5hrs	**Unit 5:** Benchmarking – Back test Analytical • Data Quality • Software • Privacy • Model Design and Documentation	✓		✓		✓			Jamboard
week5 5hrs	Corporate Governance. • Example applications: Credit Risk Modeling	✓		✓					
week6 5hrs	Fraud Detection • Recommender Systems • Web Analytics.	✓			✓		✓		Test , Assignment given through GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :1. Baesens, 2014, Analytics in a Big Data World: The Essential Guide to Data Science and Its applications, Wiley India Private Limited

Reference Books :

1. Michael Minelli, Michele Chambers, 2013, Big Data, Big Analytics: Emerging Business Intelligence and Analytic Trends for Today's Businesses, Wiley CIO

2.Stephan Kudyba, 2014, Big Data, Mining and Analytics: Components of Strategic Decision Making, CRC Press.

3.Frank J. Ohlhorst, 2013, Big data Analytics: Turning Big Data into Big Money, Wiley and SAS Business Series.

4.Foster Provost, Tom Fawcett, 2013, Data Science for Business, SPD.

Websites :http://www.tutorialpoint.com

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Name of the Faculty : M Revathy Meenal

Course :PG SEMESTER :III

Subject Name :FUNDAMENTALS OF INFORMATION TECHNOLOGY **Total Hours:85**

Class : II M.COM Section: - Subject Code:KDA31

Objectives : To offer basic skills in computer applications and to develop working knowledge on business related software to the students

Hour	TOPICSCOVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 1 2 hrs	**UNIT I** Introduction to Computer Computer What is computer? Functionalities of a computer Computer Components HARDWARE AND SOFTWARE Central Processing Unit (CPU) Primary Memory, Secondary Memory Output devices, Software Unit of Measurements Computers classification Laptop and Smartphone Computers Data, Information and Knowledge Characteristics of Computer Computer Viruses Classification of Digital Computer System Micro Computer, Mini Computer, Mainframe Computer, Super Computer	✓				✓			Test given through GCR , Jamboard
2 hrs	Computer Architecture Number, Conversions, Compliments 1's Compliment, 2's Compliment, 9's Compliment, 10's Compliment Logic Gates AND, NOT, OR Truth Table, Boolean Algebra Table Simplification of Boolean Function	✓		✓		✓	✓		Jamboard
Week 2 2 hrs	**UNIT II** Introduction to Computer Software 1.Computer Application Software 2. Types of Computer Software 3. Software Licensing 4. Types of Software License 5. Software Privacy Software : Programming in 'C',Variables, Data type, operators, Conditions, Loops, Arrays, Union, Structure, Functions, Files, Pointers	✓				✓	✓		Test given through GCR ,

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

2hrs	DBMS Introduction Components of DBMS DDL DML DCL Report Table operation method Data storage method Database Administration RDBMS -Implementing Number Sorting Matrix Addition Multiplication Palindrome Checking, Searching an Element an Array	✓	✓			✓			Jamboard
Week 3 2 hrs	**UNIT III** MS- WORD Creating Word Document Editing Text Adding and Formatting Numbers Symbols Getting into Print MS-EXCEL Creating Tables Using EXCEL Using Tables and Creating Graphs	✓	✓		✓				Jamboard
2 hrs	MS-ACCESS Planning and Creating Tables, forms Modifying Tables, Creating relational Database, Form Design, Reports MS-POWERPOINT Preparing Power Point Presentation for Marketing Products such as CREDIT CARD, Newly Introduced Cosmetic item etc	✓	✓	✓		✓	✓		Assignment given through GCR
Week 4 2 hrs	**UNIT IV** Introduction to Internet Resources of Internet Hardware Requirement of Internet Software Requirement of Internet	✓			✓	✓	✓		Jamboard
2 hrs	Internet Service Providers What does ISP mean? Why use an ISP? How does the ISP connect you to the Internet? Differences between ISPs Creating an E-Mail Account Sending and Receiving Messages with Attachments to our friends account Multimedia and its Applications	✓			✓	✓	✓		Jamboard

Week 5 2hrs	**UNIT V** Application software Identify the four categories of application software Describe characteristics of a user interface Identify the key features of widely used business programs Identify the key features of widely used graphics and multimedia programs Identify the key features of widely used home, personal, and educational programs	✓	✓		✓	✓	✓		Jamboard
2 hrs	Identify the types of application software used in communications Describe the learning aids available for application software Accounting packages Enterprise Accounting Software Cloud Accounting Software Payroll and Accounting Software Installed Accounting Software Commercial Off-the-Shelf (COTS) Software	✓		✓	✓	✓			Jamboard
Week 6 2 hrs	Statistical packages Microsoft Excel SPSS, SAS, Stata, R Preparation of financial statements	✓	✓	✓		✓			Jamboard
2hrs	Statistical analysis Identify the industry economic characteristics Identify company strategies. Assess the quality of the firm's financial statements Analyze current profitability and risk Prepare forecasted financial statements Value the firm	✓		✓	✓	✓	✓	✓	Jamboard

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text: Alexis Leon & Mathew Leon, Fundamental of information Technology, Vikas Publishing Home Pvt.,Ltd

Reference Books: James A. Senn, Information Technology in Business Principles; Practices and opportunities, International Edition, Prentice Hall

Corey Sandler, Tom Badget, Jan Wein Garten, Ms-Office for Windows

Websites : www.gurukpo.com/admin/bookpdf/66.pdf

www.springer.comhttps://lo.unisa.edu.au/mod/book/view.php?id=631718

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Name of the Faculty : **M.Revathy Meenal**

Course :**UG** **SEMESTER** :**V**

Subject Name :**Operating Systems** **Total Hours:30**
Subject Code:SAE5A

Class : **III BSc.Computer Science** **Section: A**

Objectives : This course introduces the functions of operating systems. Course outline

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 1 1 hr	**Unit 3:** Memory Management : Address Binding • What is address binding in the operating system? • Types of Address Binding in Operating System • Difference between Preemptive and Non-Preemptive Scheduling	✓			✓				Test given through GCR , Jamboard
1 hr	Dynamic Loading and Linking What is Linking? Static Linking: Dynamic Linking:	✓				✓			Jamboard
Week 2 1 hr	Overlays • Logical and Physical Address Space • Parameters • Logical • Physical	✓							Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
1 hr	Contiguous Allocation • Advantages • Disadvantages Internal & External Fragmentation • Types of Fragmentation 1. Internal Fragmentation 2. External Fragmentation	✓			✓	✓			Test given through GCR , Jamboard
Week 3 1 hr	Non Contiguous Allocation • Variable Partitioning, • Fixed Partitioning	✓							Jamboard
1 hr	• Paging and Segmentation schemes • Paging Protection • Example of Paging • Segmentation					✓			Jamboard

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 4 1 hr	Implementation – Hardware Protection	✓		✓		✓			Jamboard
1 hr	Sharing - Fragmentation.	✓			✓	✓			Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :

1. A.Silberschatz and P.B.Galvin-Operating System Concepts - Addision-Welsey Publishing Company, 8th Edn, 2011
2. D.M.Dhamdere,Operating System: A Concept based approach , Second Edition, Tata McGraw Hill Education,1999.
3. A.S.Godbole-Operating Systems-Tata McGraw Hill-1999.

Reference Books :

1. H.Deitel and P.Deital, Operating System, Third Edition, Pearson 2003
2. 2. G.Nutt, Operating System, Third Edition, Pearson, 2003.

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Name of the Faculty: M.Revathy Meenal

Course **:UG** **SEMESTER : I**

Total Hours:30

Subject Name **:Non Major Elective-HTML** **Subject Code: SE51C**

Class **: I BSc. Psychology** **Section:**

Objectives : This course introduces to the tags used in HTML . To use Knowledge of HTML and the basic tools that every Web page coder needs to know. To implement modern Web pages with HTML.

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 1 1 hr	**Unit 1:** Introduction : • Web Basics: • What is Internet		✓		✓				Jamboard
1 hr	• Web browsers • What is Web page • HTML Basics: • Understanding tags.	✓		✓		✓			Jamboard
Week 2 1 hr	**Unit 2:** • Tags for Document structure HTML, Head, Body Tag.	✓							Mareials posted in GCR Jamboard
1 hr	Block level text elements: • Headings paragraph(tag) Font style elements: • bold, italic, font, small, strong, strike, big tags	✓			✓	✓			Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 3 1 hr	**Unit 3:** • Lists: Types of lists: Ordered, Unordered • Nesting Lists	✓	✓	✓	✓	✓			Jamboard
1 hr	Other tags: • Marquee, HR, BR- Using Images • Creating Hyperlinks.	✓	✓	✓	✓	✓			Jamboard
Week 4 1 hr	**Unit 4:** Tables: • Creating basic Table, Table elements, Caption Table and cell alignment • Rowspan, Colspan • Cell padding	✓	✓	✓	✓				Assignment given in GCR Jamboard

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ☒the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week5 1 hr	**Unit 5:** • Frames: Frameset • Targeted Links. • No frame	☒			☒	☒			Jamboard
1 hr	Forms : • Input, Textarea, Select, Option	☒			☒	☒			Jamboard

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :

1. Laura Lemay, "HTML Complete Reference, Teach Yourself Web Publishing with HTML".

Reference Books :

1.E Stephen Mack, Janan Platt , "HTML".

WEB REFERENCES :

NPTEL & MOOC courses titled HTML.

https://www.codecademy.com/learn/learn-html

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Name of the Faculty : K MAHESWARI

Course : UG **SEMESTER : V**

Subject Name : OPERATING SYSTEMS **Total Hours:18**
Subject Code: SAE5A

Class : III Year **Section: A**

Objectives : This course introduces the functions of operating systems

- **To understand the structure and functions of the Operating Systems**
- **To compare the performance of the CPU Scheduling Algorithms**
- **To analyze resource management techniques**

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
6	**UNIT -I** Introduction: Views Goals Types of system OS Structure Components Services System Structures Layered Approach Virtual Machines System Design and Implementation.	✓		✓		✓			GCR https://youtu.be/vBURTt97EkA
6	Process Management: Process Process Scheduling Cooperating Process Threads Inter process Communication	✓		✓	✓		✓	✓	GCR https://youtu.be/vBURTt97EkA
4	CPU Scheduling : CPU Schedulers Scheduling criteria Scheduling Algorithms	✓		✓		✓	✓	✓	GCR https://youtu.be/vBURTt97EkA
6	**UNIT-II** Process Synchronization: Critical-Section problem Synchronization Hardware Semaphores Classic Problems of Synchronization Critical Region Monitors.	✓		✓			✓		GCR tps://youtu.be/vBURTt97EkA Material Posted in GCR

4	Deadlock: Characterization Methods for handling Deadlocks Prevention Avoidance Detection of Deadlock Recovery from deadlock.	✓		✓		✓			GCR https://youtu.be /FVmwvZNQgt0
1.Lecture 2.BlackBoard 3.PowerPoint Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text: Silberschatz, GalvinP.B., Gange,. 2002, Operating System Principles, Sixth Edition, John Wiley& Sons. .

Reference Books: H.M.Deitel, 1990, An Introduction to Operating System, Second Edition, Addison Wesley

Websites

http://bcs.wiley.com/he-bcs / Books? action= resource & itemId= 0471250600 & bcsId=1743& resourceId=2437

https://www.cse.iitb.ac.in/~mythili/os/

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Name of the Faculty : K MAHESWARI

Course : UG **SEMESTER** : III

Subject Name : ALLIED STATISTICS - I **Total Hours:12**

Subject Code:SP3AA

Class : II Year **Section: A**

Objectives : This subject makes the student understand the basic concepts of Statistics like Probability, Correlation and Analysis of Data in to their day to day activities.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns						ICT Tools
		1	2	3	4	5	6	
5	**UNIT- III** Analysis of Data (Univariate) Measures of central tendency: Arithmetic Mean ➢ Properties of Arithmetic Mean ➢ Methods to calculate Arithmetic Mean ➢ Examples	✓				✓	✓	GCR
5	Analysis of Data (Univariate) ➢ Weighted Arithmetic Mean ➢ Corrected Mean ➢ Combined Mean ➢ Example Sums	✓		✓		✓	✓	Material shared in GCR
4	Analysis of Data (Univariate) ➢ Merits, demerits and uses of Arithmetic Mean ➢ Example Sums	✓		✓		✓	✓	Material shared in GCR
5	Analysis of Data (Univariate) Measures of central tendency: Median ➢ Calculation of Median ➢ Merits, demerits and uses of Median ➢ Example Sums	✓		✓		✓	✓	Material shared in GCR

4	**Analysis of Data (Univariate)** **Measures of central tendency: Median** ➢ **Graphic Location of Median** ➢ **Example Sums**	✓				✓	✓	**GCR**
5	**Analysis of Data (Univariate)** **Measures of central tendency: Mode** ➢ **Types of Modal Series** ➢ **Computation of Mode** ➢ **Empirical Relation between Mean, Median & Mode** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**
5	**Analysis of Data (Univariate)** **Measures of central tendency: Mode** ➢ **Merits, demerits and uses of Mode** ➢ **Graphical Representation of Mode** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**
4	**Analysis of Data (Univariate)** **Measures of central tendency: Mode** ➢ **Empirical Relation between Mean, Median & Mode** ➢ **Example Sums using Mean, Median and Mode**	✓		✓		✓	✓	**Material shared in GCR**
5	**Analysis of Data (Univariate)** ➢ **Choice of an average** ➢ **Features of good average** ➢ **Comparison among Mean, Median & Mode** ➢ **Example Sums using Mean, Median and Mode**	✓		✓		✓	✓	**Material shared in GCR**
1. Lecture 2.Power Point Presentation 3.Test 4.Seminar 5.Assignment 6.Group Discussion								

Recommended Text	**: Statistical Methods by SP Gupta**
Reference Books	**: Comprehensive Statistical Methods by PN Arora - S. Chand** **https://www.schandpublishing.com › commerce-management**
Websites	**: https://www.emathzone.com › tutorials › basic-statistics** **https://www.bmj.com › publications › statistics-square-one**

https://towardsdatascience.com/basic-probability-theory-and-statistics-3105ab637213

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Name of the Faculty : K MAHESWARI

Course : UG **SEMESTER : III**

Subject Name : ALLIED STATISTICS - I Total Hours:12

Subject Code:SP3AA

Class : II Year **Section: B**

Objectives : This subject makes the student understand the basic concepts of Statistics like Probability, Correlation and Analysis of Data in to their day to day activities.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns						ICT Tools
		1	2	3	4	5	6	
5	**UNIT- III** **Analysis of Data (Univariate)** **Measures of central tendency: Arithmetic Mean** ➢ **Properties of Arithmetic Mean** ➢ **Methods to calculate Arithmetic Mean** ➢ **Examples**	✓				✓	✓	**GCR**
5	**Analysis of Data (Univariate)** ➢ **Weighted Arithmetic Mean** ➢ **Corrected Mean** ➢ **Combined Mean** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**
4	**Analysis of Data (Univariate)** ➢ **Merits, demerits and uses of Arithmetic Mean** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**
5	**Analysis of Data (Univariate)** **Measures of central tendency: Median** ➢ **Calculation of Median** ➢ **Merits, demerits and uses of Median** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**

4	**Analysis of Data (Univariate)** **Measures of central tendency: Median** ➢ **Graphic Location of Median** ➢ **Example Sums**	✓				✓	✓	**GCR**
5	**Analysis of Data (Univariate)** **Measures of central tendency: Mode** ➢ **Types of Modal Series** ➢ **Computation of Mode** ➢ **Empirical Relation between Mean, Median & Mode** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**
5	**Analysis of Data (Univariate)** **Measures of central tendency: Mode** ➢ **Merits, demerits and uses of Mode** ➢ **Graphical Representation of Mode** ➢ **Example Sums**	✓		✓		✓	✓	**Material shared in GCR**
4	**Analysis of Data (Univariate)** **Measures of central tendency: Mode** ➢ **Empirical Relation between Mean, Median & Mode** ➢ **Example Sums using Mean, Median and Mode**	✓		✓		✓	✓	**Material shared in GCR**
5	**Analysis of Data (Univariate)** ➢ **Choice of an average** ➢ **Features of good average** ➢ **Comparison among Mean, Median & Mode** ➢ **Example Sums using Mean, Median and Mode**	✓		✓		✓	✓	**Material shared in GCR**
1. Lecture 2.Power Point Presentation 3.Test 4.Seminar 5.Assignment 6.Group Discussion								

Recommended Text	: Statistical Methods by SP Gupta
Reference Books	: Comprehensive Statistical Methods by PN Arora - S. Chand https://www.schandpublishing.com › commerce-management
Websites	: https://www.emathzone.com › tutorials › basic-statistics https://www.bmj.com › publications › statistics-square-one

https://towardsdatascience.com/basic-probability-theory-and-statistics-3105ab637213

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Dr. HANNAH VIJAYKUMAR M.C.A.,M.Phil.,Ph.D.
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Name of the Faculty : P.PAKUTHARIVU

Course : UG **SEMESTER : V**

Subject Name : COMPUTER ARCHITECTURE AND ORGANIZATION (SAE5C)

Total Hours:100

Subject Code:SAE5C

Class : III B.Sc **Section: A**

Objectives **:** This course introduces the architecture of various computers and its organization

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – I : Computer Evolution: Pentium and Power PC Evolution	✓		✓			✓		Assignments in GCR
3	Computer system: Components Function Interconnection structures	✓		✓					
2	Bus interconnection Basics of PCI Bus	✓		✓			✓		Assignments in GCR
2	Memory: Characteristics Hierarchy	✓		✓					
3	Cache memory Principles Cache Design Locality of Reference	✓		✓	✓				
3	UNIT – II : Main memory: Static RAM Dynamic RAM Types of ROM	✓		✓			✓		Assignments in GCR
2	Memory chip organization Types of DRAM	✓		✓					
2	External Memory: Magnetic disk Basics of RAID	✓		✓	✓				Posted Study material in GCR
3	Optimal Memory Magnetic Tapes	✓		✓			✓		

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – III : Input/Output: External Devices I/O Module	✓		✓	✓				
3	Programmed I/O Interrupt Driven I/O	✓		✓					
2	DMA I/O Channels & Processors	✓		✓			✓		Assignments in GCR
3	Computer Arithmetic: ALU Integer Representation and Arithmetic Floating point Representation and Arithmetic	✓		✓					
3	Instruction Set: Characteristics Operand types Operation types	✓		✓					
3	Addressing Modes Instruction formats Pentium and power PC operands Operations Addressing modes(Simple Examples)	✓		✓			✓		Assignments in GCR
2	UNIT – IV: CPU: Organization of Processors and Registers	✓		✓					
3	Instruction Cycle Instruction Pipelining	✓		✓					
2	Pentium Processor RISC: Characteristics	✓		✓					
2	Large Register File Register Optimization	✓		✓					
3	Architecture RISC vs CISC Characteristics Pipelining	✓		✓	✓		✓		Assignments in GCR
2	UNIT – V: Control Unit: Micro Operations	✓		✓	✓				Conducted Test in GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	Control of Processors Hardwired Implementation	✓		✓		✓			
3	Micro Programmed Control Concepts	✓		✓	✓	✓		✓	Assignments in GCR
1	Micro instruction Sequencing	✓		✓	✓	✓	✓		
3	General Micro instruction Execution	✓		✓		✓			

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : (i). W. Stallings, 2003, Computer Organization and Architecture,6th Edition – PHI, New Delhi.

Reference Books : (i). C. Hamacher, Z. Vranesic, S. Zaky, 2002, Computer Organization, 5th Edition, McGraw Hill.

Websites : (i). www.geeksforgeeks.org

(ii). www.cs.iit.edu

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Name of the Faculty : P.PAKUTHARIVU

Course : UG **SEMESTER : III**

Subject Name : JAVA AND DATA STRUCTURES(SE23A) **Total Hours:85**
Subject Code:SE23A

Class : II B.Sc **Section: B**

Objectives :

- To enable the students to learn the basic concepts of Java programming
- To use class and objects to create applications
- To have an overview of interfaces, packages, multithreading and exceptions.
- To familiarize students with basic data structures and their use in algorithms.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – I : History and Evolution of Java Features of Java	✓		✓			✓		Assignments in GCR
2	Object Oriented Concepts Bytecode	✓		✓					
3	Lexical Issues Data Types Variables Type Conversion and Casting	✓		✓					
1	Operators: Arithmetic Operators Bitwise Relational Operators Assignment Operator The conditional Operator	✓		✓					
2	Operator Precedence Control Statements Arrays	✓		✓	✓		✓		Assignments in GCR
3	UNIT – II : Classes and Objects: Constructors Destructors	✓		✓					Online Java Compiler and editor
3	Overloading method Static and fixed methods	✓		✓					Online Java Compiler and editor
3	Inner Classes String Class Overriding methods	✓		✓					
2	Using super Abstract class	✓		✓			✓		Assignments in GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	this keyword finalize() method Garbage Collection	✓		✓	✓		✓		Assignments in GCR
2	UNIT – III : Packages Access Protection Importing Packages	✓		✓					
2	Interfaces Exception Handling Throw and Throws	✓		✓					
2	The Java Thread Model Creating a Thread and Multiple Threads - Thread Priorities Synchronization	✓		✓	✓				Test Conducted in GCR
2	Inter thread Communication Deadlock - Suspending, Resuming and stopping threads	✓		✓					
2	Multithreading I/O Streams File Streams Applets	✓		✓					
3	Unit IV: Abstract Data Types(ADTs) List ADT Array based implementation	✓		✓		✓			Online Java Compiler and editor
3	linked list implementation singly linked list	✓		✓					
2	doubly linked list circular linked list	✓		✓					Online Java Compiler and editor
3	Stack ADT operations- Applications	✓		✓					Online Java Compiler and editor
2	Evaluating arithmetic expressions Conversion of infix to postfix expression	✓		✓					Study Materials Posted in GCR
3	Queue ADT Operations Applications of Queues	✓		✓	✓		✓		Online Java Compiler and editor

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – V: Trees: Binary Trees Representation Operations on Binary Trees	✓		✓		✓			Study Materials Posted in GCR
3	Traversal of a Binary Tree- Binary Search Trees	✓		✓		✓			Online Java Compiler and editor
3	Graphs: Representation of Graphs Traversal in Graph	✓		✓	✓	✓	✓		Online Java Compiler and editor
3	Dijkstra's Algorithm Depth-First vs Breadth-First Search	✓		✓		✓			

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : 1. E.Balagurusamy," Programming with Java: A Primer", Tata McGraw Hill 2014, 5th Edition.

2. Mark Allen Weiss, "Data Structures and Algorithms Analysis in C++", Person Education 2014, 4 th Edition.

Reference Books : 1. Herbert Schildt, "JAVA 2: The Complete Reference", McGraw Hill 2018, 11th Edition.

2.Aho, Hopcroft and Ullman, "Data Structures and Algorithms ", Pearson Education 2003.

3. S. Sahni, "Data Structures, Algorithms and Applications in JAVA", Universities Press 2005, 2nd Edition

Websites :

- NPTEL & MOOC courses titled Java and Data Structures
- https://nptel.ac.in/courses/106106127/
- https://nptel.ac.in/courses/106105191/

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Name of the Faculty : UNNAMALAI K

Course : UG **SEMESTER : V**

Subject Name : OPERATING SYSTEM **Total Hours:100**
Subject Code:SAE5A

Class : B.Sc **Section: B**

Objectives : This course introduces the functions of operating systems

- Understand the structure and functions of Operating System
- Compare the performance of Scheduling Algorithms
- Analyze resource management techniques

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
4	**UNIT I** Introduction: Views Goals Types of system OS Structure Components Services System Structures Layered Approach Virtual Machines System Design and Implementation.	✓		✓		✓			GCR https://youtu.be/vBURTt97EkA
6	Process Management: Process Process Scheduling Cooperating Process Threads Interprocess Communication	✓		✓	✓		✓	✓	GCR https://youtu.be/vBURTt97EkA
4	CPU Scheduling : CPU Schedulers Scheduling criteria Scheduling Algorithms	✓		✓		✓	✓	✓	GCR https://youtu.be/vBURTt97EkA
4	**Unit-II:** Process Synchronization: Critical-Section problem Synchronization Hardware Semaphores Classic Problems of Synchronization Critical Region Monitors.	✓		✓			✓		GCR tps://youtu.be/vBURTt97EkA miro white board app

4	Deadlock : Characterization Methods for handling Deadlocks Prevention Avoidance Detection of Deadlock Recovery from deadlock.	✓		✓		✓			GCR https://youtu.be/FVmwvZNQgt0
4	**Unit III:** Memory Management : Address Binding Dynamic Loading and Linking Overlays Logical and Physical Address Space Contiguous Allocation Internal & External Fragmentation	✓		✓	✓		✓	✓	GCR https://youtu.be/W0068fRJTGQ miro white board app
4	Non Contiguous Allocation: Paging Segmentation schemes Fragmentation.	✓		✓		✓	✓	✓	GCR https://youtu.be/kt4LkPFt8Zg miro white board app
4	**Unit-IV:** Virtual Memory Demand Paging Page Replacement Page Replacement Algorithms Thrashing.	✓		✓		✓	✓	✓	GCR https://youtu.be/ujoJ7J_l9cY miro white board app
4	File System: Concepts Access methods Directory Structure Protection Consistency Semantics File System Structures Allocation methods Free Space Management.	✓		✓		✓	✓	✓	GCR https://youtu.be/AnGOeYJCv6s miro white board app
4	**Unit-V :** I/O Systems: Overview I/O Hardware Application I/O Interface Kernel I/O subsystem Transforming I/O Requests to Hardware Operations Performance.	✓		✓	✓	✓	✓		GCR https://youtu.be/Gg8yOzP8ENY miro white board app

4	Secondary Storage Structures : Protection Goals Domain Access matrix	✓		✓	✓		✓		GCR miro white board app
4	The security problem Authentication Threats Threat Monitoring Encryption	✓		✓	✓	✓	✓	✓	GCR miro white board app
1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text: Silberschatz A., Galvin P.B., Gange,. 2002 , Operating System Principles ,Sixth Edition, John Wiley & Sons. .

Reference Books: H.M. Deitel ,1990, An Introduction to Operating System,- Second Edition,Addison Wesley

Websites

http://bcs.wiley.com/he-bcs/Books?action=resource&itemId=0471250600&bcsId=1743&resourceId=2437

https://www.cse.iitb.ac.in/~mythili/os/

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Name of the Faculty : UNNAMALAI. K

Course : B.Sc Computer Science SEMESTER : I

Subject Name :PROBLEM SOLVING USING PYTHON Total Hours:66 Subject Code:SE21A

Class :I Yr Section: B

Objectives : At the end of the Semester students will be familiarized with the basic concepts of Python, OOPS, tuples and dictionaries and will be able to write programs

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
1	**UNIT - I** Introduction: The essence of computational problem solving Limits of computational problem solving	✓		✓		✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	Computer algorithms Computer Hardware Computer Software The Process of computational problem solving	✓		✓		✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	Python programming language Literals Variables and Identifiers	✓		✓	✓				GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	Operators: Arithmetic Operators, Relational Operators, Identity Operators, Logical Operators, Bitwise operators-operator precedence	✓		✓	✓		✓		GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	Expressions: Evaluating expressions,Type casting Data types: Numbers, Strings, Lists and Tuples, Dictionary	✓		✓	✓	✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	**UNIT - II** Control Structures: Boolean Expressions Selection Control If Statement: Indentation in Python	✓		✓	✓	✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
2	Multi-Way Selection if statement if-else statement if-elif statement nested if statement	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Iterative Control break,continue	✓		✓			✓		GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	While Statement Infinite loops Definite vs. Indefinite Loops	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Boolean Flags and Indefinite Loops. Lists: List Structures	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Lists in Python Iterating over lists in Python	✓		✓	✓		✓		GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	**UNIT – III** Functions: Program Routines Defining Functions	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	More on Functions: Calling Value-Returning Functions Calling Non-Value-Returning Functions	✓		✓			✓		GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
1	Parameter Passing Keyword Arguments in Python Default Arguments in Python Variable Scope	✓		✓	✓				GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion https://www.tutorialspoint.com/online_python_ide.php

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
2	**UNIT – IV** Objects and their use Software Objects	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Turtle Graphics Turtle attributes	✓		✓			✓		GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Modular Design: Modules TopDown Design	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Python Modules	✓		✓			✓		GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Text Files: Opening Reading Writing text files	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	String Processing String operators Basic, Membership, Comparison operators String Slices String Funtions and Methods	✓		✓					GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Exception Handling Errors in a program Exceptions	✓		✓	✓				GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	**UNIT - V** Dictionaries and Sets : Dictionary type in Python Dictionary functions and methods Working with Dictionaries	✓		✓		✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php

1. **Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion**

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
2	Set Data type set frozenset	✓		✓		✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Inheritance Polymorphism.	✓		✓		✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php
2	Recursion: Recursive Functions.	✓		✓	✓	✓			GCR Pydroid App https://www.tutorialspoint.com/online_python_ide.php

TEXT BOOK:

1. Charles Dierbach, "Introduction to Computer Science using Python - A computational Problem solving Focus", Wiley India Edition, 2015.

WEB REFERENCES

http://interactivepython.org/courselib/static/pythonds

NPTEL & MOOC courses titled Python programming

https://www.w3schools.com/python

https://www.tutorialspoint.com/python

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Name of the Faculty : SUMATHI.K

Course : BSc Computer Science **SEMESTER :** I

Subject Name : PROBLEM SOLVING USING PYTHON **Total Hours:66**

Subject Code:SE21A

Class : I Yr **Section:** A

Objectives : To familiarize the students with the concepts of OOPS programming language Python and able to write programs

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	**UNIT - I** Introduction: The essence of computational problem solving Limits of computational problem solving	✓							GCR
2	Computer algorithms Computer Hardware Computer Software The Process of computational problem solving	✓							GCR
2	Python programming language Literals Variables and Identifiers								GCR Python IDLE Pyroid App
2	Operators: Arithmetic Operators, Relational Operators, Identity Operators, Logical Operators, Bitwise operators-operator precedence			✓			✓		GCR Python IDLE Pyroid App
2	Expressions: Evaluating expressions,Type casting Data types: Numbers, Strings, Lists and Tuples, Dictionary			✓	✓		✓		GCR Python IDLE Pyroid App
4	**UNIT - II** Control Structures: Boolean Expressions Selection Control If Statement: Indentation in Python Multi-Way Selection if , if-else statements if-elif, nested if statements	✓	✓	✓	✓		✓		GCR Python IDLE Pyroid App

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
4	Iterative Control break, continue	✓	✓	✓			✓		GCR Python IDLE Pyroid App
4	While Statement Infinite loops Definite vs. Indefinite Loops	✓	✓	✓					GCR Python IDLE Pyroid App
4	Boolean Flags and Indefinite Loops. Lists: List Structures	✓	✓	✓					GCR
4	Lists in Python Iterating over lists in Python	✓	✓		✓		✓		GCR Python IDLE Pyroid App
3	**UNIT – III** Functions: Program Routines Defining Functions	✓		✓					GCR Python IDLE Pyroid App
3	More on Functions: Calling Value-Returning Functions Calling Non-Value-Returning Functions	✓	✓	✓			✓		GCR Python IDLE Pyroid App
3	Parameter Passing Keyword Arguments in Python Default Arguments in Python Variable Scope	✓	✓	✓	✓				GCR Python IDLE Pyroid App
3	**UNIT – IV** Objects and their use Software Objects	✓							GCR
3	Turtle Graphics Turtle attributes	✓					✓		GCR Python IDLE Pyroid App
3	Modular Design: Modules TopDown Design	✓							GCR
3	Python Modules	✓					✓		GCR Python IDLE Pyroid App
3	Text Files: Opening Reading Writing text files	✓							GCR Python IDLE Pyroid App
3	String Processing String operators Basic,Membership,Comparison operators String Slices String Funtions and Methods	✓	✓	✓					GCR Python IDLE Pyroid App
3	Exception Handling Errors in a program Exceptions	✓		✓	✓				GCR Python IDLE Pyroid App

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
4	**UNIT - V** Dictionaries and Sets : Dictionary type in Python Dictionary functions and methods Working with Dictionaries	✓	✓			✓			GCR Python IDLE Pyroid App
2	Set Data type set frozenset	✓	✓			✓			GCR Python IDLE Pyroid App
2	Object Oriented Programming using Python: Encapsulation	✓				✓	✓		GCR
2	Inheritance Polymorphism.	✓				✓			GCR
2	Recursion: Recursive Functions.	✓			✓	✓			GCR Python IDLE Pyroid App

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

1. Charles Dierbach, "Introduction to Computer Science using Python - A computational Problem solving Focus", Wiley India Edition, 2015.

WEB REFERENCES

http://interactivepython.org/courselib/static/pythonds

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https://www.tutorialspoint.com/python

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CHENNAI-40

Name of the Faculty : SUMATHI.K

Course : M.Sc COMPUTER SCIENCE **SEMESTER :** III

Total Hours:100

Subject Name : PRINCIPLES OF COMPILER DESIGN **Subject Code:PSD3A**

Class : II Year **Section:** NA

Objectives : To make students understand the Basic concepts of Compiler, Grammar, Languages & Tools for designing a compiler

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
5	**UNIT - I** Introduction language processors, Structure of compiler Compiler Front end, Back end	✓		✓					GCR
5	Syntax Definition Syntax directed translation Parsing	✓	✓	✓					GCR
5	Lexical Analysis Symbol Tables Intermediate code generations	✓	✓	✓					GCR
5	Specification of tokens, Recognition of tokens Lexical Analyser LEX Finite Automata	✓	✓	✓					GCR
5	Regular Expression NFA DFA NFA to DFA	✓	✓				✓		GCR
6	**UNIT – II** Syntax Analysis: Context Free Grammars Production rule Notation Context free languages	✓	✓						GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
5	Top- Down Parsing Bottom- Up Parsing LR Parsing	✓	✓	✓					GCR
5	More LR Parsers Using Ambiguous Grammer Parser Generators	✓		✓	✓		✓		GCR
5	**UNIT –III** Syntax-Directed Translation Symbol Table Intermediate –code Generation Three Address code Type and Declaration	✓		✓					GCR
4	Translation of Expressions Type Checking Control Flow Back Patching Switch statements Intermediate code for Procedures	✓	✓	✓					GCR
4	Run-Time Environments Storage organization Stack, Heap	✓	✓	✓					GCR
4	Garbage collection Trace-based collection Advanced Topics	✓		✓	✓		✓		GCR
4	**UNIT – IV** Principal sources of Optimization Data- flow Analysis Constant Propagation Partial- Redundancy Elimination	✓		✓					GCR
5	Loops in Flow Graphs Region Based Analysis Symbolic Analysis	✓		✓			✓		GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

3	**UNIT – V** Code Generation Target Language Basic Blocks & Flow Graphs	✓		✓		✓			GCR
4	Optimization of Basic Blocks Simple Code Generator Peephole optimization	✓		✓		✓			GCR
4	Register Allocation ,Assignment Optimal Code Generation-Expressions Dynamic Programming-Code generation	✓		✓	✓	✓	✓		GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

1. A.V. Aho, J.D.Ullman, 1985, Principles of Compiler Design, Narosa Pub-House.
2. D.Gries, 1979, Compiler Construction for Digital Computers, John Wiley& Sons.
3. A.V.Aho, Ravi Sethi, and J.D.Ullman, 1986, Compilers Principles, Techniques and Tools, Addison Wesley Pub. Co.

WEB REFERENCES

NPTEL courses titled Principles of Compiler Design

https://www.geeksforgeeks.org/

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Name of the Faculty : SUMATHI.K

Course : B.Com General **SEMESTER : I**

Total Hours:30

Subject Name : HTML **Subject Code:SE51C**

Class : I Yr **Section: A**

Objectives : To provide an in-depth training in use of Hyper Text Mark-up Language Tags and enable the students write Web pages using HTML tags

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	**UNIT I:** Introductory concepts: Web Basics	✓		✓					GCR
3	What is Internet Web browsers What is Web page	✓		✓					GCR
2	HTML Basics Understanding tags	✓		✓			✓		GCR
2	**UNIT II:** Tags for Document structure HTML, Head, Body Tag Block level text elements	✓	✓	✓					GCR Html Creator
2	Headings paragraph(<p> tag) Font style elements (bold, italic, font, small, strong, strike, big tags)	✓	✓	✓	✓				GCR Html Creator
2	**UNIT III:** Lists: Types of lists: Ordered, Unordered – Nesting Lists	✓	✓	✓					GCR Html Creator
2	Other tags: Marquee, HR, BR Using Images Creating Hyperlinks	✓	✓	✓			✓	✓	GCR Html Creator
2	**UNIT IV:** Tables: Creating basic Table, Table elements, Caption	✓	✓	✓					GCR Html Creator

1.Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6. Assignment 7. Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	Table and cell alignment Rowspan, Colspan Cell padding.	✓	✓	✓	✓		✓		GCR Html Creator
2	**UNIT V:** Frames: Frameset – Targeted Links	✓	✓	✓					GCR Html Creator
2	No frame – Forms : Input, Textarea, Select, Option	✓	✓	✓	✓			✓	GCR Html Creator

1.Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6. Assignment 7. Group Discussion

RECOMMENDED TEXTS:

1. Laura Lemay, "HTML Complete Reference, Teach Yourself Web Publishing with HTML".

REFERENCE BOOKS:

1. E Stephen Mack, Janan Platt , "HTML".

WEB REFERENCE:

- NPTEL & MOOC courses titled HTML.
- https://www.codecademy.com/learn/learn-html

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Name of the Faculty : S.RADHA

Course : PG **SEMESTER : III**

Subject Name : CLOUD COMPUTING (Elective III - PSDEJ) **Total Hours:100**

Class : II M.Sc (6 Hrs / WEEK) **Subject Code:PSDEJ**

Objectives :

- Demonstrate an understanding of guidelines, principles, and theories influencing cloud computing.
- Recognize how a cloud computing operation to be performed.
- Use the information sources available, and be aware of the methodologies and technologies supporting advances in cloud computing.

After completion of this course, students can able to

- ✓ Define cloud computing, Cloud deployment Models and related concepts.
- ✓ Understand the key dimensions of the challenges of Cloud Computing
- ✓ Understand how cloud components fit together.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
6	**UNIT – I :** UNDERSTANDING CLOUD COMPUTING: Introduction, History of Cloud Computing	✓	✓	✓			✓		• **GCR** • **Google form** • **Mentimeter** • **Poll Everywhere**
6	Cloud Architecture, Cloud Storage	✓	✓	✓					• **GCR** • **Google form** • **Mentimeter**
6	Why Cloud Computing Matters, Importance of migration, Migration into a cloud	✓							• **GCR** • **Hot Potatoes**
6	Advantages of Cloud Computing, Disadvantages of Cloud Computing, Companies in the Cloud Today	✓	✓						• **GCR**
6	Roots of cloud computing, Enriching Integration As a Service, Cloud Services	✓		✓	✓		✓		• **GCR**
6	**UNIT – II :** DEVELOPING CLOUD SERVICES: Web-Based Application, Pros and Cons of Cloud Service Development	✓		✓					• **GCR** • **Mentimeter**
6	Types of Cloud Service Development, Virtual Machines Provisioning and Migration Services, On the management of Virtual machines for cloud Infrastructures	✓		✓					• **GCR** • **Hot Potatoes** • **Youtube**
6	Software as a Service, Platform as a Service, Infrastructure as a service, Web Services			✓	✓				• **GCR** • **Google form** • **Youtube**
6	On-Demand Computing, Discovering Cloud Services Development Services and Tools			✓			✓		• **GCR**
6	Architecting Applications for the Amazon Cloud, Amazon Ec2, Google App Engine, IBM Clouds								• **GCR** • **Mentimeter** • **Youtube**

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar
6.Assignment 7. Group Discussion 8. ICT Tools

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
6	**UNIT – III :** CLOUD COMPUTING FOR EVERYONE: Centralizing Email Communications, Collaborating on Schedules, Collaborating on To-Do Lists, Collaborating Contact Lists	✓	✓		✓		✓		• GCR • Collaborative Tools Demo • Google Form
6	Cloud Computing for the Community, Collaborating on Group Projects and Events, Cloud Computing for the Corporation	✓	✓						• GCR • Collaborative Tools Demo
6	**UNIT – IV:** USING CLOUD SERVICES: Collaborating on Calendars, Schedules and Task Management, Exploring Online Scheduling Applications	✓	✓						• GCR • Collaborative Tools Demo • Google Form
6	Exploring Online Planning and Task Management, Online game Hosting on cloud Resources	✓	✓						• GCR • Collaborative Tools Demo
6	Collaborating on Event Management, Contact Management, Project Management, Word Processing, Databases, Storing and Sharing	✓	✓						• GCR • Collaborative Tools Demo
6	**UNIT – V:** OTHER WAYS TO COLLABORATE ONLINE: Collaborating via Web-Based Communication	✓	✓		✓		✓		• GCR • Collaborative Tools Demo
6	Evaluating Web Mail Services, Evaluating Web Conference Tools	✓	✓		✓		✓		• GCR • Google Form
6	Collaborating via Social Networks and Groupware, Blogs and Wikis	✓	✓		✓		✓		• GCR Google Form

1. Lecture **2.Black Board** **3.Power Point Presentation** **4.Test** **5.Seminar**
6.Assignment **7. Group Discussion** **8. ICT Tools**

Recommended Text :

1) Michael Miller, Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online, Que Publishing, August 2008.
2) Kumar Saurabh, "Cloud Computing –Insights into New Era Infrastructure", Wiley Indian Edition, 2011.
3) Haley Beard, Cloud Computing Best Practices for Managing and Measuring Processes for On-demand Computing, Applications and Data Centers in the Cloud with SLAs, Emereo Pty Limited, July 2008.

Reference Books :

1) "Cloud Computing: principles and Paradigms", Raj Kumar Bunya, James Bromberg, Andrej Kosciusko, Wiley, New York, USA.
2) John Rittinghouse & James Ransome, Cloud Computing, Implementation, Management and Strategy, CRC Press, 2010.
3) David E.Y. Sarna Implementing and Developing Cloud Application, CRC press 2011

Websites :

i. www.geeksforgeeks.org
ii. www.cs.iit.edu
iii. https://nptel.ac.in/courses/106105163/

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Name of the Faculty : S.RADHA

Course : PG **SEMESTER : III**

Subject Name : MANAGEMENT INFORMATION SYSTEM IN TOURISM (Elective III - HAUED)

Class : II M.A TTM (6 Hrs / WEEK) **Total Hours:100**
Subject Code:HAUED

Objectives :

- To know the technologies and methods used for effective decision making in an Organization
- To design & implement routines, processes & procedures which provide appropriate report in consistent, accurate and timely manner

After completion of this course, students can able to

- Gains knowledge on effective applications of information systems in tourism

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
6	**UNIT – I :** Introduction, Objective, Characteristics, Functions, Limitation, Types, Concept, Role and Impact of MIS in Tourism Industry	✓	✓	✓					• GCR • Google form • Mentimeter • Poll Everywhere
6	Modern Media Techniques, Internet and Tourism Industry, Computer Based Information System,	✓	✓	✓					• GCR • Google form • Mentimeter
6	Cargo Logistic Management, Computers in Cargo, Airlines, Hotels, Travel Agency and Railways	✓	✓	✓				✓	• GCR • Mentimeter
6	CRS, GDS	✓	✓	✓					• GCR • Hot Potatoes
6	Galileo, Abacus , Amadeus	✓	✓	✓	✓	✓	✓		• GCR • Google form • Youtube
6	**UNIT – II :** Process of Management	✓	✓	✓				✓	• GCR • Poll Everywhere
6	MIS A Tool for Management Process	✓	✓	✓	✓			✓	• GCR • Kahoot
6	Basic Model of Organisation Structure	✓	✓	✓				✓	• GCR • Mentimeter
6	Modified Model of Organisation Structure	✓	✓	✓	✓			✓	• GCR • Mentimeter
6	MIS and Organisation	✓	✓	✓	✓			✓	• GCR • Mentimeter • Youtube

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar
6.Assignment 7. Group Discussion 8. ICT Tools

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
6	**UNIT – III :** Decision Making Concepts, Process, Decision Analysis	✓	✓	✓					• GCR • Poll Everywhere
6	MIS, Hardware, Software	✓	✓	✓					• GCR
6	Decision Support System, System Design	✓	✓	✓	✓				• GCR
6	Characteristics and Capabilities of DSS, Components of DSS	✓	✓	✓	✓			✓	• GCR • Google form • Mentimeter
6	**UNIT – IV:** System Approach, System Design and MIS in Tourism	✓	✓	✓					• GCR
6	Data Base Management System	✓		✓				✓	• GCR • MS Access Demo
6	RDBMS, OOAD	✓	✓	✓	✓			✓	• GCR • Mentimeter
6	**UNIT – V:** Function Management, Marketing	✓	✓	✓		✓	✓	✓	• GCR • Google form
6	Personnel, Production and Finance	✓	✓	✓		✓	✓	✓	• GCR • Google form
6	Information System	✓	✓	✓		✓	✓	✓	• GCR • Google form

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6.Assignment 7. Group Discussion 8. ICT Tools

Recommended Text :

- ✓ Gordon B Davis and Margrette H Olson, 2003, **Management Information System,** Tata McGraw Hill Company.
- ✓ Gerald V Post and David L Anderson, 2004, **Management Information System,** Tata McGraw Hill Company.

Reference Books :

- ✓ Avdesh Gupta and Aurag Malik, 2006, **Management Information System,** Fire Wall Media Publications.
- ✓ Verma,.S.B., 2006, **Information Technology and Management,** Deep and Deep Publication Delhi.
- ✓ Goel, D.P.O., 2005, **Management Information System-Concept and Applications,** Deep and Deep Publications, Delhi.
- ✓ R.K. Subha, 1999, **Leisure Tourism,** Dominant Publishers and Distributors, Delhi.
- ✓ Arnold O. Putnam, 2003, **Management Information System.**

Websites :

i. www.educationforallinindia.com/page3.html
ii. https://nptel.ac.in/courses/122105022/

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Name of the Faculty : S.RADHA

Course : UG **SEMESTER : V**

Subject Name : Operating System (Subject code – SAE5A) **Total Hours:66**

Class : III B.Sc (4 Hrs / WEEK) **Subject Code:SAE5A**

Section: 'A'

Objectives : Students will be able to:

a. Understand the structure and functions of Operating Systems.
b. To compare the performance of the CPU Scheduling Algorithms.
c. To analyze resource management techniques.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
4	**UNIT – 4 :** Virtual Memory Demand Paging Page Replacement Page Replacement Algorithms	✓		✓			✓		• **GCR** • **Jam Board** • **Google form** • **Mentimeter** • **Poll Everywhere**
4	Page Replacement Algorithms Thrashing	✓	✓	✓					• **GCR** • **Mentimeter**
4	File System: Concepts Access methods Directory Structure Protection Consistency Semantics File System Structures Allocation methods Free Space Management.	✓	✓		✓				• **GCR** • **Hot Potatoes**
4	**UNIT – V :** I/O Systems: Overview I/O Hardware Application I/O Interface Kernel I/O subsystem Transforming I/O Requests to Hardware Operations Performance	✓		✓				✓	• **GCR** • **Jam Board**
4	Secondary Storage Structures : Protection Goals Domain Access matrix	✓	✓	✓	✓		✓		• **GCR** • **Jam Board** • **Google form**
4	The security problem Authentication Threats Threat Monitoring Encryption	✓	✓	✓			✓		• **GCR** • **Mentimeter**

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test
5.Seminar 6.Assignment 7. Group Discussion 8. ICT Tools

Recommended Text :

1) Silberschatz A., Galvin P.B., Gange,. 2002 , Operating System Principles ,Sixth Edition, John Wiley & Sons.

Reference Books :

1) H.M. Deitel, 1990, An Introduction to Operating System,- Second Edition, Addison Wesley

Websites :

1) http://bcs.wiley.com/hebcs/Books?action=resource&itemId=0471250600&bcsId=1743&resourceId=2437
2) https://www.cse.iitb.ac.in/~mythili/os/

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Name of the Faculty : S.RANJANA **Total Hours:100**
Subject Code:SAE5C

Course : UG **SEMESTER : V**

Subject Name : COMPUTER ARCHITECTURE AND ORGANIZATION (SAE5C)

Class : III B.Sc **Section: B**

Objectives : To understand the basic organization of computers and the working of each component and CPU. Describe and understand the processor memory hierarchy. Basic understanding of interrupts, I/O devices, and I/O protocols. To understand the principles of Interfacing I/O devices and Direct Memory accesses.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – I : Computer Evolution: Pentium and Power PC Evolution	✓		✓			✓		Online Digital board-Jamboard, Mentimeter
3	Computer system: Components Function Interconnection structures	✓		✓					Google slides, Jamboard
2	Bus interconnection Basics of PCI Bus	✓							Google slides
2	Memory: Characteristics Hierarchy	✓							Paddlet tool for interaction
3	Cache memory Principles Cache Design Locality of Referenc	✓			✓		✓		Google slides
3	UNIT – II : Main memory: Static RAM Dynamic RAM Types of ROM	✓		✓					Assignments in GCR
2	Memory chip organization Types of DRAM	✓							Google slides
2	External Memory: Magnetic disk Basics of RAID	✓			✓				Google slides
3	Optimal Memory Magnetic Tapes	✓	✓	✓			✓		Kahoot

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Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	
2	UNIT – III : Input/Output: External Devices I/O Module	✓			✓		✓		Google slides
3	Programmed I/O Interrupt Driven I/O	✓							Google slides
2	DMA I/O Channels & Processors	✓							Assignments in GCR
3	Computer Arithmetic: ALU Integer Representation and Arithmetic Floating point Representation and Arithmetic	✓		✓					
3	Instruction Set: Characteristics Operand types Operation types	✓		✓					
3	Addressing Modes Instruction formats Pentium and power PC operands Operations Addressing modes(Simple Examples)	✓							Google Form for quiz
2	UNIT – IV: CPU: Organization of Processors and Registers	✓							Google slides
3	Instruction Cycle Instruction Pipelining	✓							Jamboard
2	Pentium Processor RISC: Characteristics	✓							Google slides
2	Large Register File Register Optimization	✓							Paddlet
3	Architecture RISC vs CISC Characteristics Pipelining	✓			✓				Mentimeter for assesment
2	UNIT – V: Control Unit: Micro Operations	✓			✓		✓		

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Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	
2	Control of Processors Hardwired Implementation	✓				✓			
3	Micro Programmed Control Concepts	✓			✓	✓			Digital online live board for drawings
1	Micro instruction Sequencing	✓	✓		✓	✓	✓		
3	General Micro instruction Execution	✓				✓			Assignment in GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : (i). W. Stallings, 2003, Computer Organization and Architecture, 6th Edition – PHI, New Delhi.

Reference Books : (i). C. Hamacher, Z. Vranesic, S. Zaky, 2002, Computer Organization, 5th Edition, McGraw Hill.

Websites : (i). www.geeksforgeeks.org

(ii). www.cs.iit.edu

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Name of the Faculty : S.RANJANA

Course : PG **SEMESTER : III**

Total Hours:100

Subject Name : ARTIFICIAL INTELLIGENCE (PSD3C) **Subject Code:PSD3C**

Class : III B.Sc **Section:**

Objectives : II M.Sc Computer Science

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – I : Introduction Foundation of AI History of AI	✓		✓			✓		Online Digital board-Jamboard
3	Intelligent Agents Nature of Environment Structure of Agent	✓		✓					Google slides
2	Problem Solving - by Searching Searching for Solutions								Paddlet
2	Informed Search and Exploration Heuristic functions Local search algorithms								Google slides,Paddlet
3	Constraint Satisfaction Problems-Backtracking search for CSP – Adversarial Search-Games,Optimal decisions in games,Alpha Beta Pruning								Google slides,Jamboard
1	UNIT – II : Knowledge and Reasoning	✓	✓	✓					Assignments in GCR
3	Logical Agents Propositional Logic Reasoning Patterns Effective propositional inference	✓	✓						Google Form
2	First-Order Logic Syntax and Semantics of FoL Knowledge Engineering in FoL	✓	✓		✓				

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	Inference in First-Order Logic Unification and Lifting Forward Chaining Backward Chaining Resolution	✓	✓	✓			✓		Kahoot
2	- Knowledge Representation Ontological Engineering	✓	✓		✓		✓		Google slides
3	UNIT -III Planning Planning with state space Partial order planning Planning graphs	✓	✓						
2	Planning and Acting in the Real World Uncertain knowledge and reasoning Non deterministic domains	✓	✓						Assignments in GCR
3	Uncertainty Basic probability Notation Axioms of Probability Bayes Rule	✓	✓						
3	Probabilistic Reasoning	✓	✓	✓					
3	Probabilistic Reasoning Over Time - Making Simple Decisions - Making Complex Decisions	✓	✓						Google Form for quiz
3	UNIT – IV: Learning - Learning from Observations Forms of Learning Inductive Learning Decision Tree Ensemble Learning	✓	✓						
3	Knowledge in Learning Formulation of Learning Knowledge in Learning Explanation based Learning	✓	✓						Google slides
2	Reinforcement Learning Passive Reinforcement Learning Active Reinforcement Learning								

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	UNIT V: Communicating, Perceiving, and Acting - Communication Syntatic analysis Semantic Interpretation								
2	Probabilistic Language Processing Information Retreval Information Extraction								
2	Perception Image Formation Object Recognition	✓	✓			✓			
3	Robotics Robot Hardware	✓	✓		✓	✓			Digital online live board for drawings
1	Robotic perception	✓	✓		✓	✓	✓		
3	Robotic Software Architectures Applications Domains	✓	✓			✓			Assignment in GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : (i). 1) Stuart Russell and Peter Norvig, 2003, Artificial Intelligence: A Modern Approach, 2nd Edition, Prentice Hall of India, New Delhi.

Reference Books

1) Elaine Rich and Kevin Knight, 1991, Artificial Intelligence, 2nd Edition, Tata McGraw-Hill, New Delhi.
2) Herbert A. Simon, 1998, The Sciences of the Artificial Intelligence, 3rd Edition, MIT Press.
3) N.J. Nilson, 1983, Principles of AI, Springer Verlag.

Website and e-Learning Source:

1)http://aima.eecs.berkeley.edu/slides-pdf/

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CHENNAI-40

Signature

Dr. HANNAH VIJAYKUMAR M.C.A.,M.Phil.,Ph.D.
HEAD, DEPARTMENT OF COMPUTER SCIENCE
ANNA ADARSH COLLEGE FOR WOMEN
ANNA NAGAR, CHENNAI-600040.

Name of the Faculty : RANJANA S

Course : B.Com General **SEMESTER : I**

Total Hours: 30

Subject Name : HTML **Subject Code:SE51C**

Class : I Yr **Section: B**

Objectives : To provide an in-depth training in use of Hyper Text Mark-up Language Tags and enable the students write Web pages using HTML tags

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	**UNIT I:** Introductory concepts: Web Basics	✓		✓					GCR, JAMBOARD
3	What is Internet Web browsers What is Web page	✓		✓					GCR, Google Sites
2	HTML Basics Understanding tags	✓		✓			✓		Online Code editor, GCR
2	**UNIT II:** Tags for Document structure HTML, Head, Body Tag Block level text elements	✓		✓					Online Code editor,
2	Headings paragraph(<p> tag) Font style elements (bold, italic, font, small, strong, strike, big tags)	✓		✓		✓			Online Code editor, GCR
2	**UNIT III:** Lists: Types of lists: Ordered, Unordered – Nesting Lists	✓		✓					Online Code editor, GCR
2	Other tags: Marquee, HR, BR Using Images Creating Hyperlinks	✓		✓				✓	Online Code editor, GCR
2	**UNIT IV:** Tables: Creating basic Table, Table elements, Caption	✓		✓					Online Code editor, GCR

1.Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6. Assignment 7. Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	Table and cell alignment Rowspan, Colspan Cell padding.	✓		✓	✓				GCR
2	**UNIT V:** Frames: Frameset – Targeted Links	✓		✓					GCR, Online Code editor
2	No frame – Forms : Input, Textarea, Select, Option	✓		✓	✓			✓	GCR

1.Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6. Assignment 7. Group Discussion

RECOMMENDED TEXTS:

1. Laura Lemay, "HTML Complete Reference, Teach Yourself Web Publishing with HTML".

REFERENCE BOOKS:

1. E Stephen Mack, Janan Platt , "HTML".

WEB REFERENCE:

- NPTEL & MOOC courses titled HTML.
- https://www.codecademy.com/learn/learn-html

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9th Main Road, Anna Nagar,
CHENNAI-40

Name of the Faculty : Mahalakshmi S

Course : UG **SEMESTER : V**

Subject Name :VISUAL PROGRAMMING **Total Hours:100**
Subject Code:SEE5A

Class :III Year **Section: B**

Objectives : To make students understand, create and manage controls in any visual programming language, here in Visual Basic.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
4	***UNIT - I*** Introduction to Visual Programming, Introduction to Visual Basic, IDE, Forms, Toolbox	✓	✓						GCR
6	Creating a VB Application: Guidelines to create a VB application Form Properties, Form Events, The Grid, Editing Tools, Message Box, Input box functions, Image Control, Access Keys.	✓	✓	✓					GCR
5	Variables, Scope of variables, Data Types, Data Types String – Numbers, Operators.	✓	✓	✓					GCR
1	CIA – 1 / Unit test				✓				GCR
5	***UNIT - II*** Displaying Information on a form, The format function, Pictures Boxes, Rich Textbox, Conditionals Structures	✓	✓	✓					GCR
5	Looping structures, Built-in Functions like string functions, conversions, date and numeric	✓	✓				✓		GCR
4	Procedures, Sub Procedure, Function Procedure Calling a function or procedure	✓	✓				✓		GCR
2	Unit test				✓				GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test
5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
5	***UNIT – III*** List & Arrays: Types of Arrays, Control Array.	✓	✓	✓					GCR
4	Searching and Sorting Records, Combo Boxes, Grid Control	✓	✓	✓			✓		GCR
4	Project with Multiple forms Do Events and Sub main Error Trapping	✓	✓	✓					GCR
2	CIA – 2 / Unit test				✓				GCR
4	**UNIT – IV** Dialog Boxes, common controls, menu	✓	✓	✓			✓		GCR
4	MDI Forms, Testing and Debugging, Optimization	✓	✓	✓			✓		GCR
5	Working with Graphics: Image Control, Picture Box Control, Image List Control , Line and Shape Control	✓	✓	✓			✓		GCR
2	CIA – 3 / Unit test				✓				GCR
5	**UNIT – V** Mouse Events, File Handling, File System Controls	✓	✓	✓	✓	✓	✓		GCR
5	File System Objects, OLEClient Control OLE Drag & Drop	✓	✓	✓	✓	✓	✓		GCR

1. **Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion**

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
5	Object Linking and Embedding, OLE Automation COM , DLL Servers	✓	✓	✓		✓	✓		GCR
2	Unit test				✓				GCR
	Revision								

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

1. Gary Cornell - Visual Basic 6 from the Ground up - Tata McGraw Hill - 1999. Noel Jerke - Visual Basic 6 (The Complete Reference) - Tata McGraw Hill – 1999.

WEB REFERENCES

https://www.vbtutor.net

https://www.uop.edu.jo/download/research/members/vb6

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5th Main Road, Anna Nagar
CHENNAI-40

Name of the Faculty : Mahalakshmi S

Course : PG **Semester : I**

Total Hours:48

Subject Name : SYSTEM SOFTWARE **Subject Code:PSD1C**

Class :I Yr **Section: -**

Objectives : At the end of the semester students will have the knowledge of System softwares like Compilers, Interpreters, Assemblers, Macros, Linkers ,Loaders and Editors.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	**UNIT I:** Language processors Language processing activities	✓	✓						GCR
3	Fundamentals Language Processing	✓	✓						GCR
3	Fundamentals Language specification	✓	✓	✓					GCR
3	Language processor development Tools , LEX & YACC	✓	✓				✓		GCR
4	Data Structures and Language Processing - Search Data Structures	✓	✓			✓			GCR
3	Allocation Data Structures	✓	✓						GCR
3	Scanning and Parsing Introduction	✓	✓						GCR
4	Scanning	✓	✓						GCR
3	Parsing	✓	✓				✓		GCR
	CIA – 1				✓				
3	**UNIT II:** Assemblers : Elements of Assembly LanguageProgramming	✓	✓						GCR
3	Overview of the Assembly Process A Simple Assembly Scheme Pass structure of Assemblers	✓	✓						GCR
3	Design of a Two-Pass Assembler	✓	✓	✓		✓			GCR
5	A single Pass Assembler for IBM PC	✓	✓				✓		GCR
	CIA – II				✓				

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	**UNIT III** Macros and Macro processors Macro definition Macro call and expansion	✓	✓	✓					GCR
3	Nested Macro calls Advanced macro facilities	✓	✓						GCR
3	Design of a macro preprocessor	✓	✓						GCR
5	Compilers Aspects of Compilation	✓	✓				✓		GCR
	CIA – III				✓				
	Revision								

1. **Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion**

TEXT BOOK:

D. M. Dhamdhere, 1999, Systems Programming and Operating Systems, Second Revised Edition, Tata McGraw-Hill, New Delhi

REFERENCE BOOK:

L. L. Beck, 1996, System Software An Introduction to System Programming, 3rd edition, Addison-Wesley.

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Name of the Faculty : M ANITA RAJKUMAR

Course : UG **SEMESTER : III**

Subject Name : Statistics - I **Total Hours: 48**

Class : II B.Sc **Subject Code: SP3AA**

Section: A

Objective : To provide the understanding on the statistical parameters like deviation, correlation and CHI-square Test

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
10	**UNIT IV** Measures of Dispersion: Range Absolute range Coefficient of range Quartile Deviation Mean Deviation	✓	✓	✓		✓			POSTED MATERIAL IN GCR
10	Standard Deviation Relative Measures of Dispersion Coefficient of Variations Deciles	✓		✓	✓	✓			
10	**UNIT V:** Correlation Definition Merits of Rank Correlation Limitations of Rank Correlation Types of Correlation Positive Correlation Negative Correlation No Correlation	✓	✓		✓	✓		✓	
10	Scatter Plot Coefficient of Correlation Properties of Correlation Coefficient Pearson's Correlation Coefficient Spearman's Rank Correlation Coefficient Correlation coefficient for Bi-variate Frequency Table Association of Attributes CHI-Square Test of Independence of Attributes	✓	✓	✓		✓	✓		ASSIGNMENT ASSIGNED IN GCR
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text :

1) Fundamentals of Mathematical Statistics, Gupta, S.C and Kapoor, V. K (2002), Sultan Chand and Sons, New Delhi

2) Fundamentals of Statistics, Vol. I & II, 8th Edn., Goon A.M., Gupta M.K. and Dasgupta B. (2002): The World Press, Kolkata

3) Mathematical Statistics with Applications, (7th Edn.), Irwin Miller, Marylees Miller (2006): John E. Freund's Prentice Hall International INC

4) Introduction to the Theory of Statistics, 3rd Edn., (Reprint), Mood, A.M. Graybill, F.A. and Boes, D.C. (2007): Tata McGraw-Hill Pub. Co. Ltd

Reference Books :

1) Saxena H.C.: Elementary Statistics. S. Chand & Co., 2009.

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ANNA NAGAR, CHENNAI-600 040.

Name of the Faculty : M ANITA RAJKUMAR

Course : UG **SEMESTER : III**

Subject Name : Statistics - I **Total Hours: 48**

Class : II B.Sc **Subject Code:SP3AA**
Section: B

Objective : To provide knowledge of Statistical parameters like deviation, correlation coefficient and Chi-Square

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
10	**UNIT IV:** Measures of Dispersion: Range Absolute range Coefficient of range Quartile Deviation Mean Deviation	✓	✓	✓		✓			**Material Posted in GCR**
10	Standard Deviation Relative Measures of Dispersion Coefficient of Variations Deciles	✓		✓	✓	✓			
10	**UNIT V:** Correlation Definition Merits of Rank Correlation Limitations of Rank Correlation Types of Correlation Positive Correlation Negative Correlation No Correlation	✓	✓		✓	✓		✓	
10	Scatter Plot Coefficient of Correlation Properties of Correlation Coefficient Pearson's Correlation Coefficient	✓	✓	✓		✓	✓		**Assignment in GCR**
5	Spearman's Rank Correlation Coefficient Tie-Rank Correlation Coefficient Correlation coefficient for Bi-variate	✓	✓	✓		✓	✓		
5	Frequency Table - Association of Attributes CHI-Square Test of Independence of Attributes	✓	✓	✓		✓	✓		
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text :

1) Fundamentals of Mathematical Statistics, Gupta, S.C and Kapoor, V. K (2002), Sultan Chand and Sons, New Delhi
2) Fundamentals of Statistics, Vol. I & II, 8th Edn., Goon A.M., Gupta M.K. and Dasgupta B. (2002): The World Press, Kolkata

3) Mathematical Statistics with Applications, (7th Edn.), Irwin Miller, Marylees Miller (2006): John E. Freund's Prentice Hall International INC
4) Introduction to the Theory of Statistics, 3rd Edn., (Reprint), Mood, A.M. Graybill, F.A. and Boes, D.C. (2007): Tata McGraw-Hill Pub. Co. Ltd

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1) Saxena H.C.: Elementary Statistics. S. Chand & Co., 2009.

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Name of the Faculty : M Anita Rajkumar

Course : PG **SEMESTER : III**

Subject Name : Information Security **Total Hours: 48**
Subject Code:PSD3B

Class : II M.Sc **Section: -**

Objectives : This subject's main objective is to study Security in Computing as the definitive guide to information about computer security attacks and counter measures.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
6	**UNIT III**: Introduction to Database Concept of Database Component of Database Advantage of Using Database **Security Requirements** Integrity of the Database Element Integrity Audit ability Access Control User Authentication Availability Integrity/Confidentiality/Availability SQL Injection Protecting your SQL query	✓					✓	✓	**Materials posted in GCR**
6	**Reliability and Integrity** Protection Features from the Operating System Two-phase update Redundancy/Internal Consistency Recovery Concurrency/Consistency Monitors Summary of Data Reliability	✓			✓		✓		**Conducted Quiz in MAKE MY QUIZ**
6	**Sensitive Data** Access Decision Types of Disclosures Security versus precision **Inference** Direct Attack Indirect Attack Aggregation	✓	✓			✓	✓	✓	**Conducted Quiz in MAKE MY QUIZ**
3	**Multilevel Database** The case of Differentiated Security Granularity Security Issues	✓			✓		✓		

3	**Proposal for Multi-level Security** Separation Design of Multilevel Security databases Trusted Front End Practical Issues	✓		✓	✓		✓		**Conducted Quiz in MAKE MY QUIZ**
3	**UNIT IV:** **Security in Networks:** **Threats in networks** What Makes a Network Vulnerable? Who Attacks Networks? Reconnaissance Threats in Transit: Eavesdropping and Wiretapping Protocol Flaws Impersonation Message Confidentiality Threats Message Integrity Threats Format Failures Web Site Vulnerabilities Denial of Service Distributed Denial of Service Threats in Active or Mobile Code Complex Attacks	✓	✓	✓			✓		**Assignments in GCR**
3	**Network security control** Security Threat Analysis Design and Implementation Architecture Encryption Content Integrity Strong Authentication Access Controls Wireless Security Alarms and Alerts Honeypots Traffic Flow Security Controls Review	✓		✓			✓	✓	**Assignments in GCR**
3	**Firewalls** What Is a Firewall? Design of Firewalls Types of Firewalls Personal Firewalls Comparison of Firewall Types Example Firewall Configurations	✓	✓		✓		✓		**Assignments in GCR**
4	**Intrusion detection systems** Types of IDSs Goals for Intrusion Detection Systems IDS Strengths and Limitations **Secure e-mail** Security for E-mail Requirements and Solutions Designs - Example Secure E-mail Systems, Networks and cryptography Example protocols: PEM- SSL- Ipsec.	✓	✓		✓		✓	✓	

4	**UNIT V Computer crime** Why a Separate Category for Computer Crime Is Needed Why Computer Crime Is Hard to Define Why Computer Crime Is Hard to Prosecute Examples of Statutes International Dimensions Why Computer Criminals Are Hard to Catch What Computer Crime Does Not Address Cryptography and the Law Summary of Legal Issues in Computer Security	✓	✓		✓		✓		
3	**Privacy** **Ethical issues in computer society** Differences Between the Law and Ethics Studying Ethics Ethical Reasoning	✓			✓	✓	✓		
3	**Case studies of ethics.** Case I: Use of Computer Services Case II: Privacy Rights Case III: Denial of Service Case IV: Ownership of Programs	✓				✓	✓		
3	Case V: Proprietary Resources Case VI: Fraud Case VII: Accuracy of Information Case VIII: Ethics of Hacking or Cracking Codes of Ethics Conclusion of Computer Ethics	✓			✓	✓	✓	✓	

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :

1) C. P. Pfleeger, and S. L. Pfleeger, Security in Computing, Pearson Education, 4th Ed, 2003
2) Matt Bishop, Computer Security: Art and Science, Pearson Education, 2003.

Reference Books :

1) Stallings, Cryptography & N/w Security: Principles and practice, 4th Edition, 2006
2) Kaufman, Perlman, Speciner, Network Security, Prentice Hall, 2nd Edition, 2003
3) Eric Maiwald, Network Security : A Beginner's Guide, TMH, 1999
4) Macro Pistoia, Java Network Security, Pearson Education, 2nd Edition, 1999
5) Whitman, Mattord, Principles of information security, Thomson, 2nd Edition, 2005

Websites :

1) http://www.cs.gsu.edu/~cscyqz/courses/ai/aiLectures.html
2) http://www.eecs.qmul.ac.uk/~mmh/AINotes/

R. Shanthi

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Hannah Vijaykumar

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Name of the Faculty : M.ANITA RAJKUMAR

Course **:** B.Com A & F **SEMESTER : I**

Subject Name **:** HTML **Total Hours: 30**

Class : I YEAR **Subject Code:SE51C**

Section: -

Objectives **:** To provide an in-depth training in use of Hyper Text Mark-up Language tags and enable the students write Web pages using HTML tags

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	**UNIT I:** Introductory concepts: Web Basics	✓		✓					GCR
3	What is Internet Web browsers What is Web page	✓		✓					GCR
2	HTML Basics Understanding tags	✓		✓			✓		GCR
2	**UNIT II:** Tags for Document structure HTML, Head, Body Tag Block level text elements	✓		✓					
2	Headings paragraph(<p> tag) Font style elements (bold, italic, font, small, strong, strike, big tags)	✓		✓		✓			ASSIGNMENT ASSIGNED IN GCR
2	**UNIT III:** Lists: Types of lists: Ordered, Unordered – Nesting Lists	✓		✓					
2	Other tags: Marquee, HR, BR Using Images Creating Hyperlinks	✓		✓				✓	GCR
2	**UNIT IV:** Tables: Creating basic Table, Table elements, Caption	✓		✓					

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	Table and cell alignment Rowspan, Colspan Cell padding.	✓		✓	✓				MATERIAL POSTED IN GCR
2	**UNIT V:** Frames: Frameset – Targeted Links	✓		✓					GCR
2	No frame – Forms : Input, Textarea, Select, Option	✓		✓	✓			✓	GCR
1.Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6. Assignment 7. Group Discussion									

RECOMMENDED TEXTS:

1. Laura Lemay, "HTML Complete Reference, Teach Yourself Web Publishing with HTML".

REFERENCE BOOKS:

1. E Stephen Mack, Janan Platt , "HTML".

WEB REFERENCE:

- NPTEL & MOOC courses titled HTML.
- https://www.codecademy.com/learn/learn-html

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ANNA NAGAR, CHENNAI-600040.

Name of the Faculty : Dr.D.SASIREKHA

Course : UG **SEMESTER : V**

Total Hours: 100

Subject Name : VISUAL PROGRAMMING **Subject Code:SEE5A**

Class : III Year **Section: 'A'**

Objectives **:** This course provides the skills and knowledge required to use essential features and capabilities of Visual BASIC, a programming system used to produce Graphical User Interfaces and applications in a Windows environment. It includes basic programming concepts, problem solving, programming logic, and the design of event-driven programming.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	UNIT - I Introduction to VB: Features of VB 6.0, Editions of visual Basic, Integrated Development Environment, Customizing a Form,	✓	✓						Posted the Material in GCR
3	Toolbox , Creating Controls , Name Property, Command Button, Textbox, Label, Frame Control, Option Button, Check Box, Message Box, Input box functions, Image Control, Access Keys.	✓	✓		✓				
3	Creating a VB Application: Guidelines to create a VB application Form Properties, Form Events, The Grid, Editing Tools, Writing Simple Programs.		✓	✓					
3	Variables, Scope of variables, Data Types, Data Types String – Numbers, Operators.		✓	✓			✓		Posted the Material in GCR
3	UNIT - II Displaying Information: Displaying Information on a form, The format function, Pictures Boxes, Rich Textbox.		✓	✓					
2	Conditionals Structures: If Statement: if-else statement nested if statement Select case statement	✓	✓				✓		Posted the Material in GCR
2	Determinate Loops Indeterminate Loops	✓	✓				✓		

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	Built-in Functions: String Functions, Conversion Functions Date Functions, Numeric Functions.	✓	✓						
3	Procedure Sub Procedure Function Procedure Calling a function or procedure	✓	✓	✓	✓				
2	CIA – I Unit Test				✓				
3	**UNIT – III** List & Arrays: Types of Arrays, Erase Statement, Control Array.	✓	✓	✓					
3	Searching and Sorting Records Combo Boxes Grid Control	✓	✓	✓					
3	Building Larger Project: Project with Multiple forms Do Events and Sub main Error Trapping	✓	✓	✓			✓		Posted Assignment – Practical program
3	**UNIT – IV** VB Objects Manipulating objects built in VB Object Browser, control collection	✓	✓						
3	User Interface Controls Common Dialog Boxes Common Controls Menus MDI Forms	✓	✓				✓		
3	Handling Errors : Errors Handling Runtime Errors Error Handling Process	✓	✓						
3	Working with Graphics: Image Control Picture Box Control Animating Pictures Static Variables Preparing for the Toolbar	✓	✓	✓			✓		
3	Working with Graphics: Image List Control Finalizing the Toolbar Line and Shape Control	✓	✓	✓					

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	Working with Graphics: Line Control Mastering the shape Control Monitoring Mouse Activity	✓	✓		✓				
2	CIA – II Unit Test								
3	UNIT – V Monitoring Mouse Activity Mouse Events	✓	✓			✓			Posted Material in GCR
3	File Handling: File Handling in VB Types of File Access File Operations	✓	✓			✓	✓		GCR
3	File System Controls File System Objects	✓	✓			✓			
3	Object Linking and Embedding: OLE Client Control OLE Drag & Drop	✓	✓		✓	✓			
3	Object Linking and Embedding: OLE Automation COM DLL Servers	✓	✓		✓	✓			
	Revision								

1. Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

1. Gary Cornell - Visual Basic 6 from the Ground up - Tata McGraw Hill - 1999. Noel Jerke - Visual Basic 6 (The Complete Reference) - Tata McGraw Hill – 1999.

WEB REFERENCES

https://www.vbtutor.net

https://www.uop.edu.jo/download/research/members/vb6

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Name of the Faculty : Dr.D.SASIREKHA

Course : PG **SEMESTER : I**

Total Hours: 30

Subject Name : SYSTEM SOFTWARE **Subject Code:PSD1C**

Class : I Yr

Objectives : At the end of the semester students will have the knowledge of System softwares like Compilers, Interpreters, Linkers, Loaders and Editors.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	**UNIT - IV** Compilers and Interpreters: Memory Allocation • Static &Dynamic Memory Allocation • Array Allocation and Access	✓	✓	✓					GCR
3	Compilation of Expressions • A Toy Generator for Expression • Triples & quadruples	✓	✓	✓					
2	Compilation of Control Structures	✓	✓						
3	Code optimization • Optimizing Transformations • Local Optimization	✓	✓				✓		GCR
2	Interpreters	✓	✓	✓					GCR
	Unit Test				✓				
3	**UNIT - V** Linkers: Linking and Relocation concepts Design of a linker Linking Requirements	✓	✓			✓			
3	Self-Relocating Programs A Linker for MS DOS	✓	✓	✓			✓		Assignment given in GCR
3	Linking for Overlays • Overlay structured programs	✓	✓	✓					
2	Loaders	✓	✓	✓					GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	Software Tools: Software tools for program development	✓	✓	✓		✓			GCR
3	Editors Debug Monitors Programming environments user interfaces	✓	✓	✓		✓			
2	Unit Test				✓				
	Revision								

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

D. M. Dhamdhere, 1999, Systems Programming and Operating Systems, Second Revised Edition, Tata McGraw-Hill, New Delhi

REFERENCE BOOK:

L. L. Beck, 1996, System Software An Introduction to System Programming, 3rd edition, Addison-Wesley.

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ANNA ADARSH COLLEGE FOR WOMEN

POST GRADUATE DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN 2021-2022

EVEN SEMESTER

Head of the Department

Dr. HANNAH VIJAYKUMAR M.C.A.,M.Phil.,Ph.D.
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Principal

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Name of the Faculty : **Dr. Hannah Vijaykumar**

Course : **PG** **SEMESTER** : **II**

Subject Name : **Mobile Computing** **Total Hours: 85**

Class : **M.Sc** **Subject Code: PSDEA**

Objectives : **This subject imparts fundamental concepts in the area of mobile computing, provides a computer systems perspective on the converging areas of wireless networking, embedded systems, and software, and to introduce selected topics of research.**

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns						ICT Tools
		1	2	3	4	5	6	
6	**UNIT I:** **Introduction and Applications** Vehicles - Emergencies - Business -Replacement of wired networks - Location dependent services	✓	✓	✓		✓	✓	Materials posted in GCR Assignment posted in GCR
6	**Mobile and wireless devices** A simplified reference model - Wirelesstransmission - Frequencies for radio transmission – Signals – Antennas - Signal propagation - Path loss of radio signals - Multi-path propagation	✓	✓	✓		✓		Materials posted in GCR
6	**Multiplexing and Modulation** Space division multiplexing - Frequency division multiplexing - Time division multiplexing - Code division multiplexing - Amplitude shift keying - Frequency shiftkeying - Phase shift keying - Advanced frequency shift keying - Advanced phase shift keying - Multi-carrier modulation	✓	✓		✓	✓	✓	Materials posted in GCR

6	**Spread spectrum** Direct sequence spread spectrum - Frequency hopping spread spectrum - Cellular systems - Medium access control - Hidden and exposed terminals - Near and far terminals – S/F/TDMA - Fixed TDM – Classical and Slotted Aloha	✓	✓	✓		✓		Materials posted in GCR
6	**Multiple access** Carrier sense multiple access - Demand assigned multiple access - PRMA packetreservation - Reservation TDMA - Multiple access with collision avoidance – Polling - Inhibit sense multiple access -Spread Aloha multiple access	✓	✓	✓		✓	✓	Materials posted in GCR Assignment posted in GCR
6	**<u>UNIT II</u>**: **Telecommunications systems** GSM - Mobile services - System architecture - Radio interface - Protocols - Localization and calling - Handover	✓	✓	✓		✓		Materials posted in GCR
6	**Architecture** System architecture - Protocol architecture - TETRA 134 4.4 UMTS andIMT-2000 - UMTS releases and standardization - UMTS system architecture - UMTS radio interface	✓	✓	✓	✓	✓	✓	Materials posted in GCR
6	**Satellite systems** History - Applications - Basics – GEO,LEO, MEO – Routing – Localization - Handover	✓	✓	✓		✓		Materials posted in GCR

6	**UNIT III**: **Wireless LAN** Infrared vs. radio transmission - Infrastructure and ad-hoc network - IEEE 802.11 - System architecture - Protocol architecture - Physical layer - Medium access control layer - MAC management - HIPERLAN	✓	✓	✓		✓	✓	Materials posted in GCR
6	**Bluetooth** User scenarios - Architecture - Mobile communications - Radio layer - Baseband layer **Link manager protocol** L2CAP - Security	✓	✓	✓		✓		Materials posted in GCR
6	**UNIT IV**: **Mobile network layer** Mobile IP - Goals, assumptions and requirements - Entities and terminology - IP packet delivery - Agent discovery – Registration - Tunneling and encapsulation – Optimizations - Reverse tunneling	✓	✓	✓	✓	✓	✓	Materials posted in GCR
6	**IPv6** IP micro-mobility support - Dynamic hostconfiguration protocol - Mobile ad-hoc networks - Routing - Destination sequence distance vector - Dynamic source routing - Alternative metrics - Ad-hoc routing protocols	✓	✓	✓	✓	✓	✓	Materials posted in GCR

6	**UNIT V**: **Mobile transport layer** Traditional TCP - Congestion control - Slow start - Fast retransmit/fast recovery - Implications of mobility - Classical TCP improvements - Indirect TCP - SnoopingTCP	✓	✓	✓	✓	✓	✓	Materials posted in GCR
6	**Mobile TCP** Fast retransmit/fast recovery - Transmission/time-out freezing - Selective retransmission -Transaction-oriented TCP - TCP over 2.5/3G wirelessnetworks	✓	✓	✓		✓		Materials posted in GCR
1. Lecture 2.Power Point Presentation 3.Test 4.Seminar 5.Assignment 6.Group Discussion								

Recommended Text:

J. Schiller, 2003, Mobile Communications, 2nd edition, Pearson Education, Delhi.

Reference Books:

1) Hansmann, Merk, Nicklous, Stober, 2004, Principles of Mobile Computing, 2ndEdition, Springer (India).

2) Pahlavan, Krishnamurthy, 2003(2002), Principle of wireless Networks: A unifiedApproach, Pearson Education,Delhi.

3) Martyn Mallick, 2004, Mobile and Wireless Design Essentials, Wiley Dreamtech India Pvt.Ltd., NewDelhi.

4) W.Stallings, 2004, Wireless Communications and Networks, 2nd Edition, Pearson Education, Delhi.

Website and e-Learning Source:

http://csbdu.in/pdf/mobile%20communication.pdf

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Name of the Faculty : Dr.Hannah Vijaykumar
Course : UG **SEMESTER** : IV
Subject Name : Statistics - II Total Hours:85
Class : II B.Sc **Section: A** Subject Code:SP3AB

Objective: This subject will give an understanding of the basic concept of Probability and the characteristics of discrete and continuous distributions.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
6	**UNIT I:** Basic concepts of Probability: Definition of Probability-Theorems on Probability-Problems on Permutation and Combination-Conditional Probability- Classical and empirical approach to probability and their limitation	✓		✓		✓	✓		Materials in GCR
6	**Types of events:** Exhaustive, mutually exclusive, equally likely and Independent events -Axiomatic approach to probability	✓		✓		✓			Assignments in GCR
6	**Bayes Theorem** - Basic theorems on probability using axiomatic approach – Problems and applications using Bayes Theorem	✓		✓	✓	✓	✓		Materials in GCR
6	**UNIT II:** **Discrete probability mass function** Cumulative distribution function-Theory and problems based on it.	✓		✓		✓			
10	Bernoulli distribution, Binomial Distribution and Poisson Distribution	✓		✓	✓		✓		Materials in GCR

6	**UNIT- III:** **Continuous probability density** function, cumulative distribution function – Theory and problems based on it.	✓		✓			✓		Assignments in GCR
10	Normal Distribution and its properties, Standard Normal distribution - Problems based on it - Exponential Distribution - Problems based on it	✓		✓	✓		✓		Materials in GCR
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text:

1) Fundamentals of Mathematical Statistics, Gupta, S.C and Kapoor, V. K (2002), Sultan Chand and Sons, New Delhi
2) Fundamentals of Statistics, Vol. I & II, 8th Edn., Goon A.M., Gupta M.K. and Dasgupta B. (2002): The World Press, Kolkata
3) Mathematical Statistics with Applications, (7th Edn.), Irwin Miller, Marylees Miller (2006): John E. Freund's Prentice Hall International INC
4) Introduction to the Theory of Statistics, 3rd Edn., (Reprint), Mood, A.M. Graybill, F.A. and Boes, D.C.(2007): Tata McGraw-Hill Pub. Co. Ltd

Reference Books :

Saxena H.C.: Elementary Statistics. S. Chand & Co., 2009.

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Name of the Faculty : LAKSHMI. A

Course : UG **SEMESTER : VI**

Total Hours:100

Subject Name : Data Mining **Subject Code:SEE6H**

Class : III B.Sc. Computer Science **Section: B**

Objectives : To introduce fundamental data mining concepts and techniques for discovering interesting patterns from data in various applications.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
6	Unit-1: Introduction: Data mining – Functionalities - Classification – Introduction to Data Warehousing	✓	✓	✓					GCR
6	Data Preprocessing : Preprocessing the Data – Data cleaning – Missing Values -Noisy Data	✓	✓	✓					GCR
6	Data Integration and Transformation: Normalization, Binning	✓	✓	✓					GCR
6	Data reduction: Wavelet Transforms - Principal Components Analysis - Attribute Subset Selection - Regression and Log-Linear Models: Parametric Data Reduction	✓	✓	✓	✓				GCR
6	Unit-2: Data Mining, Primitives, Languages and System Architecture: Data Mining – Primitives- Data Mining Query Language, Architectures of Data mining Systems	✓	✓	✓					GCR
6	Concept Description, Characterization and Comparison: Concept Description, Data Generalization and summarization, Mining Class Comparison	✓	✓	✓					GCR
6	Unit-3: Mining Association Rules: Basics Concepts – Single Dimensional Boolean Association Rules From Transaction Databases, Multilevel Association Rules from transaction databases	✓	✓	✓	✓				GCR
6	Multilevel Association Rules from transaction databases – Multi dimension Association Rules from Relational Database and Data Warehouses	✓	✓	✓		✓			GCR

1. **Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion**

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
6	Unit-4:Classification and Prediction: Introduction – Issues – Decision Tree Induction – Bayesian Classification – Classification of Back Propagation.	✓	✓	✓		✓	✓		GCR
6	Classification based on Concepts from Association Rule Mining – Other Methods. Prediction – Introduction – Classifier Accuracy.	✓	✓	✓		✓	✓		GCR
6	Unit-5: Cluster Analysis: Introduction – Types of Data in Cluster Analysis, Petitioning Methods	✓	✓	✓		✓			GCR
6	Hierarchical Methods Density Based Methods – GRID Based Method – Model based Clustering Method	✓	✓	✓	✓	✓			GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :

1. J.Han and M. Kamber,2001,Data Mining Concepts and Techniques,Harcourt India Pvt. Ltd - New Delhi.

Reference Books :

1. K.P. Soman , ShyamDiwakar, V.Ajay ,2006, Insight into Data Mining Theory and Practice,Prentice Hall of India Pvt. Ltd - New Delhi.

Websites :

https://www.tutorialspoint.com/data_mining/index.htm

https://www.javatpoint.com/data-mining

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(A. Lakshmi)

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Name of the Faculty : A.P.Tharani

Course : UG **Semester: IV**

Total Hours:85

Subject Name : Web Technology **Subject Code:SE24A**

Class : II B.Sc **Section : A**

Objectives :

- To use PHP and MySQL to develop dynamic web sites for user on the Internet
- To develop web sites ranging from simple online information forms to complex e-commerce sites with MySQL database, building, connectivity, and maintenance

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
3	**UNIT – I :** Introducing PHP: Basic development Concepts	✓		✓					
3	Creating first PHP Scripts Using Variable and Operators	✓		✓					Assignment in GCR
3	Storing Data in variable Understanding Data types	✓					✓		
3	Setting and Checking variables Data types Using Constants	✓					✓		
3	Manipulating Variables with Operators	✓			✓				Assignment in GCR
3	**UNIT – II** : Controlling Program Flow: Introduction	✓		✓					Online PHP Compiler and editor
3	Writing Simple Conditional Statements	✓							Online PHP Compiler and editor
3	Writing More Complex Conditional Statements	✓		✓	✓				Online PHP Compiler and editor

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
3	Repeating Action with Loops	✓		✓					Assignment in GCR
3	Working with String and Numeric Functions	✓		✓	✓		✓		
3	**UNIT – III :** Working with Arrays: Storing Data in Arrays	✓				✓	✓		
3	Processing Arrays with Loops and Iterations	✓	✓		✓				
3	Using Arrays with Forms	✓	✓						
3	Working with Array Function	✓	✓		✓				Test in GCR
3	Working with Dates and Times	✓	✓		✓	✓			
3	**Unit IV:** Using Functions and Classes: Introduction	✓		✓	✓	✓			
3	Creating User-Defined Functions	✓		✓					Online PHP Compiler and editor
3	Creating Classes	✓		✓	✓				Online PHP Compiler and editor
3	Using Advanced OOP Concepts	✓		✓	✓		✓		Online PHP Compiler and editor Materials in GCR
3	Working with Files and Directories: Reading Files	✓		✓					
3	Writing Files- Processing Directories	✓		✓					Online PHP Compiler and editor

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
3	**UNIT – V:** Working with Database and SQL : Introducing Database and SQL	✓	✓	✓	✓				Online PHP Compiler and editor Materials in GCR
3	Using MySQL Adding and modifying Data	✓	✓	✓					Online PHP Compiler and editor
3	Handling Errors Using SQLite Extension and PDO Extension	✓	✓				✓		Materials in GCR
3	Introduction XML Simple XML and DOM Extension	✓	✓				✓		

1.Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

TEXT BOOKS:

1. VikramVaswani, "PHP A Beginner's Guide", Tata McGraw Hill 2008.

REFERENCES:

1. Steven Holzner , "The PHP Complete Reference", Tata McGraw Hill, 2007.
2. Steven Holzer , "Spring into PHP", Tata McGraw Hill 2011, 5thEdition.

WEB REFERENCES:

- https://www.w3schools.com/php/
- https://www.phptpoint.com/php-tutorial-pdf/
- http://www.xmlsoftware.com/

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Name of the Faculty : A.P.Tharani

Course : UG **Semester : IV**

Total Hours:85

Subject Name : Statistics - II **Subject Code:SP3AB**

Class : II B.Sc **Section : B**

Objective : This course introduces the basic concept of Probability, the characteristics of different discrete and continuous distributions and the Sampling distributions and the applications of statistical tests

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS ADOPTED
		1	2	3	4	5	6	7	
6	**UNIT I**: Basic concepts of Probability: Random Experiments, Sample space, Trial, Events Classical and empirical approach to probability and their limitations	✓		✓		✓	✓		Materials in GCR
6	Types of events: Exhaustive, mutually exclusive, equally likely and Independent events - Axiomatic approach to probability	✓		✓		✓			Assignments in GCR
6	Basic theorems on probability using axiomatic approach. Importance of organisation of data Bayes Theorem (statement only)	✓		✓	✓	✓	✓		Materials in GCR

6	**Unit II:** Discrete probability mass function, cumulative distribution function- Theory and problems based on it.	✓		✓		✓			
10	Bernoulli distribution, Binomial Distribution and Poisson Distribution	✓		✓	✓		✓		Materials in GCR
6	**UNIT- III:** Continuous probability density function, cumulative distribution function – Theory and problems based on it.	✓		✓			✓		Assignments in GCR
10	Normal Distribution and its properties, Standard Normal distribution, Problems based on it. Exponential Distribution	✓		✓	✓		✓		Materials in GCR
1.Lecture 2.Blackboard 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text :

1) Gupta, S. C and Kapoor, V. K (2002), Fundamentals of Mathematical Statistics, Sultan Chand and Sons, New Delhi.
2) Saxena H.C.: Elementary Statistics. S. Chand & Co., 2009.

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Name of the Faculty : PARAMESWARI A

Course : UG SEMSTER: VI

Subject Name : DATA COMMUNICATION AND NETWORKING

Total Hours: 30

Subject Code:SAE6A

Class : III B.Sc. Computer Science SECTION: B

Objectives : Upon completion of this course, students will be able to understand the fundamentals of data communication and networking & students get exposed to understand about security and firewall.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
2	Unit 1 :- Introduction to data communication – components-data representation- data flow.	✓	✓	✓	✓	✓	✓		GCR
2	Networks-Network Criteria-Physical Structures-Networks Models	✓	✓	✓	✓		✓	✓	GCR
2	Categories of Networks-Internetwork-Protocols and standards-Protocols-Standards	✓	✓	✓			✓	✓	GCR
2	Standards Organizations-Internet standards-Line configuration-topology.	✓	✓	✓	✓	✓	✓		GCR
2	Transmission mode-OSI Model-Layered architecture-Peer to peer processes-Encapsulation	✓	✓	✓			✓	✓	GCR
2	Layers in OSI model-Physical Layer-Data Link Layer-Network Layer-Transport Layer-Session Layer-Presentation Layer-Application Layer	✓	✓	✓	✓		✓		GCR

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
2	Unit 5:- Repeaters-Bridges-Routers- gateways-Routing Algorithms.	✓	✓	✓	✓		✓	✓	GCR
2	TCP/IP Network, Transport and Application Layers of TCP/IP-World Wide Web.	✓	✓	✓			✓		GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : **I. Behrouz and Forouzan, 2001, Introduction to Data communication and Networking, 2nd edition, TMH.**

Reference Books :**Jeanwarland 1998, Communication Networks, (A first Course), second Edition, WCB/McGraw Hill.**
Behrouz and Forouzan, 2006, Data Communication and Networking, 3rd edition, TMH.

A. Parameswari

Hannah Vijay Kumar

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Name of the Faculty : PARAMESWARI A

Course : PG SEMESTER: II

Subject Name : DIGITAL IMAGE PROCESSING **Total Hours: 85**
Subject Code: PSD2B

Class : I M.Sc Computer Science

Objectives : Upon completion of this course, students will be able to understand the digital image fundamentals, students get exposed to simple enhancement techniques in spatial and frequency domains & they can operate on images using the techniques of smoothing & sharpening.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
5	Unit 1 :- Introduction to digital Processing-Applications –Steps in digital processing-components of image processing system.	✓	✓	✓					GCR
5	Digital Image Fundamentals-Image acquisition-Image sampling and quantization-Some relationship between pixels.	✓	✓	✓				✓	GCR
5	Color models-basics of color image processing – Unit 2-Basics of intensity transformations and spatial filtering-basic intensity transformation functions-Histogram processing.	✓	✓	✓				✓	GCR
5	Fundamentals of spatial filtering-smoothing spatial filters-sharpening spatial filters-combining spatial enhancement methods.	✓	✓	✓	✓		✓		GCR
5	Using Fuzzy techniques for intensity transformations and spatial filtering. Unit 3:- Image enhancement in frequency domain-Introduction to Fourier transform-1-D,2-D DFT and its inverse transform.	✓	✓	✓				✓	GCR
5	Smoothing and sharpening in frequency domains. Unit 4:-Image restoration-Model of degradation and restoration process	✓	✓	✓	✓		✓		GCR

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS USED
		1	2	3	4	5	6	7	
5	Noise models-restoration in the presence of noise- Periodic noise reduction- Image segmentation-point, line and edge detection	✓	✓	✓	✓		✓	✓	GCR
5	Thresholding and region based segmentation. Unit 5:- Image compression fundamentals- models.	✓	✓	✓			✓		
5	Information theory-error free compression- Lossy compression: predictive and transform coding, JPEG standard.	✓	✓	✓		✓		✓	

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : C Gonzalez, R E Woods,2009, Digital Image Processing ,3rd edition, Pearson Education.

Reference Books : Pratt W K, Digital Image Processing, 3rd Edition, John Wiley & Sons.
Rosenfled A & Kak A C , Digital Picture Processing, Vol I & II , Academic Press.

Website & E-learning Resources: http://imageprocessingplace.com/DIP/dip-downloads

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Name of the Faculty: M.Revathy Meenal

Course :PG **SEMESTER : II**

Subject Name : Object Oriented Analysis and Design **Total Hours:85**

Subject Code:PED2A

Class : I M.Sc

Objectives :

- To understand the Object-based view of Systems
- To develop robust object-based models for Systems
- To inculcate necessary skills to handle complexity in software design

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 1 2hrs	**UNIT – I :** • System Development • Object Basics • Development Life Cycle	✓		✓			✓		Jamboard
2hrs	• Methodologies • Patterns • Frameworks	✓		✓					Jamboard
1 hr	Unified Approach - UML.	✓		✓	✓				Jamboard
Week 2 2hrs	UNIT – II : • Use-Case Models • Object Analysis	✓		✓					Jamboard
2 hrs	• Object relations • Attributes • Methods	✓		✓	✓		✓		Jamboard
1hr	• Class and Object responsibilities • Case Studies.	✓		✓					Jamboard
Week 3 2hrs	UNIT – III : • Design Processes • Design Axioms	✓		✓	✓				Jamboard
1 hr	• Class Design • Object Storage	✓		✓			✓		Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2 hrs	• Object Interoperability • Case Studies	✓		✓	✓		✓		Jamboard
Week 4 2 hrs	**UNIT IV:** User Interface Design View layer Classes	✓		✓					Jamboard
1 hr	Micro-Level Processes	✓		✓	✓				Jamboard
2hrs	View Layer Interface Case Studies.	✓		✓					Jamboard
Week 5 2hrs	**UNIT – V:** Quality Assurance Tests Testing Strategies Object orientation on testing	✓		✓			✓		Jamboard
1 hr	Test Cases Test Plans	✓		✓					Assignement given through GCR, Jamboard
1hr	Continuous testing Debugging Principles	✓		✓					Jamboard
1hr	System Usability Measuring User Satisfaction Case Studies	✓		✓					Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : (i) Ali Bahrami, Reprint 2009, Object Oriented Systems Development, Tata McGraw Hill International Edition.

Reference Books : (i) G. Booch, 1999, Object Oriented Analysis and design, 2nd Edition, Addison Wesley,Boston

(ii) Roger S.Pressman, 2010, Software Engineering A Practitioner's approach, Seventh Edition, Tata McGraw Hill, New Delhi.

(iii) Rumbaugh, Blaha, Premerlani , Eddy, Lorensen, 2003, Object Oriented Modeling And design , Pearson education, Delhi.

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Name of the Faculty : M.Revathy Meenal

Course :UG **SEMESTER : VI**

Total Hours: 100

Subject Name :Data mining

Subject Code: SEE6H

Class : III BSc Computer science **Section: 'A'**

Objectives : The aim of data mining is to discover structure inside unstructured data, extract meaning from noisy data, discover patterns in apparently random data, and use all this information to better understand trends, patterns, correlations, and ultimately predict customer behaviour, market and competition trends.

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 1 3 hrs	**Unit 1:** **Introduction to Data mining** What Is Data Mining? Different kinds of data • Database Data 9 • Data Warehouses • Transactional Data • Other Kinds of Data What Kinds of Patterns can be mined? Major Issues in Data Mining • Functionalities	✓			✓				Jamboard
3hrs	• Classification • Introduction to Data warehousing Data Preprocessing • Preprocessing the data • Data Cleaning • Missing Values • Noisy Data • Data Cleaning as a Process Data Integration • Entity Identification Problem • Redundancy and Correlation Analysis • Tuple Duplication	✓				✓			

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 2 3 hrs	Data Transformation and Data Discretization • Data Transformation Strategies Overview • Data Transformation by Normalization • Discretization by Binning • Discretization by Histogram Analysis • Discretization by Cluster, Decision Tree, and Correlation Analyses • Concept Hierarchy Generation for Nominal Data • Data Value Conflict Detection and Resolution Data Reduction • Overview of Data Reduction Strategies	✓							Jamboard
3hrs	**Unit 2:** Data mining, Primitives, Languages and system architecture • Data mining query language • Architectures of data mining systems • Concept description • Data generalization and summarization	✓			✓	✓			Test given through GCR
Week 3 3hrs	Analytical Characterization • Mining class comparison • Statistical measures	✓					✓		Assignment through GCR
3hrs	**Unit 3:** Mining Association rules • Basic concepts • Single dimensional Boolean association rules from transaction databases • Multilevel association rules from transaction databases Multi dimensional association rules from relational databases and datawarehouses	✓			✓	✓			Jamboard

Hour	TOPICSCOVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
Week 4 6hrs	**Unit 4:** • Classification: Basic Concepts • Decision Tree Induction • Decision Tree Induction • Attribute Selection Measures • Tree Pruning • Scalability and Decision Tree Induction • Visual Mining for Decision Tree Induction • Bayes Classification Methods • Bayes' Theorem • Na¨ıve Bayesian Classification • Rule-Based Classification • Using IF-THEN Rules for Classification • Back propagation	✓							Jamboard
week5 3hrs	**Unit 5:** Cluster analysis Cluster Analysis: Basic Concepts and Methods • Cluster Analysis What Is Cluster Analysis? • Requirements for Cluster Analysis • Overview of Basic Clustering Methods	✓		✓					Jamboard
3hrs	Partitioning Methods k-Means: A Centroid-Based Technique k-Medoids: A Representative Object-Based Technique Hierarchical Methods Agglomerative versus Divisive Hierarchical Clustering	✓		✓					
week6 6hrs	Distance Measures in Algorithmic Methods BIRCH: Multiphase Hierarchical Clustering Using Clustering Chameleon: Multiphase Hierarchical Clustering Using Dynamic Modeling Probabilistic Hierarchical Clustering Density-Based Methods 10.4.1 DBSCAN: Density-Based Clustering	✓			✓		✓		Test given through GCR , Jamboard

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text :

1. **J.HAN and M.Kamber,2001,Data mining concepts and Techniques,Harcourt India Private Ltd.- New delhi**

Reference Books :

1. **1.K.P Soman,Shyam Diwakar,V.Ajay,2006,Insight into Data mining Theory and Practice,Prentice Hall of India Pvt. Ltd- New delhi**

Websites E-learning resources

1.http://www.academicpress.com

2. .http://www.mkp.com

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Name of the Faculty : P.PAKUTHARIVU

Course : UG **SEMESTER : IV**

Subject Name : WEB TECHNOLOGY **Total Hours: 85**
Subject Code:SE24A

Class : II B.Sc **Section: B**

Objectives :

- To use PHP and MySQL to develop dynamic web sites for user on the Internet
- To develop web sites ranging from simple online information forms to complex e-commerce sites with MySQL database, building, connectivity, and maintenance

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	UNIT – I : Introducing PHP: Basic development Concepts	✓		✓			✓		Assignments in GCR
3	Creating first PHP Scripts Using Variable and Operators	✓		✓					
3	Storing Data in variable Understanding Data types	✓		✓					
3	Setting and Checking variables Data types Using Constants	✓		✓					
3	Manipulating Variables with Operators	✓		✓	✓		✓		Assignments in GCR
3	UNIT – II : Controlling Program Flow: Introduction	✓		✓					Online PHP Compiler and editor
3	Writing Simple Conditional Statements	✓		✓					Online PHP Compiler and editor
3	Writing More Complex Conditional Statements	✓		✓					
3	Repeating Action with Loops	✓		✓			✓		Assignments in GCR

1. **Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion**

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	Working with String and Numeric Functions	✓		✓	✓		✓		Assignments in GCR
3	UNIT – III : Working with Arrays: Storing Data in Arrays	✓		✓					
3	Processing Arrays with Loops and Iterations	✓		✓					
3	Using Arrays with Forms	✓		✓	✓				Test Conducted in GCR
3	Working with Array Functions	✓		✓					
3	Working with Dates and Times	✓		✓					
3	Unit IV: Using Functions and Classes: Introduction	✓		✓		✓			Online PHP Compiler and editor
3	Creating User-Defined Functions	✓		✓					
3	Creating Classes	✓		✓					Online PHP Compiler and editor
3	Using Advanced OOP Concepts	✓		✓					Online PHP Compiler and editor
3	Working with Files and Directories: Reading Files	✓		✓					Study Materials Posted in GCR
3	Writing Files- Processing Directories	✓		✓	✓		✓		Online PHP Compiler and editor

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
4	UNIT – V: Working with Database and SQL : Introducing Database and SQL	✓		✓		✓			Study Materials Posted in GCR
4	Using MySQL Adding and modifying Data	✓		✓		✓			Online SQL Compiler and editor
4	Handling Errors Using SQLite Extension and PDO Extension	✓		✓	✓	✓	✓		Online SQL Compiler and editor
4	Introduction XML Simple XML and DOM Extension	✓		✓		✓			

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : 1. VikramVaswani, "PHP A Beginner's Guide", Tata McGraw Hill 2008.

Reference Books : 1. Steven Holzner , "The PHP Complete Reference", Tata McGraw Hill, 2007.

2. Steven Holzer , "Spring into PHP", Tata McGraw Hill 2011, 5thEdition.

Websites :

- https://www.w3schools.com/php/
- https://www.phptpoint.com/php-tutorial-pdf/
- http://www.xmlsoftware.com/

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Name of the Faculty : Unnamalai K

Course : UG **SEMESTER : VI**

Total Hours: 48

Subject Name : Software Engineering **Subject Code:SEE6G**

Class : III Year **Section: A**

Objectives : This subject makes the student to understand the software development life cycle for a project, apply appropriate Design principles to S/W project development and implement the principles and guidelines in programming the software

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns						ICT Tools
		1	2	3	4	5	6	
5	**UNIT I: Introduction to Software Engineering** Introduction and definitions – Size factors – Efforts – Project size – Time	✓	✓	✓				GCR
5	**Quality and productivity factors** Quality and productivity factors - Managerial issue	✓	✓	✓		✓		GCR
5	**Planning a Software Project** Defining the problem – Goals and requirements	✓	✓	✓				GCR
6	**Developing a solution strategy** Planning the development process – Phased life cycle model – Milestones, Documents and Reviews – Cost Model – Prototype Life cycle Model – Successive versions	✓	✓	✓		✓	✓	GCR
5	**Planning an organization structure** Project structure – Project/Functional/Matrix Format – Programming Team structure – Management by objectives	✓	✓	✓				GCR

4	**Other Planning Activities** Planning for configuration management – Quality Assurance – Planning for Independent verification and validation – Planning phase	✓	✓	✓			✓	GCR
5	**UNIT II:** **Software Cost Estimation** Software cost factors – Programmer ability – product complexity- product size – available time – level of reliability – level of technology	✓	✓	✓				GCR
5	**Software cost estimation Techniques** Expert judgment – Delphi cost estimation – Work breakdown structure – Algorithmic cost models	✓	✓	✓		✓		GCR
4	**Specification techniques** Staffing-Level estimation – Estimating software - Estimating software maintenance costs	✓	✓	✓	✓		✓	GCR
5	**Software requirements specification** Software requirements specification – Formal specification Techniques – Relational notations – Implicit equations - Recurrence relations - Algebraic axioms - Regular expressions – State oriented notations - Decision Tables - Events Tables - Transition Tables - Finite-State Mechanisms - Petri Nets	✓	✓	✓	✓		✓	GCR
6	**UNIT III:** **Software Design** Fundamental Design concepts - Abstraction – Information hiding – Structure – Modularity – Concurrency – Verification – Aesthetics	✓	✓	✓		✓		GCR

4	**Modules and modularizing Criteria** Coupling – Cohesion – Modularization criteria	✓	✓	✓			✓	GCR
6	**Design Notations** Data flow diagrams – Structure charts – HIPO diagrams – Procedure templates – Pseudocode – Structured flow charts – Structured English – Decision tables	✓	✓	✓	✓			GCR
6	**Design Techniques** Stepwise refinement – Levels of Abstraction – Structured design – Integrated Top-Down development – Jackson Structured programming – Detailed design considerations	✓	✓	✓	✓		✓	GCR
1. Lecture 2.Power Point Presentation 3.Test 4.Seminar 5.Assignment 6.Group Discussion								

Recommended Text:

1) R.Fairley, Software Engineering Concepts, Tata McGraw-Hill Edn. 1997.
2) R.SPressman, Software Engineering, Fourth Ed., McGraw Hill, 1997.

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Name of the Faculty : SUMATHI. K

Course : B.Sc Computer Science

Subject Name : COMPUTER ORGANIZATION

Class : I Yr

SEMESTER : II
Total Hours: 66
Subject Code:SE22A
Section: A

OBJECTIVES:

- To understand the basic organization of computers and the working of each component and CPU
- To bring the programming features of 8085 Microprocessor and know the features of latest microprocessors.
- To understand the principles of Interfacing I/O devices and Direct Memory accesses

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
4	**UNIT I** **Data Represtation** Data Types Number System Complements Fixed Point Representation	✓		✓			✓		GCR
4	Integer Arithmetic Floating Point Representation Binary Codes	✓		✓					GCR
6	**Register Transfer And Micro operations** Register Transfer Language Bus Transfer Memory Transfer Micro-operations	✓		✓	✓				GCR
6	**UNIT II** Central Processing Unit General register Organization Stack Organization Instruction formats Addressing Modes	✓		✓					GCR
4	Data Transfer and Manipulations RISC	✓		✓					GCR

1. Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
6	**Pipelining & Vector Processor** Parallel Processing Pipelining Arithmetic Pipeline Instruction Pipeline	✓		✓					GCR
4	RISC Pipeline Vector Pipeline Array Processors	✓		✓	✓		✓		GCR
6	**Unit - III** **Microprocessor Architecture And Its Operations** Components Of Microprocessor System Bus 8085 Architecture 8085 Pin	✓		✓	✓		✓	✓	GCR
4	8085 Instruction Set Instruction format Data transfer instruction Arithmetic Instruction Logical Instructions	✓		✓			✓		GCR 8085 APP
4	Branching Instructions Machine Control Instruction Stack & IO instructions	✓		✓	✓		✓		GCR 8085 APP
8	**UNIT IV** Assembly Language Programs Addition, Subtractions Multiplication, Division Searching Sorting Reversing	✓		✓			✓		GCR 8085 APP
4	Code conversions	✓		✓	✓		✓		GCR 8085 APP
4	**UNIT V** Interrupts Structure Instructions for interrupts, Interrupt process Types of interrupts, Priority Vectored & Non Vectored Interrupts	✓		✓			✓		GCR 8085 APP

1. Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
4	Direct memory access DMA process Working principle Types of DMA DMA controller 8257	✓		✓	✓	✓	✓		GCR 8085 APP
4	8255A – Programmable Peripheral Interface Advanced Microprocessors	✓		✓		✓			GCR 8085 APP

1. Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion

Recommended Text:

- M.M. Mano, "Computer System architecture". Pearson, Third Edition, 2007
- R. S. Gaonkar- "Microprocessor Architecture- Programming and Applications with 8085"- 5th Edition- Penram- 2009.

Reference Books:

- V. Vijayendran- "Fundamentals of Microprocessors – 8085"- S. Viswanathan Pvt. Ltd.- 2008.

Websites

- NPTEL & MOOC courses titled Computer organization
- https://nptel.ac.in/courses/106105163/
- https://nptel.ac.in/courses/106103068/

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Name of the Faculty : S.RADHA

Course : PG **SEMESTER : II**

Subject Name : COMPUTER NETWORKS (Subject Code - PSD2A) **Total Hours:85**
Subject Code:PSD2A

Class : I M.Sc (5 Hrs / WEEK)

Objectives :

The main Objective of this Course Computer Networks is about how the Communication will happen between the client and server (computers) in the network.

Computer Networks focuses on explaining layers functionality, how the Internet works, ranging from how bits are modulated on wires and in wireless to application-level protocols like HTTP. It also explains the principles of how to design networks and network protocols.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
5	**UNIT – I :** Introduction, Network Hardware, Software	✓		✓			✓	✓	• GCR • Google form • Mentimeter • Poll Everywhere
5	Reference Models - OSI and TCP/IP models	✓	✓	✓					• GCR • Google form • Mentimeter
5	Example networks: Internet, 3G Mobile phone networks, Wireless LANs,RFID and sensor networks	✓						✓	• GCR • Hot Potatoes
5	Physical layer, Theoretical basis for data communication	✓				✓			• GCR • Jam Board
5	Guided Media & Unguided Media	✓	✓	✓	✓		✓		• GCR • Jam Board
5	**Unit II:** Wireless transmission, Communication Satellites	✓		✓		✓		✓	• GCR • Mentimeter
5	Digital modulation and multiplexing, Types of Multiplexing	✓	✓	✓				✓	• GCR • Hot Potatoes • Youtube
5	Telephones network structure – local loop, trunks and multiplexing, switching	✓	✓	✓	✓				• GCR • Google form • Youtube
5	Data link layer: Design issues, Error detection and correction	✓	✓	✓			✓		• GCR • Jam Board
5	**Unit III:** Elementary data link protocols, sliding window protocols, Example Data Link protocols	✓	✓	✓				✓	• GCR • Mentimeter • Youtube

1. Lecture 2. Black Board 3.Power Point Presentation 4.Test
5.Seminar 6.Assignment 7. Group Discussion 8. ICT Tools

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
5	Example Data Link protocols, Packet over SONET, ADSL	✓	✓	✓			✓		• GCR • Google Form
5	Medium Access Layer, Channel Allocation Problem, Multiple Access Protocols	✓	✓	✓	✓				• GCR
5	**Unit IV:** Network layer, design issues , Routing algorithms	✓	✓	✓				✓	• GCR • Google Form
5	Congestion control algorithms, Quality of Service	✓	✓	✓		✓			• GCR
5	Network layer of Internet, IP protocol, IP Address, Internet Control Protocol	✓	✓	✓		✓		✓	• GCR • Jam Board
5	**Unit V:** Transport layer, transport service, Elements of transport protocol	✓		✓			✓		• GCR • Mentimetter
5	Addressing, Establishing & Releasing a connection, Error control, flow control, multiplexing and crash recovery	✓		✓			✓		• GCR • Jam Board
5	Internet Transport Protocol, TCP/IP Network, Transport and Application Layers of TCP/IP	✓		✓	✓		✓		• GCR Google Form
5	Network Security: Cryptography	✓	✓	✓	✓		✓		• GCR • Jam Board • Google Form

1. Lecture **2. Black Board** **3.Power Point Presentation** **4.Test**
5.Seminar **6.Assignment** **7. Group Discussion** **8. ICT Tools**

Recommended Text :

1) A. S. Tanenbaum, 2011, Computer Networks, Fifth Edition, Pearson Education, Inc.

Reference Books :

1) B. Forouzan, 1998, Introduction to Data Communications in Networking, Tata McGraw Hill, New Delhi.
2) F. Halsall, 1995, Data Communications, Computer Networks and Open Systems, Addison Wessley.
3) D. Bertsekas and R. Gallagher, 1992, Data Networks, Prentice hall of India, New Delhi.
4) Lamarca, 2002, Communication Networks, Tata McGraw Hill, New Delhi.

Websites :

1) http://peasonhighered.com/tanenbaum

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Name of the Faculty : S.RADHA

Course : UG **SEMESTER : VI**

Subject Name : Data Communication & Networking **(Subject code - SAE6A)**

Class : III B.Sc (3 Hrs / WEEK) **Section: 'A'**

Total Hours: 48

Subject Code: SAE6A

Objectives : Students will be able to:

a. Understand of the fundamental concepts of data communication and computer networking.
b. Understand how errors detected and corrected that occur in transmission.
c. How collisions to be handled when many stations share a single channel.
d. Know about routing mechanisms and different routing protocols.
e. Understand transport layer functions
f. Know about different application layer protocols.
g. Get exposed to understand about security and firewall.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							
		1	2	3	4	5	6	7	8
6	**UNIT – I :** Introduction to Data Communication, Network, Protocols &standards and standards organizations	✓	✓	✓				✓	• GCR • Google form • Mentimeter • Poll Everywhere
6	Line Configuration, Topology, Transmission mode	✓	✓	✓				✓	• GCR • Google form • Mentimeter
6	Classification of Network, OSI Model, Layers of OSI Model	✓	✓	✓	✓			✓	• GCR • Hot Potatoes
6	**UNIT – II :** Parallel and Serial Transmission	✓	✓	✓				✓	• GCR • Jam Board
6	DTE/DCE/such as EIA-449, EIA-530, EIA-202 and x.21 interface, Interface standards, Modems	✓		✓		✓	✓		• GCR • Jam Board
6	Guided Media - Unguided Media	✓		✓	✓				• GCR • Mentimeter
6	Performance, Types of Error, Error Detection	✓		✓				✓	• GCR • Hot Potatoes • Youtube
6	Error Detection, Error Corrections	✓	✓	✓	✓				• GCR • Google form • Youtube
6	**UNIT – III :** Multiplexing , Types of Multiplexing	✓	✓	✓					• GCR • Jam Board
6	Multiplexing Application - Telephone system	✓	✓	✓	✓			✓	• GCR • Mentimeter • Youtube

1. Lecture 2. Black Board 3.Power Point Presentation 4.Test
5.Seminar 6.Assignment 7. Group Discussion 8. ICT Tools

Recommended Text :

1) Behrouz and Forouzan, 2001, Introduction to Data Communication and Networking, 2nd Edition,TMH..

Reference Books :

1) Jean Walrand 1998, Communication Networks (A first Course), Second Edition, WCB/McGraw Hill.
2) Behrouz and Forouzan, 2006, Data Communication and Networking, 3nd Edition ,TMH.

Websites :

1) http://www.academicpress.com
2) .http://www.mkp.com

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Name of the Faculty : S.RANJANA

Course : UG **SEMESTER : VI**

Total Hours:100

Subject Name : SOFTWARE ENGINEERING **Subject Code: SEE6G**

Class : III B.Sc **Section: B**

Objectives : This course introduces the details about the concepts of life cycle of software.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	UNIT – I : Introduction to Software Engineering Some definition – Some size factors	✓		✓			✓		Online Digital board- Jamboard
3	Quality and productivity factors – Managerial issue	✓		✓					Google Slides
2	Planning a Software Project: Defining the problem								Paddlet
2	Developing a solution strategy – planning the development process								Jamboard
3	planning an organization structure – other planning activities								
2	UNIT – II : Software Cost Estimation: Software – Cost factors	✓	✓	✓					Assignments in GCR
3	Software cost estimation techniques	✓	✓						
3	Specification techniques – level estimation	✓	✓		✓				
3	estimating software maintenance costs- The software requirements specification	✓	✓	✓			✓		Kahoot
2	UNIT -III Software Design: Fundamental Design concepts	✓	✓		✓		✓		
3	– Modules and modularizing Criteria – Design Notations – Design Techniques – Detailed Design Consideration	✓	✓						

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
3	Real time and distributed system design – Test plan	✓	✓						Assignments in GCR
3	Mile stones walk through and inspection	✓	✓						
3	Unit-4: Implementation issues : Structured Coding techniques coding	✓	✓	✓					
3	style – standards and guidelines – documentation guidelines	✓	✓						Google Form for quiz
3	Type checking – scooping rules – concurrency mechanisms.	✓	✓						
3	Unit V: Quality assurance – walk through and inspection	✓	✓						
2	Static analysis – symbolic exception	✓							Google Form
3	Unit testing and Debugging – System testing	✓							
3	Formal verification: Enhancing maintainability during development – Managerial aspects of software maintenance	✓							Google Form
3	Configuration management – source code metrics – other maintenance tools and techniques.	✓							Mentimeter

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Recommended Text : i. Richard E.Fairly - Software Engineering Concepts - Tata McGraw-Hill book Company.

2. Reference Books

i. R.S.Pressman, 1997, Software Engineering – 1997 - Fourth Ed., McGraw Hill.

ii. Rajib Mall ,2004,Fundamentals of Software Engineering,2nd Edition, PHI.

Reference Books

1) Website and e-Learning Source:

1) http://aima.eecs.berkeley.edu/slides-pdf/

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Name of the Faculty : S. MAHALAKSHMI

Course	**: UG**	**SEMESTER : IV**
Subject Name	**: STATISTICS -II**	**Total Hours: 66** **Subject Code: SP3AB**
Class	**: II Year**	**Section: 'B'**

Objectives **:** The main objective of this paper is to introduce Hypothesis and basic testing with small & large samples.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools Adapted
		1	2	3	4	5	6	7	
6	**Unit IV** - Estimating Parameters of Discrete and Continuous Distributions - Introduction of Sampling distributions – o Basic Definitions of Parameter o Sample and Sampling Theory o Methods of Sampling, Standard Error	✓	✓	✓		✓			GCR
6	- Student's t Distribution o Introduction, o Assumptions o Properties of t-test and Applications of t-test - Chi-Square Distribution o Introduction o Degrees of Freedom o Properties of Chi-Square Distribution	✓	✓			✓			GCR
1	CIA 1				✓				

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar
6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools Adapted
		1	2	3	4	5	6	7	
6	- Distribution of Sample Mean from Normal Distribution - Density Function and Properties only	✓		✓		✓			GCR
6	**Unit V** - Testing of Hypothesis – Introduction, Procedure for testing a Hypothesis, Some Basic Definitions - Difference Between Large and Small Samples and Assumptions For Large Samples - Single Mean Test and Double Means Test based on Normal Distribution	✓	✓					✓	GCR
10	- Large Sample Test o Test of Significance of Single Mean o Test of Significance of Difference Between Two Means o Test of Significance of Single Standard Deviation o Test of Significance of Difference Between Two Standard Deviations o Test of Significance of Single Proportion o Test of Significance of Difference Between Two Sample Proportions	✓		✓	✓			✓	GCR
10	- Small Sample Test o Students t-distribution o Test of Significance of Single Mean o Paired t- test for Difference of Means o Test of Significance of Difference Between Two Means and F Test – Assumptions and F-Statistic	✓	✓						GCR
2	CIA II				✓				

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar

6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools Adapted
		1	2	3	4	5	6	7	
10	- Chi-Square Test o Definition o Properties, Uses, Chi-Square Test for Goodness of Fit, o Chi-Square Test as a Test of Independence - ANOVA Test o Introduction o Definition of ANOVA Table, o Uses and Classification of One-Way and Two Way ANOVA	✓	✓		✓			✓	GCR
	Model Examination								
	Revision								

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar
6.Assignment 7.Group Discussion

TEXT BOOK:

Statistical Methods by SP Gupta

REFERENCES

Comprehensive Statistical Methods By PN Arora - S. Chand

WEB REFERENCES

https://www.schandpublishing.com › commerce-management
https://www.emathzone.com › tutorials › basic-statistics https://www.bmj.com › publications › statistics-square-one
https://towardsdatascience.com/basic-probability-theory-and-statistics- 3105ab637213

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Name of the Faculty : S. MAHALAKSHMI

Course	**: UG**	**SEMESTER : VI**
Subject Name	**: WEB TECHNOLOGY**	**Total Hours:100** **Subject Code: SAE6B**
Class	**: III Year**	**Section: 'B'**

Objectives **:** The main objective of this paper is to introduce basic script coding while desingning a simple web page using HTML and to design webpage in .NET framework using ASP.NET.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools Adapted
		1	2	3	4	5	6	7	
2	UNIT – I Introduction to VBScript, Adding VBScript Code to an HTML Page, VB Script Basic	✓	✓	✓					GCR
3	VBScript Data Types, VBScript Variables, VBScript Constants, VBScript Operators – Mathematical	✓	✓	✓					GCR
2	Comparison &logical Operator, Using Conditional Statements, Looping Through Code	✓	✓	✓					GCR
3	VBScript Procedures, type casting variables, math functions,	✓	✓						GCR
2	String functions, other functions VBScript Coding Conventions -	✓	✓						GCR
3	Dictionary Object in VBScript, Err Object	✓	✓						GCR
3	UNIT – II Introduction to JavaScript- Applications of JavaScript Advantages of JavaScript	✓	✓						GCR
2	JavaScript syntax – Values, Literal, Data type –Variable	✓	✓	✓					GCR
1	CIA – I				✓				GCR
2	JavaScript Array ,Operator & Expression	✓	✓						GCR
2	Looping – For,While,do-while,Switch Statement, Control Structures	✓	✓	✓					GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar
6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	Constructor Function – Built – in JavaScript Constructor, Sample Program	✓	✓			✓			GCR
2	User defined function Dialog Box i)Alert Box ii)Confirm Box iii)Prompt Box	✓	✓	✓			✓		GCR
2	**UNIT – III** JavaScript Document Object Model – HTML DOM Tree of Objects	✓	✓	✓					GCR
3	Introduction – Object in HTML , Event Handling – Window Object – Properties, Methods	✓	✓						GCR
2	Document object – Methods of Document Object, Properties of Document Object	✓	✓	✓					GCR
3	Browser object – Form object – Form Control Elements - radio button, textarea,button,checkbox- Navigator object	✓	✓	✓					GCR
3	Screen object – Build in object – User defined object – Cookies	✓	✓						GCR
2	CIA – II				✓				
2	**UNIT – IV** ASP.NET Language Structure – Page Structure	✓	✓	✓					GCR
2	Page Event , Properties & Compiler Directives	✓	✓	✓					GCR
2	HTML server controls – Anchor, Tables, Forms, Files	✓	✓						GCR
3	Basic Web server Controls – Label, Text box, Button, Image Links, Check & radio Button	✓	✓	✓			✓		GCR
2	Hyperlink, Data List Web Server Controls – Check box list	✓	✓				✓		GCR
2	Radio button list, Drop down list, List box, Data grid, Repeater	✓	✓			✓	✓		GCR
2	Test				✓				

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	**UNIT – V** Request and Response Objects, Cookies	✓	✓	✓		✓			GCR
2	Working with Data – OLEDB connection class, command class	✓	✓	✓					GCR
2	Transaction class, data adaptor class, data set Class	✓	✓			✓			GCR
3	Security – Authentication, IP Address, Secure by SSL & Client Certificates	✓	✓						GCR
3	Object Linking and Embedding: OLE Automation COM DLL Servers	✓	✓			✓			GCR
	Model Exam				✓				
	Revision								GCR

1. Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

i) Bayross, 2000, Web Enable Commercial Application Development Using HTML, DHTML, Javascript, Perl CGI, BPB Publications.

ii) A.Russell Jones, Mastering Active Server Pages 3, BPB Publications

REFERENCES

i. HathleenKalata, Internet Programming with VBScript and JavaScript, Thomson Learning

ii. Mike McGrath, XML Harness the Power of XML in easy steps, Dreamtech Publications

iii. T.A. Powell, 2002,Complete Reference HTML , TMH. iv. J.Jaworski, 1999, Mastering Javascript, BPB Publications. v. Powell, Thomas; Schneider, Fritz, JavaScript: The Complete Reference, 2nd edition2004, TMH

WEB REFERENCES

https://www.w3schools.com

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Name of the Faculty : M.ANITA RAJKUMAR

Course : B.Sc Computer Science
SEMESTER : II

Subject Name : COMPUTER ORGANIZATION
Total Hours: 48
Subject Code: SE22A

Class : I Yr
Section: B

OBJECTIVES:

- This subject make the student to understand the basic organization of computers and the working of each component and CPU and to know the features of 8085 Microprocessor and know the features of latest microprocessors.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	**UNIT I** **Data Represtation** Data Types Number System Complements Fixed Point Representation	✓		✓			✓		
3	Integer Arithmetic Floating Point Representation Binary Codes	✓		✓					ASSIGNMENT IN GCR
3	**Register Transfer And Micro operations** Register Transfer Language Bus Transfer Memory Transfer Micro-operations	✓		✓	✓				
3	**UNIT II** Central Processing Unit General register Organization Stack Organization Instruction formats Addressing Modes	✓		✓					
2	Data Transfer and Manipulations RISC	✓		✓					

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	**Pipelining & Vector Processor** Parallel Processing Pipelining Arithmetic Pipeline Instruction Pipeline	✓		✓					
3	RISC Pipeline Vector Pipeline Array Processors	✓		✓	✓		✓		ASSIGNMENT IN GCR
3	**Unit - III** **Microprocessor Architecture And Its Operations** Components Of Microprocessor System Bus 8085 Architecture 8085 Pin	✓		✓	✓		✓	✓	
3	8085 Instruction Set Instruction format Data transfer instruction Arithmetic Instruction Logical Instructions	✓		✓			✓		GCR 8085 APP
3	Branching Instructions Machine Control Instruction Stack & IO instructions	✓		✓	✓		✓		GCR 8085 APP
3	**<u>UNIT IV</u>** Assembly Language Programs Addition, Subtractions Multiplication, Division Searching Sorting Reversing	✓	✓	✓			✓		GCR 8085 APP
2	Code conversions	✓		✓	✓		✓		GCR 8085 APP

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
3	Direct memory access DMA process Working principle Types of DMA DMA controller 8257	✓		✓	✓	✓	✓		GCR 8085 APP
3	8255A – Programmable Peripheral Interface Advanced Microprocessors	✓		✓		✓			GCR 8085 APP

1. Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion

Recommended Text:

- M.M. Mano, "Computer System architecture". Pearson, Third Edition, 2007
- R. S. Gaonkar- "Microprocessor Architecture- Programming and Applications with 8085"- 5th Edition- Penram- 2009.

Reference Books:

- V. Vijayendran- "Fundamentals of Microprocessors – 8085"- S. Viswanathan Pvt. Ltd.- 2008.

Websites

- NPTEL & MOOC courses titled Computer organization
- https://nptel.ac.in/courses/106105163/
- https://nptel.ac.in/courses/106103068/

R. Shanthi

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Hannah Vijay Kumar

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Name of the Faculty : Anita Rajkumar

Course : UG **SEMESTER : IV**

Subject Name : Statistical II **Total Hours:66**
Subject Code: SP3AB

Class : II Year **Section: A**

Objectives : This subject makes the student understand the concepts of Hypothesis, Sampling, large sample tests, and small sample tests.

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools
		1	2	3	4	5	6	7	
6	**Unit IV** - Estimating Parameters of Discrete and Continuous Distributions - Introduction of Sampling distributions – o Basic Definitions of Parameter o Sample and Sampling Theory o Methods of Sampling, Standard Error	✓		✓		✓			
6	- Student's t Distribution o Introduction, o Assumptions o Properties of t-test and Applications of t-test - Chi-Square Distribution o Introduction o Degrees of Freedom o Properties of Chi-Square Distribution	✓	✓		✓	✓			ASSIGNMENT IN GCR
6	- Distribution of Sample Mean from Normal Distribution - Density Function and Properties only	✓		✓		✓			
6	**Unit V** - Testing of Hypothesis – Introduction, Procedure for testing a Hypothesis, Some Basic Definitions - Difference Between Large and Small Samples and Assumptions For Large Samples	✓	✓					✓	MATERIAL IN GCR

	- Single Mean Test and Double Means Test based on Normal Distribution								
10	- Large Sample Test o Test of Significance of Single Mean o Test of Significance of Difference Between Two Means o Test of Significance of Single Standard Deviation o Test of Significance of Difference Between Two Standard Deviations o Test of Significance of Single Proportion o Test of Significance of Difference Between Two Sample Proportions	✓		✓	✓			✓	ASSIGNMENT IN GCR
10	- Small Sample Test o Students t-distribution o Test of Significance of Single Mean o Paired t- test for Difference of Means o Test of Significance of Difference Between Two Means and F Test – Assumptions and F-Statistic	✓	✓						
10	- Chi-Square Test o Definition o Properties, Uses, Chi-Square Test for Goodness of Fit, o Chi-Square Test as a Test of Independence - ANOVA Test o Introduction o Definition of ANOVA Table, o Uses and Classification of One-Way and Two Way ANOVA	✓	✓		✓			✓	ASSIGNMENT IN GCR
1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion									

Recommended Text : Statistical Methods by SP Gupta

Reference Books	**: Comprehensive Statistical Methods By PN Arora - S. Chand** **https://www.schandpublishing.com › commerce-management**
Websites	**: https://www.emathzone.com › tutorials › basic-statistics** **https://www.bmj.com › publications › statistics-square-one** **https://towardsdatascience.com/basic-probability-theory-and-statistics-3105ab637213**

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Name of the Faculty : Dr.D.SASIREKHA

Course : UG **SEMESTER : VI**

Subject Name : WEB TECHNOLOGY **Total Hours: 100**
Subject Code: SAE6B

Class : III Year **Section: 'A'**

Objectives : The main objective of this course is to study designing web sites and deploying websites on web servers using ASP, JavaScript and VBScript.

Hour	TOPICS COVERED	METHODOLOGY ✓the Relevant Columns							ICT Tools Adapted
		1	2	3	4	5	6	7	
2	UNIT - I Introduction to VBScript, Adding VBScript Code to an HTML Page, VB Script Basic	✓		✓					GCR
3	VBScript Data Types, VBScript Variables, VBScript Constants, VBScript Operators - Mathematical	✓		✓					GCR
2	Comparison &logical Operator, Using Conditional Statements, Looping Through Code	✓		✓					GCR
3	VBScript Procedures, type casting variables, math functions,	✓							
2	String functions, other functions VBScript Coding Conventions -	✓							
3	Dictionary Object in VBScript, Err Object	✓	✓						
3	UNIT - II Introduction to JavaScript- Applications of JavaScript Advantages of JavaScript	✓	✓						GCR
2	JavaScript syntax – Values, Literal, Data type –Variable	✓	✓	✓					
2	JavaScript Array ,Operator & Expression	✓	✓						
2	Looping – For,While,do-while,Switch Statement, Control Structures	✓	✓	✓					GCR

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar
6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	Constructor Function – Built – in JavaScript Constructor, Sample Program	✓	✓			✓			GCR
2	User defined function Dialog Box i)Alert Box ii)Confirm Box iii)Prompt Box	✓	✓	✓			✓		
1	CIA – I				✓				GCR
2	**UNIT – III** JavaScript Document Object Model – HTML DOM Tree of Objects	✓	✓	✓					GCR
3	Introduction – Object in HTML , Event Handling – Window Object – Properties, Methods	✓	✓						GCR
2	Document object – Methods of Document Object, Properties of Document Object	✓	✓	✓					GCR
3	Browser object – Form object – Form Control Elements - radio button, textarea,button,checkbox- Navigator object	✓	✓	✓					
3	Screen object – Build in object – User defined object – Cookies	✓	✓						
2	**UNIT – IV** ASP.NET Language Structure – Page Structure	✓	✓	✓					
2	Page Event , Properties & Compiler Directives	✓	✓	✓					GCR
2	HTML server controls – Anchor, Tables, Forms, Files	✓	✓						GCR
3	Basic Web server Controls – Label, Text box, Button, Image Links, Check & radio Button	✓	✓	✓			✓		GCR
2	Hyperlink, Data List Web Server Controls – Check box list	✓	✓				✓		GCR
2	Radio button list, Drop down list, List box, Data grid, Repeater	✓	✓			✓	✓		
2	CIA - II				✓				

1. Lecture 2.Black Board 3.Power Point Presentation 4.Test 5.Seminar 6.Assignment 7.Group Discussion

Hour	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT Tools Adopted
		1	2	3	4	5	6	7	
2	UNIT – V Request and Response Objects, Cookies	✓	✓	✓		✓		✓	
2	Working with Data – OLEDB connection class, command class	✓	✓	✓					GCR
2	Transaction class, data adaptor class, data set class	✓	✓			✓			GCR
3	Security – Authentication, IP Address, Secure by SSL & Client Certificates	✓	✓					✓	
3	Object Linking and Embedding: OLE Automation COM DLL Servers	✓	✓			✓		✓	

1. Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6.Assignment 7.Group Discussion

TEXT BOOK:

i) Bayross, 2000, Web Enable Commercial Application Development Using HTML, DHTML, Javascript, Perl CGI, BPB Publications.

ii) A.Russell Jones, Mastering Active Server Pages 3, BPB Publications

REFERENCES

i. HathleenKalata, Internet Programming with VBScript and JavaScript, Thomson Learning

ii. Mike McGrath, XML Harness the Power of XML in easy steps, Dreamtech Publications

iii. T.A. Powell, 2002,Complete Reference HTML , TMH. iv. J.Jaworski, 1999, Mastering Javascript, BPB Publications. v. Powell, Thomas; Schneider, Fritz, JavaScript: The Complete Reference, 2nd edition2004, TMH

WEB REFERENCES

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Name of the Faculty: Dr. K. Bhargavi

Course : UG **Semester : VI**

Subject Name : Data Communication & Networking **Total Hours:66**

Class : III B.Sc. (4 Hrs / WEEK) **Subject Code:SAE6A**

Section: 'B'

Objectives: Students will be able to:

a. Understand of the fundamental concepts of data communication and computer networking.

b. Understand how errors detected and corrected that occur in transmission.

c. Know about Multiplexing Circuit Switching, Packet Switching, Message Switching.

d. Know about routing mechanisms and different routing protocols.

e. Understand transport layer functions

f. Know about different application layer protocols.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
3	**UNIT – II:** Parallel and Serial Transmission	✓	✓	✓	✓				GCR
6	DTE/DCE/such as EIA-449, EIA-530, EIA-202 and x.21 interface, Interface standards, Modems , Guided Media - Unguided Media	✓	✓	✓	✓				GCR
5	Performance, Types of Error, Error Detection, Error Corrections	✓	✓	✓	✓		✓		GCR
3	**UNIT – III:** Multiplexing, Types of Multiplexing, Multiplexing Application - Telephone system	✓	✓	✓	✓				GCR
3	Project 802, Ethernet, Token Bus, Token Ring	✓	✓	✓	✓				GCR
6	FDDI, IEEE 802.6, SMDS, Circuit Switching, Packet Switching, Message Switching	✓	✓	✓		✓	✓	✓	GCR

3	Connection Oriented and Connectionless services	✓	✓	✓		✓	✓	✓	GCR
3	**UNIT – IV:** History of Analog and digital Network	✓	✓	✓	✓				GCR
6	Access to ISDN, ISDN Layers, Broadband ISDN, X.25 Layers, Packet Layer Protocol	✓	✓	✓	✓				GCR
4	ATM, ATM Topology, ATM Protocol	✓	✓	✓			✓	✓	GCR
1.Lecture 2. Black Board 3. Power Point Presentation 4.Test 5. Seminar 6. Assignment 7. Group Discussion									

Recommended Texts:

1) Behrouz and Forouzan, 2001, Introduction to Data Communication and Networking, 2nd Edition,TMH..

Reference Books:

1) Jean Walrand 1998, Communication Networks (A first Course), Second Edition, WCB/McGraw Hill.

2) Behrouz and Forouzan, 2006, Data Communication and Networking, 3nd Edition ,TMH.

Websites:

1) http://www.academicpress.com

2) http://www.mkp.com

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Name of the Faculty : Dr.K.Bhargavi

Course : UG **Semester : VI**

Subject Name : Data Communication & Networking **Total Hours:48**

Class : III B.Sc (3 Hrs / WEEK) **Subject Code: SAE6A**

Section: 'A'

Objectives : Students will be able to:

a. Understand of the fundamental concepts of data communication and computer networking.

b. Understand how errors detected and corrected that occur in transmission.

c. How collisions to be handled when many stations share a single channel.

d. Know about routing mechanisms and different routing protocols.

e. Understand transport layer functions

f. Know about different application layer protocols.

g. Get exposed to understand about security and firewall.

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
2	Ethernet, Token Bus, Token Ring	✓	✓	✓	✓				GCR
5	FDDI, IEEE 802.6, SMDS, Circuit Switching, Packet Switching, Message Switching	✓	✓	✓		✓	✓	✓	GCR
3	Connection Oriented and Connectionless services	✓	✓	✓		✓	✓	✓	GCR
3	**UNIT – IV:** History of Analog and digital Network	✓	✓	✓	✓				GCR
6	Access to ISDN, ISDN Layers, Broadband ISDN, X.25 Layers, Packet Layer Protocol	✓	✓	✓	✓				GCR
3	ATM, ATM Topology, ATM Protocol	✓	✓	✓			✓	✓	GCR
3	**UNIT V:** Repeaters, Bridges, Routers, Gateway, Routing Algorithms	✓	✓	✓	✓				GCR

3	TCP/IP Network, Transport and Application Layers of TCP/IP	✓	✓	✓	✓				GCR
2	World Wide Web	✓	✓	✓		✓	✓	✓	GCR
1.Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion									

Recommended Texts:

1) Behrouz and Forouzan, 2001, Introduction to Data Communication and Networking, 2nd Edition,TMH..

Reference Books:

1) Jean Walrand 1998, Communication Networks (A first Course), Second Edition, WCB/McGraw Hill.

2) Behrouz and Forouzan, 2006, Data Communication and Networking, 3nd Edition, TMH.

Web Reference:

1) http://www.academicpress.com

2) http://www.mkp.com

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Name of the Faculty : Dr.K.BHARGAVI

Course : UG **Semester: VI**

Subject Name : Software Engineering **Total Hours:48**

Class : III B.Sc (3 Hrs / WEEK) **Subject Code: SEE6G**

Section: 'A'

Objectives : Students will be able to:

a. To introduce the software development life cycles
b. To introduce concepts related to structured and objected oriented analysis & design co.
c. To provide an insight into UML and software testing techniques

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
4	**UNIT III:** Layered design – Approaches Function Oriented Design	✓	✓	✓	✓				GCR
3	Structured Analysis – DFD –	✓	✓	✓	✓				GCR
3	Structured Design – Detailed design	✓	✓	✓	✓				GCR
3	**UNIT- IV** Object Modeling using UML – OO concepts	✓	✓	✓		✓	✓	✓	GCR
4	– UML – Diagrams –	✓	✓	✓	✓				GCR
3	Use case, Class, Interaction, Activity, State Chart – Postscript	✓	✓	✓	✓				GCR
3	**UNIT- V** Coding & Testing – coding – Review	✓	✓	✓	✓				GCR
4	Documentation – Testing –Black-box, White-box,	✓	✓	✓		✓	✓	✓	GCR
4	Integration, OO Testing, Smoke testing.	✓	✓	✓		✓	✓	✓	GCR
1.Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion									

Recommended Texts:

1. Rajib Mall, "*Fundamentals of Software Engineering*", PHI 2018, 5th Edition.

Reference Books:

1. Roger S. Pressman, "*Software Engineering - A Practitioner's Approach*", McGraw Hill 2010, 7th Edition.
2. Pankaj Jalote, "*An Integrated Approach to Software Engineering*", Narosa Publishing House 2011, 3rd Edition.

Web Reference:

1. NPTEL online course – Software Engineering - https://nptel.ac.in/courses/106105182/

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Name Of the Faculty: Dr.K.BHARGAVI

Course : UG **Semester: II**

Subject Name : Computer Organization **Total Hours: 12**

Class : I B.Sc (I Hrs / WEEK) **Subject Code: SE22A**

Section: 'B'

Objectives : Students will be able to:

a. To understand the basic organization of computers and the working of each component and CPU

b. To bring the programming features of 8085 Microprocessor and know the features of latest microprocessors.

c. To understand the principles of Interfacing I/O devices and Direct Memory accesses

HOUR	TOPICS COVERED	METHODOLOGY ✓ the Relevant Columns							ICT TOOLS
		1	2	3	4	5	6	7	
3	**UNIT V:** DMA- Introduction, 8257 DMA Controller	✓	✓	✓	✓				GCR
3	8255A Programmable Peripheral interface	✓	✓	✓	✓				GCR
2	Basic Features of Advanced Microprocessors	✓	✓	✓		✓	✓	✓	GCR
3	Pentium I3, Pentium I5, Pentium I7	✓	✓	✓		✓	✓	✓	GCR
1.Lecture 2. Black Board 3. Power Point Presentation 4. Test 5. Seminar 6. Assignment 7. Group Discussion									

Recommended Texts:

1.M.M. Mano, "Computer System architecture". Pearson, Third Edition, 2007

2. R. S. Gaonkar- "Microprocessor Architecture- Programming and Applications with 8085"- 5th Edition- Penram- 2009.

3. Tripti Dodiya & Zakiya Malek, "Computer Organization and Advanced Microprocessors", Cengage Learning, 2012.

Reference Books:

1.Mathur- "Introduction to Microprocessor"- 3rd Edition- Tata McGraw-Hill-1993.

2. P. K. Ghosh and P. R. Sridhar- "0000 to 8085: Introduction to Microprocessors for Engineers and Scientists"- 2nd Edition- PHI- 1995.

3. NagoorKani- "Microprocessor (8085) and its Applications"- 2nd Edition- RBA Publications- 2006.

4. V. Vijayendran- "Fundamentals of Microprocessors – 8085"- S. Viswanathan Pvt. Ltd.- 2008.

Web Reference:

1.NPTEL & MOOC courses titled Computer organization

https://nptel.ac.in/courses/106105163/

https://nptel.ac.in/courses/106103068/

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