



VELS



INSTITUTE OF SCIENCE TECHNOLOGY
& ADVANCED STUDIES (VISTAS)
(Deemed to be University under section 3 of UGC Act, 1956)
NAAC ACCREDITED WITH 'A' GRADE

Bachelor of Science in Information Technology

(B.Sc IT)

**Curriculum & Syllabus
(Based on Choice Based Credit System)**

Effective from the Academic year

2018 - 2019

Department of Information Technology

School of Computing Sciences

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

- PEO1:** Exhibit practical hands on experience on the core and fundamentals like Analog Electronics, Digital electronics, Electronics circuits, Micro processor and Micro controllers, Digital Signal Processing laboratory, RF Design, VLSI design and Embedded systems.
- PEO2:** Display practical knowledge, identify and find solutions on research problems related to the latest trends in communication technology such as cognitive radio, Software defined systems and Software controlled systems, etc.
- PEO3:** Collaborate Work as a team in inter disciplinary and intra disciplinary projects to develop hardware and software solutions for diverse applications based on time series signal processing, digital image processing, software defined radio, machine language based data mining, etc
- PEO4:** Publish research findings and innovations in technical symposiums, hackathons, project presentations, and publication of research articles in peer reviewed and indexed conferences and journals.
- PEO5:** Develop analytical, critical and innovative thinking skills, leadership qualities, and good attitude well prepared for lifelong learning and service in various government, private and research institutions as an electronics engineer.

PROGRAM OUTCOME (PO)

- PO1: Critical Thinking:** Apply knowledge of Computer Science to identify, analyze, problems and to provide effective solution in the area of Computing.
- PO2: Computing Skills and Ethics:** Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- PO3: Analytical skill:** Ability to design, develop algorithms and provide software solutions to cater the industrial needs.
- PO4: Modern Tool Usage:** Use current techniques, skills, and tools necessary for computing practices
- PO5: Employability Skills:** Inculcate skills to excel in the fields of Information Technology and its Enabled services, Government and Private sectors, Teaching and Research.
- PO6: Ethics:** Insists ethical responsibilities, human and professional values and make their contribution to the society.
- PO7: Self Directed and Life-long Learning:** Engaged in lifelong learning to equip them to the changing environment and be prepared to take-up mastering programmes.

PROGRAMME SPECIFIC OUTCOME (PSO)

- PSO1:** Understand the basic concepts of system software, hardware and computer technologies.
- PSO2:** Build computer programs in different programming languages to solve problems effectively.
- PSO3:** Develop knowledge in mathematics, science fundamentals and to solve problems using computer techniques.
- PSO4:** Evaluate appropriate techniques to tackle and solve problems in the discipline of information security management.
- PSO5:** Design, and develop precise specifications of algorithms, procedures, and interaction behavior.
- PSO6:** Examine effectively in both verbal and written form in industry and society.
- PSO7:** Work in teams to build software systems and apply the technologies in various fields of Computer Science, including Mobile applications, Web site development and management, databases, and computer networks.

Vels Institute of Science Technology & Advanced Studies

School of Computing Sciences Department of Information Technology

Board of Studies

Chairman : **Dr.P.Swaminathan**, Dean,

School of Computing Sciences,

Vels Institute of Science, Technology and Advanced Studies,

Chennai.

Internal Board Member : 1. **Dr.P.Mayilvahanan**, Professor,

Department of Computer Applications,

School of Computing Sciences,

Vels Institute of Science, Technology and Advanced Studies,

Chennai.

2. **Dr.S.Prasanna**, HOD,

Department of Computer Applications,

School of Computing Sciences,

Vels Institute of Science, Technology and Advanced Studies,

Chennai.

3. **Dr.Kamalakaran**, HOD,

Department of Information Technology,

School of Computing Sciences,

Vels Institute of Science, Technology and Advanced Studies,

Chennai..

4. **Dr.K.Kalaiselvi**, HOD,

Department of Computer Science,

School of Computing Sciences,

Vels Institute of Science,Technology and Advanced Studies,

Chennai.

External Member :**Dr.K.R.Ananthapadmanaban**, Professor & HOD,

Department of Computer Science,

SRM Arts and Science College, Chennai.

Industry Member :**Dr.P.Magesh Kumar**,

Calibsoft Technologies Pvt Ltd., Chennai.

Special Invitees :**Dr.Jothi Venkateswaran**, HOD,

Department of Computer Science,

Presidency College, Chennai.

Alumni Member :**Mr.R.Balamurugan**, SCOPUS Ltd, Chennai.

VELS INSTITUTE OF SCIENCE, TECHNOLOGY AND ADVANCED STUDIES (VISTAS)
B.SC INFORMATION TECHNOLOGY
COURSES OF STUDY AND SCHEME OF ASSESSMENT
(TOTAL NO OF CREDITS:140)

CodeNo.	Course	Hours/Week			Credits	MaximumMarks		
		Lecture	Tutorial	Practical		CA	SEE	Total
SEMESTER1								
LANG	Tamil I/ Hindi / French	5	0	0	5	40	60	100
ENG	English I	5	0	0	5	40	60	100
CORE	Programming in C	5	0	0	5	40	60	100
CORE	Mathematics - I	4	0	0	4	40	60	100
CORE	Programming in C Lab	0	0	4	2	40	60	100
CORE	MS Office Lab	0	0	4	2	40	60	100
		19	0	8	23			
SEMESTER2								
LANG	Tamil II / Hindi / French	5	0	0	5	40	60	100
ENG	English II	5	0	0	5	40	60	100
CORE	Programming in C++	5	0	0	5	40	60	100
CORE	Mathematics II	4	0	0	4	40	60	100
CORE	Programming in C++ Lab	0	0	4	2	40	60	100
CORE	Visual Basic Programming Lab	0	0	4	2	40	60	100
		19	0	8	23			

CA - Continuous Assessment

SEE - Semester EndExamination

VELS INSTITUTE OF SCIENCE, TECHNOLOGY AND ADVANCED STUDIES (VISTAS)

B.SC INFORMATION TECHNOLOGY

COURSES OF STUDY AND SCHEME OF ASSESSMENT

CodeNo.	Course	Hours/Week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	SEE	Total
SEMESTER3								
LANG	Tamil III / Hindi / French	5	0	0	5	40	60	100
ENG	English – III	5	0	0	5	40	60	100
CORE	Programming in Java	5	0	0	5	40	60	100
CORE	Statistical & Numerical Methods	4	0	0	4	40	60	100
CORE	Programming in Java Lab	0	0	4	2	40	60	100
CORE	Multimedia Lab	0	0	4	2	40	60	100
SEC	Soft Skill – I	2	0	0	2	40	60	100
		21	0	8	25			
SEMESTER4								
LANG	Tamil IV / Hindi / French	5	0	0	5	40	60	100
ENG	English IV	5	0	0	5	40	60	100
CORE	Web Technology	4	0	0	4	40	60	100
CORE	Operating Systems	4	0	0	4	40	60	100
CORE	Unix Lab	0	0	3	2	40	60	100
CORE	Web Technology Lab	0	0	3	2	40	60	100
AECC	Environmental Studies	2	0	0	2	40	60	100
SEC	Soft Skill – II	2	0	0	2	40	60	100
		22	0	6	26			

CA - Continuous Assessment

SEE - Semester EndExamination

VELS INSTITUTE OF SCIENCE, TECHNOLOGY AND ADVANCED STUDIES (VISTAS)
B.SC INFORMATION TECHNOLOGY
COURSES OF STUDY AND SCHEME OF ASSESSMENT

CodeNo.	Course	Hour/Week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	SEE	Total
SEMESTER5								
DSE	Discipline Specific Elective – 1	4	0	0	4	40	60	100
DSE	Discipline Specific Elective – 2	4	0	0	4	40	60	100
DSE	Discipline Specific Elective - 3	4	0	0	4	40	60	100
DSE	Discipline Specific Elective – 4	3	0	4	3	40	60	100
DSE	Discipline Specific Elective Lab	0	0	4	2	40	60	100
GE	Generic Elective -1	2	0	0	2	40	60	100
SEC	NSS	2	0	0	2	40	60	100
		19	0	8	21			
SEMESTER6								
DSE	Discipline Specific Elective - 5	4	0	0	4	40	60	100
DSE	Discipline Specific Elective – 6	4	0	0	4	40	60	100
GE	Generic Elective -2	2	0	0	2	40	60	100
SEC/VA C	Quantitative Aptitude	2	0	0	2	40	60	100
	Project Work	0	0	0	10	40	60	100
		12	0	0	22			

CA - Continuous Assessment

SEE - Semester EndExamination

List of Discipline Specific Elective (DSE)

Subjectcode	Title of thePaper
DSE1	DataStructures
DSE2	Digital LogicFundamentals.
DSE3	Pre Processor HypertextProgramming
DSE4	Pre Processor Hypertext ProgrammingLab.
DSE5	Database ManagementSystems.
DSE6	DBMSLab.
DSE7	Dot.NetTechnology
DSE8	Dot.Net TechnologyLab
DSE9	SoftwareEngineering.
DSE10	Data Communications andNetworks
DSE11	ArtificialIntelligence
DSE12	Compiler Design.
DSE13	OrganizationalBehaviour.

List of Generic Elective (GE)

Subject Code	Title of thePaper
GE1	HTML &CSS
GE2	Flash
GE3	InternetBasics.
GE4	AdvancedExcel
GE5	SQL
GE6	Client side ScriptingLanguages
GE7	Consumer Affairs
GE8	Disaster Management

List Of Languages

Subject Code	Title of thePaper
18LEN001	Foundation Course EnglishI
18LTA001	Foundation Course LanguageI
18LHN001	Hindi Paper –I
18LFR001	French Paper - I
18LEN002	Foundation Course EnglishII
18LTA002	Foundation Course LanguageII
18LHN002	Hindi Paper –II
18LFR002	French Paper - II
18LTA003	Foundation Course LanguageIII
18LHN003	Hindi Paper –III
18LFR003	French Paper - III
18LTA004	Foundation Course LanguageIV
18LHN004	Hindi Paper –IV
18LFR004	French Paper – IV

List of Skill Enhancement Course (SEC)

Subject Code	Title of thePaper
SEC-1	Soft Skill-I
SEC-2	Soft Skill -II
SEC-3	PersonalityDevelopment
SEC-4	National Service Scheme(NSS).
SEC-5	Ethics. Quantitative Aptitude.

List of Ability Enhancement Compulsory Course(AECC)

AECC1	EnvironmentalScience
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CORE

PROGRAMMING IN C 4 0 0 4

COURSE OBJECTIVE

- This course introduces the basic concepts of programming in C.
- This subject deals various methods programming using the C languages.
- On successful completion the students should have programming ability on C.

UNIT 1 INTRODUCTION 13

Fundamental Character Set – Identifier and keywords – Datatypes – Constants – Variables – Declarations – Expressions – Statements – Arithmetic, Relational and logical, Assignment, Unary, and conditional Operators – Bit-wise operators– Library Functions.

UNIT 2 INPUT, OUTPUT FUNCTIONS AND CONTROL STRUCTURES 12

Data input/output functions – Simple C programs - Flow of control: Conditional control statement - Conditional Execution, Looping, Multiple branching - Unconditional control Statement - break, continue, goto statements, Comma operator.

UNIT 3 FUNCTIONS AND STORAGE CLASSES 11

Functions : Defining a Function – Function Prototype – Passing arguments to a Function – Recursion – Storage Classes : Automatic, External, Static, Register Variable.

UNIT 4 ARRAYS, STRINGS, STRUCTURES AND UNION 11

Arrays : Defining an array- Processing an array – Types of Arrays – Arrays and Strings- Structures – Unions.

UNIT 5 POINTERS AND FILES 13

Pointers : Declaring Pointer Variables– Accessing the address of a variable- Initialization of Pointer variable - Files : File declaration- Opening a File- Closing a File.

TOTAL HOURS: 60

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Understand the basic concepts, syntax and semantics of C Programming language.
- CO2: Develop the basic concepts and terminology of programming in general.
- CO3: Analyse the problem and develop an algorithm to simplify the program.
- CO4: Evaluate the use of C Programming Language to implement various concept
- CO5: Introduce and evaluate more advanced features of the C Language.

TEXT BOOK

1. E. Balaguruswamy, Programming in ANSI C, TMH publishing Company LTD,2008.

REFERENCE BOOKS

1. H. Schildt, The Complete Reference, 4th Edition, TMH,2004.
2. Gottfried, B.S, Programming with C, fourth edition, TMH Pub.Co.Ltd, 2004.
3. Kanetkar Y, Let us C, BPB publications with ANSI & Turbo C, First edition, Pearson Education,New Delhi, 2008.

MATHEMATICS – I

5 0 0 5

COURSE OBJECTIVE

- To develop the skills of the students in the areas of Trigonometry, Set Theory, Calculus and Algebra.

UNIT I TRIGNOMETRY

18

Introduction – Angles – Expansions of $\sin n$ $\cos n$, $\tan n$. Expansion of \sin , \cos , \tan , in terms of x - Simple problems.

UNIT II SET THEORY

18

Sets – Operations on sets – Relations – Relations and functions: Equivalence relations – Partial order relation.

UNIT III MATRICES

18

Introduction-Basic operations-Symmetric-skew symmetric-Hermitian-Skew Hermitian –Unitary orthogonal-Inverse of a matrix -Solution of linear system(Cramer's rule)- Finding the Eigen roots and Eigen vectors of a matrix-Cayley Hamilton theorem(without proof)

UNIT IV THEORY OF EQUATIONS

18

Polynomial, equations with real coefficients, irrational roots, complex roots, symmetric functions of roots, Transformation of equation by increasing or decreasing roots by a constant, reciprocal equations, Newton's method to find the root approximately.

UNIT V DIFFERENTIAL CALCULUS

18

Differentiation – Successive differentiation – Partial differentiation – Maxima and Minima of functions of two variables.

Total No of Hours: 90

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Explain the concepts of trigonometry function.
- CO2: Compare the set and equivalence function
- CO3: Construct matrix using various techniques.
- CO4: Demonstrate the theory of equation with example.
- CO5: Assess the differential calculus with example.

TEXT BOOK

1. P.R. Vittal, "Allied Mathematics", Margham Publications, 4th Edition 2009.

REFERENCE BOOK

1. A. Singaravelu, "Allied Mathematics", Meenakshi Agency, 2007.

PROGRAMMING IN C LAB

0 0 4 2

COURSE OBJECTIVE

- This course introduces the basic concepts of C programming.
- This course practices the student to write simple programs using C.
- This course improves the logical thinking in C programming.

List of Experiments

1. Write a program in C to find whether the given string is Palindrome or not.
2. Write a program in C to count vowels, consonants etc.
3. Write a program in C to find the factorial of a number.
4. Write a program in C to find the given number is prime or not.
5. Write a program in C to find the value of NPR
6. Write a program in C to find the GCD of two numbers.
7. Write a program in C to find the Fibonacci Series
8. Write a program in C to find Matrix Addition/Subtraction.
9. Write a program in C to find Matrix Transpose.
10. Write a program in C for swapping 2 numbers.

Total No. Of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand the basic terms, syntax and semantics of C programming languages

CO2: Develop programs based on conditional statements

CO3: Develop programs based on Functions

CO4: Develop programs based on arrays and structures

CO5: Develop small applications using files

List of Experiments

1. Text Manipulation using MS-WORD.
2. Usage of Bullets and Numbering, Header and Footer using MS-WORD.
3. Usage of Spell check, Find & Replace using MS-WORD.
4. Table Manipulation using MS-WORD.
5. Picture Insertion and Alignment using MS-WORD.
6. Usage of Spell check, Find & Replace using MS-WORD.
7. Creation of documents using templates using MS-WORD.
8. Cell Editing using MS-EXCEL.
9. Data Sorting using MS-EXCEL.
10. Usage of Formulas & Built In Functions using MS-EXCEL.
11. Worksheet Preparation using MS-EXCEL.
12. Drawing Graphs using MS-EXCEL.
13. Inserting ClipArt's & Pictures using MS-EXCEL.
14. Slide Transitions and Animation using MS-POWER POINT.
15. Organisation Chart using MS-POWER POINT.

Total No of Hours: 60**COURSE OUTCOME**

At the end of this course the students will be able to,

CO1: Understand the basic icons and tools in IDE

CO2: Develop to format a document

CO3: Develop mail merge.

CO4: Develop applications such as mark sheet preparation, EB bill in MS Excel

CO5: Develop a presentation using power point application

PROGRAMMING IN C++

40 0 4

COURSE OBJECTIVE:

- This course introduces the basic concepts of programming in C++
- To improve the problem solving skills using OOPS concept
- On successful completion the students should have programming ability on C++

UNIT 1 PRINCIPLES OF OOP & BASICS OF C++

8

Procedure oriented programming – OOP paradigm - Basic concepts of OOP - Benefits of OOP - Applications of OOP - Basics of C++ - Tokens – Keywords – Identifiers and Constants – Data types – Variables - Operators – Expressions - Control Structures-Functions.

UNIT 2 CLASSES AND OBJECTS

15

General structure of Class & object – Defining member function – private member function – public member function – Function Overloading – Inline Function – Default Arguments – Static data members – Static member functions.

UNIT 3 CONSTRUCTORS

15

Constructors – Types of Constructors – Overloading Constructors - Copy Constructors – Destructors - Arrays – Pointers – Operator Overloading – Overloading Unary Operator – Overloading Binary Operator – Rules For Overloading Operators – Type Conversions – Command Line Arguments

UNIT 4 INHERITANCE, RUN TIME POLYMORPHISM

10

Inheritance- Access Specifiers – public derivation – private Derivation - Types of Inheritances -Virtual Base Class – virtual functions – pure virtual function

UNIT 5 STREAMS & FILES

12

C++ Streams – Stream Classes – Unformatted I/O operations – Formatted I/O operations – Manipulators – Exception Handling.

TOTAL HOURS: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand the basic concepts of Object Oriented approach

CO2: Interpret the implementation of Classes, Objects, various types of Data members, Member functions, Constructor and Destructor.

CO3: Able to develop programs using operators and operator overloading.

CO4: Explain Inheritance, Polymorphism, Virtual Functions

CO5: Able to develop programs using strings and streams

TEXT BOOK

1. E.BalaGurusamy “Object Oriented Programming with C++”, Tata MC Graw Hill Education.

REFERENCE BOOKS

1. D.Ravichandran-“Oriented Programming with C++”, 2nd ed, TMH.
2. Yashwant Kanetkar-“Let Us C++”, 2nd edition,Mc Graw Hill,2000.

MATHEMATICS – II

5 0 0 5

COURSE OBJECTIVE

To impart the knowledge of Integral calculus, Differential Equations, Fourier series and Laplace transform. The course will also serve as a prerequisite for post graduate and specialized studies and research

UNIT I DIFFERENTIAL CALCULUS 18

Differential Calculus: Functions and limits – Differentiation – Successive Differentiation – Partial Differentiation – Maxima and Minima of Functions of two variables.

UNIT II INTEGRAL CALCULUS 18

Integral Calculus: Integration – Definite Integrals – Reduction Formulae.

UNIT III EULER'S EQUATION 18

Ordinary differential equations: Second order and non-homogenous linear differential equations with constant coefficients – Second order linear differential equations with variable coefficients. (Euler's form only).

UNIT IV PARTIAL EQUATION 18

Formation of Partial differential equations by eliminating arbitrary constants and arbitrary function – Solutions of standard types of First order equations – $f(p,q)=0$; $f(x,p,q)=0$, $f(y,p,q)=0$, $f(z,p,q)=0$, $z=px+qy+f(p,q)$ – Lagrange method of solving linear partial differential equations $Pp+Qq=R$.

UNIT V FOURIER SERIES 18

Fourier series of periodic functions on the interval $[c, c+2\pi]$ – Half range series.

Total No of Hours: 90

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Explain the concepts of integral calculus.

CO2: Develop ordinary differential equation

CO3: Examine partial differential equation..

CO4: Analyze Fourier transformation function.

CO5: Dissect Laplace transform function

TEXT BOOK

1. Higher engineering mathematical by B.S Grewal

REFERENCE BOOK

1. Mathematical foundations by P.R. Vittal.

COURSE OBJECTIVE:

- This course introduces the basic concepts of C++ programming.
- This course practices the student to write object oriented programs using C++.
- This course improves the logical thinking in C++ programming.

List of Experiments

1. Write a C++ program to demonstrate Control Structures
2. Write a C++ program to calculate Simple interest using class and Object
3. Write a C++ program to sort given numbers in Ascending Order using Bubble sort
4. Write a C++ program to manipulate a given string
5. Write a C++ program to demonstrate function overloading
6. Write a C++ program to demonstrate Inline function
7. Write a C++ program to demonstrate Friend function
8. Write a C++ program to demonstrate Default Arguments
9. Write a C++ program to demonstrate Constructor
10. Write a C++ program to demonstrate Operator Overloading
11. Write a C++ program to demonstrate Single Inheritance
12. Write a C++ program to demonstrate Multi level Inheritance
13. Write a C++ program to demonstrate Multiple Inheritance
14. Write a C++ program to demonstrate virtual function
15. Write a C++ program to demonstrate pure virtual function

Total No of Hours 60**COURSE OUTCOME**

At the end of this course the students will be able to,

- CO1: Demonstrate simple programs to manipulate functions.
- CO2: Evaluate Program using private, public and protected and static variables.
- CO3: Apply the concept of Constructor.
- CO4: Evaluate Program using pointers, static member functions, and Virtual functions.
- CO5: Able to develop programs using overloading and inheritance.

VISUAL BASIC PROGRAMMING LAB

0 0 4 2

COURSE OBJECTIVE

- To inculcate knowledge on Visual Basic concepts and Programming.
- Identify the differences between the procedural languages and event-driven languages.
- To Design, create, build, and debug Visual Basic applications

1. Building Simple Applications.
2. Working with Intrinsic Controls and ActiveX Controls.
3. Application with multiple forms.
4. Application with Dialogs.
5. Application with Menus.
6. Application using Data Controls.
7. Application using Common Dialogs.
8. Drag and Drop Events.
9. Database Management with Ms.Access
10. Creating Reports

Total No of Hours 60

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Demonstrate simple programs to manipulate functions.
- CO2: Evaluate Program using private, public and protected and static variables.
- CO3: Apply the concept of Constructor.
- CO4: Evaluate Program using pointers, static member functions, and Virtual functions.
- CO5: Able to develop programs using overloading and inheritance.

PROGRAMMING IN JAVA

4 0 0 4

COURSE OBJECTIVE

- To make students familiar with oops & applet programming
- Java programming can be used to develop both web based & console based application & stand-alone application
- Java is one of the top most languages used in most of the IT companies. It is a job assured course.

UNIT I INTRODUCTION TO JAVA

12

Introduction to Java – Features of Java – Object Oriented Concepts – Lexical Issues – Data Types – Variables – Arrays – Operators – Control Statements.

UNIT II CLASSES & OBJECTS

12

Classes – Objects – Constructors – Overloading methods – Static and fixed methods – Inner Classes – String Class – Inheritance – Overriding methods – Using super – Abstract class.

UNIT III PACKAGES

12

Packages – Access Protection – Importing packages – Exception Handling – Throw and Throws – Thread – Synchronizing – Runnable Interface – Multithreading.

UNIT IV INPUT/OUTPUT STREAMS

12

I/O streams – File Streams – Applets – Applet Life Cycle – String Buffer – Char Array – Java Utility classes – Calendar – Date – Random – Scanner – Timer – Vector.

UNIT V AWT

12

AWT - Working with windows using AWT Classes - AWT Controls - Layout Managers and Menus.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: To determine the basic concepts and implementation techniques of OOPs.

CO2: Construct class and object and experiment with OOPs concepts, compile and test, run Java programs comprising more than one class, to address the problem.

CO3: Explain the importance of packages and interfaces in java and implement members of classes found in the Java packages and interfaces.

CO4: Conclude the I/O stream concepts and estimate the proper code document.

CO5: Demonstrate the ability to employ various types of selection constructs in a Java program.

TEXT BOOKS

1. Cay S.Horstmann, Gary Cornell-Core Java 2 Volume 1 – Fundamentals,5th PHI,2000.
2. E.Balaguruswamy, "Programming with JAVA",3rd edition ,Tata McGraw- Hill Publications, 2007.

REFERENCE BOOKS

1. K.Arnold and J.Gosling- The Java Programming Language – Second Edition,Addison Wesley,2002.
2. P.Naughton and H.Schildt –Java2 (The Complete References)-Seventh Edition,TMH 2004.

STATISTICAL AND NUMERICAL METHODS

5 0 0 5

COURSE OBJECTIVE: To learn about data analysis

UNIT I INTRODUCTION TO STATISTICS

15

Frequency distribution-Diagrammatic representation-Measures of Central Tendency: Mean, Median, Mode, Geometric mean, Harmonic mean-Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation, and Coefficient of Variation.

UNIT II CORRELATION ANALYSIS

15

Introduction, Methods of Studying Correlation- Karl Pearson's Coefficient Of Correlation-Spearman's Rank Correlation Coefficient: Ranks are given, Ranks are not given, Equal ranks or Repeated Values. Regression Analysis: Two Regression Equations-Regression Equation of X on Y, Regression Equation of Y on X.

UNIT III SAMPLING

15

Test of hypothesis- Test of Significance for Small Samples: t test- Single Mean, Two Mean, and Paired t-test- F test-Chi Square Test: Goodness of Fit, 2X2 Contingency table.

UNIT IV ROOTS OF EQUATIONS

15

Graphical Method- Bisection Method- False position Method – Newton –Raphson's Method- Secant Method- Algebraic Equations: Gauss Elimination Method- Gauss- Jordan Method- Matrix Inverse Method- Gauss-Seidel Method.

UNIT V NUMERICAL INTEGRATION AND DIFFERENTIATION

15

Trapezoid Rule- Simpson's Rule- Application of numerical methods to differential equations: Runge-Kutta Order Methods

Total No of Hours: 75

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Define fundamental concept of statistics.

CO2: Apply various statistical calculations.

CO3: Apply correlation calculation techniques.

CO4: Apply testing hypothesis like chi-square etc.

CO5: Develop the techniques of ANOVA.

TEXT BOOK

1. Richard A.Johnson , “Probability and Statistics for Engineers 8th Economy Edition, Miller & Freund's Publications ,2010

REFERENCE BOOK

1. B.S Grewal, “Numerical Methods in Engineering & Science “, Khanna Publishers, 2010.

PROGRAMMING IN JAVA LAB

0 0 4 2

COURSE OBJECTIVE:

- To make students familiar with oops & applet programming
- Java programming can be used to develop both web based & console based application & stand-alone application
- Java is one of the top most languages used in most of the IT companies. It is a job assured course.

APPLICATIONS

30

1. Area of shapes using Overloading/Overriding/Interface concepts.
2. Substring Removal from a String.
3. Determining the order of numbers generated randomly using Random Class.
4. Usage of Calendar Class and its manipulation.
5. String Manipulation using built-in functions.
6. Usage of Vector Classes.
7. Implementation of Thread based application.
8. Implementation of Exception Handling.

APPLET

30

1. Working with Frames and various controls to prepare a Bio-data form.
2. Working with Dialogs and Menus.
3. Working with Panels and Layouts.
4. Working with various shapes using Graphics class.
5. Working with Colors and Fonts.

Total No ofHours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Assess Java program with basic OOP concept.
- CO2: Examine the string concepts with string buffer class.
- CO3: Explain the database creation in Java programs.
- CO4: Apply the exception handling and thread concepts.
- CO5: Assess java program & utilize the Applet concepts.

MULTIMEDIA LAB

0 0 4 2

COURSE OBJECTIVE

1. To familiarize the students with various software approaches and techniques of Animation Technology.
2. To develop competencies and skills.
3. Exploring different approaches in computer animation.

List of Programs

Photoshop

1. To design a visiting card containing atleast one graphic and text information
2. To prepare a cover page for the book in your subject area. Plan your own design.
3. To use appropriate tool(s) from the toolbox, cut the objects from 3 files (f1.jpg, f2.jpg & f3.jpg); organize them in a single file and apply feather effects.
4. To type a word and apply the effects shadow emboss
5. To take a photographic image. Give a title for the image. Put the border. Write your names. Write the name of institution and place.

Flash

6. To create an animation to represent the growing moon.
7. To display the background of given file through your name.
8. To change a circle into a square using flash
9. To create an animation to indicate a ball bouncing on steps
10. To simulate movement of a cloud
11. To Simulate a Ball hitting another Ball

Total No ofHours:60

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Assess basic concepts of Multimedia.
- CO2: Examine the icons and tools in Photoshop.
- CO3: Create invitation using Dream Viewer.
- CO4: Apply motion slides in Photoshop.
- CO5: Create a Pamphlet using icons and properties in Photoshop.

WEB TECHNOLOGY
COURSE OBJECTIVE

4 0 0 4

- Understand the various steps in designing a creative and dynamic website.
- They will be able to write html, JavaScript, CSS.
- Finally they can create good, effective and customized websites.
- Know regarding internet related technologies. Systematic way of developing a website.

UNIT I INTRODUCTION

12

Internet Basic – Introduction to HTML – PRE- List:Ordered and Unordered- Creating Table – Linking document – Frames -Graphics to HTML Doc – -Forms.

UNIT II STYLE SHEET

12

Style Sheet – Style Sheet basics – Adding style to document – Creating stylesheet rules – Inline Style sheet – External Style Sheet-Import Style Sheet

UNIT III STYLE SHEET PROPERTIES

12

Style sheet properties– Font – Text – List – Color - Background color – Margin – Padding - Box & Display properties.

UNIT IV JAVASCRIPT

12

Introduction to JavaScript –Advantage of JavaScript – JavaScript syntax – Data type – Variable –Array – Operator and Expression – Looping Constructor – Function – Dialog box.

UNIT V DOM

12

JavaScript document object model – Introduction – object in HTML – Event Handling – Window object – Document object – Browser Object – Form Object – Navigator object – Screen object –Build in object – User defined object – Cookies.

Total No of Hours:60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Identify and make the use of various HTML tags in designing a dynamic website.

CO2: Determine dynamic and interactive web pages by embedding Java Script code in HTML.

CO3: Explain the advantages and use of different types of JavaScript objects.

CO4: Apply different types of controls in a web page .

CO5: Explain the concept of cookies.

TEXT BOOKS

1. Bayross, Web Enable Commercial Application Development Using HTML, DHTML, JavaScript, Perl CGI, BPB Publications.
2. HTML Complete Reference.

REFERENCE BOOK

1. Jaworski, Mastering JavaScript, BPB Publications, 2006

OPERATING SYSTEM 4 0 0 4

COURSE OBJECTIVE

- To understand the services provided by and the design of an operating system.
- To understand the structure and organization of the file system.
- To understand what a process is and how processes are synchronized and scheduled.

UNIT I OPERATING SYSTEM TYPES 12

Introduction – Multi programming – Time sharing – Distributed system – Real time system – I/O structure – Dual – Mode operation – hardware protection – General System architecture – Operating system services –Process Management: Process concept – Concurrent process – Scheduling concepts – CPU scheduling – Scheduling Algorithms.

UNIT II PROCESS MANAGEMENT 12

Process Synchronization – Critical section – Synchronization hardware – Semaphores, classical problem of synchronization, Inter process communication, Deadlocks characterization, Prevention, Avoidance and Detection.

UNIT III MEMORY MANAGEMENT 12

Memory Management – Single Contiguous – Fixed and Dynamic partition allocation Relocatable memory Management - Paging – Segmentation – Virtual memory – Demand paging - Page replacement and algorithms, Thrashing.

UNIT IV SECONDARY STORAGE MANAGEMENT 12

Free space management – Allocation methods – Disk scheduling

UNIT V FILE MANAGEMENT 12

Files and Protection – File system organization – file operations – access methods – consistency semantics – directory structure organization – file protection – implementation issues – security – encryption.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Understand the difference between different types of OS.
- CO2: Identify the difference between process and thread.
- CO3: Explain the design and management concepts of virtual memory and main memory.
- CO4: Analyze the concepts of Deadlock in multiprogramming.
- CO5: Explain protection and security problem faced by the Operating systems.

TEXT BOOK

1. A. Silberschatz, P.B. Galvin Ganga, "Operating Concepts", 6th Edition Addison Wesley – Publishing Co., 2002

REFERENCE BOOKS

1. Deitel H.M. "An Introduction to Operating System", Addison Wesley Publishing Co., 2003
2. Dhamd.hre Milan, "Operating System", McGraw Hill, International Edition, 2002.
3. Tanenbaum, Operating System – Design and implementation, Prentice-Hall of India.

COURSE OBJECTIVE

- To understand the services provided by and the design of an operating system.
- To understand the structure and organization of the file system.
- To understand what a process is and how processes are synchronized and scheduled.

1. Inter Process Communication (IPC) using Message Queues.
2. IPC using pipes.
3. Implementations of wait and signal using counting semaphores.
4. Atomic Counter update problem.
5. Signaling processes.
6. Deadlock detection (for processes passing messages)
7. Process Scheduling: FCFS
8. Process Scheduling: Least Frequently Used.
9. Process Scheduling: Round Robin.
10. Producer-Consumer problem with limited buffers.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Ability to analyze and synthesize various basic concepts and services of operating system and it's along with its implementation in Inter Process Communication (IPC) using Message Queues and pipes.
- CO2: Ability to apply and examine the wait and signal using counting semaphores and Atomic Counter update problem.
- CO3: Ability to interpret and evaluate the concept of Signaling processes and Deadlock detection for message passing between processes
- CO4: Ability to understand and demonstrate the concept of Process Scheduling using the non-preemptive FCFS Process Scheduling and Least Frequently Used scheduling algorithms and Round Robin preemptive Process Scheduling.
- CO5: Ability to explain the classical problems of synchronization and interpret the Producer-Consumer problem with limited buffers.

HTML

1. Table Handling
2. Designing Time Table
3. Designing an index of a book using ordered and unordered List
4. Designing an index of a book using Nesting of List
5. To scroll an image over a screen
6. Create a web page to link two or more pages.
7. Create a web page to advertise a product using Frames and Links
8. Create a Bio-data using Form tag.

CASCADING STYLE SHEET

1. Create an External Style Sheet using Font, Text and Color Properties
2. Create an Internal Style Sheet using Font, Text and Color Properties and Border Properties
3. Create an Inline Style Sheet using Font, Text , Color and Background Properties

JAVA SCRIPT

1. Simple Calculator
2. String Object
3. Array Object
4. Math Object
5. Screen Object
6. Navigator Object
7. Closing a window after a minute
8. Working with OnMouseOver Event.

Total No of Hours:60**COURSE OUTCOME**

At the end of this course the students will be able to,

CO1: Analyze and make the use of various HTML tags in designing a dynamic website.

CO2: Determine dynamic and interactive web pages by embedding
Java Script code in HTML.

CO3: Explain the advantages and use of different types of JavaScript objects using script coding.

CO4: Apply different types of controls in a web page to create websites.

CO5: Explain the concept of cookies.

DISCIPLINE SPECIFIC ELECTIVE (DSE)

DATA STRUCTURES

3 0 0 3

COURSE OBJECTIVE:

- To be familiar with writing recursive methods.
- To be familiar with basic techniques of algorithm analysis
- Master the implementation of linked data structures such as linked lists and binary trees

UNIT I INTRODUCTION 15

Introduction: Basic Terminology – elementary data organization – Data Structures – Data Structure Operations – Algorithms – Complexity of Algorithms. Array: Linear array – Representation of Linear Array – Traversing Linear Array – Inserting and Deleting – Bubble Sort – Linear Search – Binary Search.

UNIT II STACK & QUEUE 15

Stack: Representation of Stack – Operations on Stack – PUSH – POP – Applications of Stack – Infix to postfix expression – Evaluation of Postfix expression – Recursion - Tower of Hanoi – Quick Sort. Queue: Representation of Queue – Applications of Queue – D Queue – Priority Queue – Circular Queue.

UNIT III LINKED LIST 13

Singly Linked List: Operation on Singly Linked List – Applications of Singly Linked List – Polynomial Addition. Doubly Linked List: Operations on Doubly Linked List.

UNITIV TREE 17

Trees: Basic Terminology – Binary Tree – Representation of Binary Tree – Binary Tree Traversal – Binary Search Tree – Operations on Binary Search Tree – Heap Sort.

UNIT V GRAPH 15

Graph – Terminology – Representation of Graph – Applications of Graph: Shortest Path algorithm – Operations of Graph – Graph Traversal – Topological Sorting. Hashing Technique.

Total No of Hours:75

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Explain the major Data structure concepts and Algorithms.

CO2: Compare stack and queue data structure concepts and choose appropriate Data Structure for specified applications

CO3: Understand the properties of linked list and apply it for various application Program and utilize it.

CO4: Demonstrate the importance of tree Data structure and interpret the operation on Binary search tree.

CO5: Assess the application of Graph and determine the Algorithms to use in Different scenarios.

TEXT BOOK

1. B.S. Gottfried, Schaum's Outline Series, Data structures using C++,Tata McGraw-Hill,. 2006.

REFERENCE BOOK

1. Ellis Horowitz “Fundamentals of Data Structures”, -2008.

DIGITAL LOGIC FUNDAMENTALS

4 0 0 4

COURSE OBJECTIVE:

- This course introduces the fundamental concepts of digital logic.
- This subject deals various number system, code conversions and Boolean algebra.
- To learn the universal gates, flip flops and registers.

UNIT 1 NUMBER SYSTEM AND CODES 14

Number System : Binary to decimal, Binary to Octal, Binary to Hexadecimal, Decimal to Binary, Decimal to Octal, Decimal to Hexadecimal, Octal to Binary-Octal to Decimal, Octal to Hexadecimal, Hexadecimal to Binary , Hexadecimal to Decimal , Hexadecimal to Octal - Binary Codes – Complements: r 's Complement , $(r-1)$'s Complement ,Subtraction using Complements -Code Conversion - Digital Logic: Logic Gates – Truth Tables – Universal Gates.

UNIT 2 BOOLEAN ALGEBRA 15

Boolean algebra: Boolean Laws , Theorems & Postulates – Simplification of Boolean Functions – Minterms - Maxterms – SOP – POS – Duality and Complements – Canonical Form of Expression- Karnaugh-Map (up to 5 variables) – Binary Addition – Binary Subtraction.

UNIT 3 COMBINATIONAL CIRCUITS 16

Combinational Circuits : Introduction -Adders , Half-Adder , Full-Adder – Subtractor ,Half-Subtractor -Full-Subtractor – Decoder – De-Multiplexer – Encoder - Multiplexer – Code Binary Parallel Adder – Code Converter – Parity bit Generators & Checker.

UNIT 4 SEQUENTIAL CIRCUITS 15

Sequential Circuits: Introduction – Flip-Flops - Basic RS Flip-Flop, Clocked RS Flip-Flop, JK Flip-Flop, D Flip Flop, T Flip-Flop & Master – Slave Flip Flop.

UNITS 5 COUNTERS & REGISTERS 15

Counters, Design of Counters -Asynchronous Counters: Ripple Counter – Synchronous Counters – Registers - Shift Registers – RAM – ROM - Types of ROMs – Types of RAMs.

TOTAL HOURS: 75

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Explain number systems and importance of the boolean function.

CO2: Interpret combination circuit design using multiplexers and decoder.

CO3: Construct sequential circuit methods to apply for flipflop and counters design.

CO4: Demonstrate the arithmetic logic unit structure and working design of arithmetic circuits.

CO5: Application of Counters and Register concepts in real world.

TEXT BOOK

1. M.Moris Mano, Digital Logic and Computer Design, PHI, 2001.

REFERENCE BOOKS

1. D.P.Leach & A.P. Malvino, Digital Principles and Applications – TMH – Fifth Edition 2002.
2. T.C.Bartee, Digital Computer Fundamental, 6th Edition, Tata McGraw Hill, 2001.

PRE-PROCESSOR HYPERTEXT PROGRAMMING

4 0 0 4

COURSE OBJECTIVE:

- Develop applications using PHP.
- Learn more server side scripting.
- Used to develop effective web based application.

UNIT I INTRODUCTION 12

Introduction – Basic features of PHP – Evolution of PHP – HTML concepts – Introducing Variables – Holding Data – Constants – Introducing Operators.

UNIT II CONTROL STRUCTURES 12

Introduction to Control Structures – Using Conditional Statements – Using Loops in PHP – Introduction to Functions – Using Functions. Accessing PHP and HTTP data – Links – HTML web forms.

UNIT III ARRAY 12

Introducing Arrays – Create Arrays – Looping through Arrays – Manipulating Arrays – Sorting Arrays – Designing PHP program logic: Problem statement – writing pseudo code – Boolean Logic.

UNIT IV TESTING & DEBUGGING 14

Testing and Debugging – Debugging PHP script – Debugging and handling errors in PHP5 – Form validation.

UNIT V WORKING WITH DATA 10

Retrieving data using PHP – SQL statement for retrieving Data – Inserting records using PHP – Updating and Deleting Records in tables.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Identify and make the use of capabilities and features of PHP for website development and understand the basic types of variables, data, constants and operators.

CO2: Apply and make use of Conditional statement, Looping Statement, Functions, Links and Forms.

CO3: Creating, storing, manipulating and sorting data with arrays.

CO4: Deducing and Correcting errors occurred and then Assessing forms data using validation.

CO5: Able to Connect to databases and design to fetch, store, and update persistent information

TEXT BOOK

1. "Beginning PHP5", Dave W.Mercer, Allan Kent, Steven D. Nowicki, 2004 Edition, Wiley Publication.

REFERENCE BOOK

1. "PHP- A Beginner's Guide", Ashok Appu, Wiley Publication.

PRE PROCESSOR HYPERTEXT PROGRAMMING LAB

0 0 4 2

COURSE OBJECTIVE:

- Develop applications using PHP.
- Learn more server side scripting.
- Used to develop effective web based application.

1. To create login page with check username Password available on database.
2. To write ARRAY program with sorting program on PHP.
3. To write PHP functions with and without parameters.
4. To design web page for student registration page.
5. Create Registration Form with validation.
6. To implement the Session Management.
7. To implement the COOKIES concepts in your web site?
8. To implement E-mail concept on PHP.
9. Display the student information on web site UPDATE, DELETE the information.
10. Create web page for REQUEST and RESPONSE object.
11. To insert the image and display Images randomly.
12. To create web site for File Upload and File Download options.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Identify and make use of variables and construct functions.

CO2: Apply and write the code for Conditional statement, Looping Statement, Functions, Links and Forms.

CO3: Creating, storing, manipulating and sorting data with arrays.

CO4: Influence and implement the concept of Cookies and Session Management

CO5: Able to Connect to databases and design to fetch, store, and update data in the database.

DATABASE MANAGEMENT SYSTEM 4 0 0 4

COURSE OBJECTIVE:

- To work on data, managing data between front end and backend and to create reports.
- Provide for mass storage of relevant data,
- Make access to the data easy for the user,
- Provide prompt response to user requests for data,

UNIT I INTRODUCTION AND BASIC CONCEPTS 12

Introduction and Basic Concepts - Structure of DBMS - Advantages & Disadvantages - Relational and their schemes integrity rules - Relational algebra: Basic operations additional operations, relational algebraic operations. Relational Calculus: Tuple Calculus domain calculus - Physical Implementation Issues

UNIT II BASIC SQL 10

Basic SQL PLUS Reports and Commands - Building a simple report - Checking the SQLPLUS Environment - Getting Text information - Data Types - How to cut and paste String - Group Value function – Date Conversion and transformation function - Advances sub queries, other joins

UNIT III INTRODUCTION TO PL/SQL 14

An Introduction to PL/SQL - PL/SQL Overview - Declaration section - Executable Commands section - Condition logic – Loops - Exception Handlings – Triggers - Required System Privileges - Required Table Privileges - Types of triggers - Triggers – Syntax - Enabling and Disabling Triggers - Replacing and Dropping Triggers

UNIT IV SUB QUERIES WITHIN FORM CLAUSE 14

Creating a complex view - Using sub queries within form clause - Using ROLLUP, GROUPING, And CUBE - Advances use of function and variables - DECODE: Amazing power in a single word - Creating, Dropping and Altering tables Views.

Unit V PL/SQL 12

Records – Tables – Varrays.Named Blocks: Procedures – Functions – Packages –Triggers –Data Dictionary Views.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand the basic concepts data base design

CO2: Apply Various normal forms in data base design for avoiding for avoiding data replication

CO3: Build knowledge in different data models.

CO4: Analyze the efficiency in authorizing database

CO5: Determine efficient SQL queries for retrieving the data

TEXT BOOKS

1. Bipin Desai “An Introduction to Daabase system”, Golgotia publication NEW Delhi
2. Abraham S.HenryKorthS.Sudarshan “Database system Concepts” TMH

REFERENCE BOOKS

1. ArunMajumdar&Pritimoy, “Database Managemnet Systems” Bhattacharya, 2007, TMH.
2. Gerald V. Post, “Database Management Systems” 3rd edition, TMH.

COURSE OBJECTIVE

- This course gives training in design and implementation of data bases for the selected problems.
- To familiarize the participant with the nuances of database environments towards an information
- oriented data-processing oriented framework
- To give a good formal foundation on the relational model of data

1. Table creation using constraints and perform insert, update,delete, select commands.
2. Exercise using drop,truncate,commit,rollback
3. Exercise to implement sub queries.
4. Joins
5. Aggregate functions
6. String, math and date functions.
7. Examples for triggers.
8. Indexing.
9. Simple PL/SQL programs.
10. Cursor examples.

Total Hours: 65**COURSE OUTCOME**

At the end of this course the students will be able to,

- CO1: Understand the basic SQL queries using ORACLE database.
- CO2: Apply various DDL commands for creating data base design
- CO3: Build knowledge in manipulation, transaction control and data control using SQL COMMANDS
- CO4: Analyze the efficiency of storing data using data clustering and partitioning
- CO5: Develop the procedures for backup & recovery and for the role of DBA .

DOT NET TECHNOLOGY

4 0 0 4

COURSE OBJECTIVE:

1. To inculcate knowledge on .NET technology and concepts.
2. To understand the concepts of C# Windows Controls
3. This syllabus is aimed to impart a basic understanding of how computers communicate using different devices and protocol.

UNIT 1 INTRODUCTION TO .NET 13

Introduction to .NET Framework - .NET Advantages - Common Language Runtime(CLR) -Common Type System (CTS) - .NET Framework Class Library (FCL) - Microsoft Intermediate Language(MSIL) - Just In Time(JIT) Compiler - Garbage Collection - Phases of Garbage Collection.

UNIT2 C# BUILDING BLOCKS 15

Introduction to C# –Overview - OOPS Concepts: Expressions- Declarations – Statements - Data types - Operators – Decision Making – Looping - Constructors and Destructors – Inheritance.

UNIT 3 C# WINDOWS CONTROLS 16

Button -Textbox -RichTextBox -Label, LinkLabel -CheckBox -RadioButton -ListBox - ComboBox -TreeView -CheckedListBox -Panel -GroupBox -PictureBox -ToolTip - ErrorProvider – Menu Controls -Common Dialogs -Date TimePicker -MonthCalendar.

UNIT 4 ASP.NET CONTROLS 16

Introduction of ASP.NET - Concept of Web Applications - ASP.NET Architecture - ASP.NET Page Life Cycle - ASP.NET Controls: Check box list – radio button list – drop down list – list box – Ad Rotator control - Required Field Validator control- Compare Validator Control – Range Validator Control – Custom Validator Control – Validation Summary Control.

UNIT 5 OBJECTS AND ADVANCED CONCEPTS IN ASP.NET15

Introduction to ADO.NET – ADO Vs ADO.NET – Connected ADO.NET Architecture – Disconnected ADO.NET Architecture – Data Reader - Data Adapter – ADO.NET Classes - Request Object - Response Object – State Management for Session,Application, Cookies, and Query String.

TOTAL HOURS: 75

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand .NET framework and can realize some of the major enhancements in the new version of ASP.NET

CO2: Understand the basic structure of ASP.Net and features of IDE .

CO3: Develop programs using primitives and constructs in C# Controls

CO4: Handle controls in Forms, Windows MDI forms and Controls

CO5: Connect database by using ADO.NET and manipulate the database

TEXT BOOK

4. Joe Duffy, Professional **.NET Framework 2.0 2006 Edition**- Wrox Publications

REFERENCE BOOKS

1. Steven Holzner, Visual Basic.NET Programming – **Black Book 2005** Edition,-Paraglyph Press and DreamTech Press
2. Alex, Professional ASP.NET 1.1 - Homler and Group Wrox Publications
3. Michael Otey and Denielle Otey ADO.NET Complete Reference Tata Macraw Hill Publication

COURSE OBJECTIVE:

- This course gives an exposure and training in .NET programming.
- To understand the goals and objectives of .NET framework, understand the concept on how software should be developed and deployed.
- To have a working knowledge of C# programming language.

LIST OF EXPERIMENTS:

1. To write a C# program to implement function overloading.
2. To write a C# program to implement function overriding.
3. To write a C# program for implementing the concept of Inheritance
4. To write a C# program for demonstrating the concept of Constructors & Destructors.
5. To write a C# program for generating Fibonacci Series.
6. To create a windows program for employee registration form with validations.
7. To create a windows program for demonstrating Progress Bar Control.
8. To create a windows program for demonstrating List Box Control
9. To create a windows program for demonstrating Combo Box Control.
10. To create a windows program for demonstrating Month Calendar Control.
11. To create Asp.net web page for demonstrating advertisement in your web page.
12. To create Asp.net page for implementing all validation controls.
13. To create Asp.net page for View and Session State.
14. To demonstrate a web page program for cookies in Asp.net.
15. To create Asp.net web page for query string through URL.

Total Hours: 45**COURSE OUTCOME**

At the end of this course the students will be able to,

CO1: Understand .NET framework environment and how to develop small programs

CO2: Understand the working of C# programs in .NET environment.

CO3: Develop menu based program for text manipulation

CO4: Understand ADO .NET and develop database applications

CO5: Develop the applications using DataGrid for displaying records

SOFTWARE ENGINEERING

4 0 0 4

COURSE OBJECTIVE:

- Be employed in industry, government, or entrepreneurial endeavors to demonstrate professional advancement through significant technical achievements and expanded leadership responsibility.
- Demonstrate the ability to work effectively as a team member and/or leader in an ever-changing professional environment.
- Progress through advanced degree or certificate programs in computing, science, engineering, business, and other professionally related fields.

UNIT I INTRODUCTION

15

Introduction to Software Engineering: Definitions – Size Factors- Quality and Productivity Factors – Managerial Issues- Planning a software Project: Defining the Problem – Developing a Solution – Strategy – Planning the Development Process – Planning an Organization Structure – Other Planning Activities.

UNIT II SOFTWARE COST ESTIMATION

15

Software cost factors – Software Cost Estimation Techniques – Staffing – Level Estimation Estimating Software Maintenance Costs – The Software Requirements Specification – Formal Specification Techniques – Languages and Processors for Requirements Specification.

UNIT III SOFTWARE DESIGN:

15

Fundamental Design Concepts – Modules and Modularization Criteria – Design Notations – Design Techniques – Detailed Design Considerations – Real-Time and Distributed System Design – Test Plans – Milestones, Walkthroughs, and Inspections.

UNIT IV IMPLEMENTATION ISSUES:

15

Structured Coding Techniques – Coding Style – Standards and Guidelines – Documentation guidelines – Type checking – Scoping Rules – Concurrency Mechanism.

UNIT V QUALITY ASSURANCE

15

Quality Assurance – Walkthroughs and Inspections – Static Analysis – Symbolic Execution – Unit Testing and Debugging – System Testing – Formal Verification: Enhancing Maintainability during Development – Managerial aspects of Software Maintenance – Source Code Metrics – Other Maintenance Tools and Techniques.

Total No ofHours : 75

COURSE OUTCOME

At the end of this course the students will be able to,

- CO1: Select and implement various software development process models
- CO2: Extract and analyze software requirements specifications for different projects (Size, Quality, Productivity Factors, Strategy and Planning Activities.)
- CO3: Productivity Factors, Strategy and Planning Activities.)
- CO4: Interpret the knowledge level of software architecture/design
- CO5: Apply and Identify the standard coding practice and software metrics

TEXT BOOK

1. R. S. Pressman, 2005, Software Engineering a Practitioner's approach, 6th Edition, Tata McGraw-Hill, New Delhi.

REFERENCE BOOKS

1. Sommerville, 2001, Software Engineering, 6th Edition, Addison Wesley, Boston.
2. Rajib Mal, 2005, -Fundamental of Software engineering, 2ND Edition, PHI, New Delhi.
3. N. E. Fenton, S. L. Pfleenger, 2004, Software Metrics, Thomson Asia, Singapore.

DATA COMMUNICATION AND NETWORKS 4 0 0 4

COURSE OBJECTIVE

- Resource sharing is the main objective of the computer network.
- To provide the high Reliability
- To learn about communication techniques & security issues.

UNIT I INTRODUCTION 10

Introduction to Data Communication, Network, Protocols & standards and standards organizations - Line Configuration - Topology - Transmission mode - Classification of Network - OSI Model - Layers of OS1 Model.

UNIT II TRASMISSION MEDIA 12

Parallel and Serial Transmission - DTE/DCE/such as EIA-449, EIA-530, EIA-202 and x.21 interface - Interface standards - Modems - Guided Media - Unguided Media - Performance - Types of Error - Error Detection - Error Corrections.

UNIT III MULTIPLEXING 14

Multiplexing - Types of Multiplexing - Multiplexing Application - Telephone system - Project 802 - Ethernet - Token Bus - Token Ring - FDDI - IEEE 802.6 - SMDS - Circuit Switching - Packet Switching - Message switching - Connection Oriented and Connectionless services.

UNITIV ANALOG & DIGITAL 14

History of Analog and Digital Network - Access to ISDN - ISDN Layers - Broadband ISDN - X.25 Layers - Packet Layer Protocol - ATM - ATM Topology - ATM Protocol.

UNIT V COMMUNICATION MODES 10

Repeaters - Bridges - Routers - Gateway - Routing algorithms - TCP/IP Network, Transport and Application Layers of TCP/IP - World Wide Web.

Total No of Hours: 60

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand the basic terms of Networks, Protocols, Standards and Compare different types of Network Topologies

CO2: Able to differentiate transmission medium and Apply Error Correction and Detection Methods for Reliable Communication.

CO3: Able to Classify various types of multiplexing and switching concepts to connect multiple devices

CO4: Able to recommend the protocols needed to support for high speed interconnection

CO5: Able to determine the shortest path between two routers

TEXT BOOK

1. Behrouz and Forouzan - Introduction to Data Communication and Networking - 2nd Edition - TMH-2005

REFERENCE BOOK

1. Jean Wairand - Communication Networks (A first Course) - Second Edition - WCB/McGraw Hill - 2003.

ARTIFICIAL INTELLIGENCE

4 0 0 4

COURSE OBJECTIVE:

- To familiarize students with Artificial Intelligence techniques for building well-engineered and efficient intelligent systems.
- Pattern-directed inference systems and different types of truth maintenance systems will be discussed in length from both theoretical and applied point of view.
- Some cutting edge applications of these systems will also be discussed. Introduction to Artificial Intelligence Programming using LISP will be provided to help students with the programming part of the course.

UNIT I INTRODUCTION 12

Artificial Intelligence Definition – Importance of Artificial Intelligence – Knowledge based Systems – Knowledge Representation – State space search – Production systems – Artificial Intelligence Programming Language – PROLOG – Heuristic search - Depth First Breadth first – Hill climbing – 4th algorithms – Game Playing.

UNIT II KNOWLEDGE REPRESENTATION 12

Propositional Logic – Clause form – Predicate logic – Resolution – Inference Rules – Unification – Semantic networks – frames – conceptual dependency – Scripts – Representing Knowledge using rules.

UNIT III SYMBOLIC REASONING AND UNCERTAINTY 12

Non monotonic Reasoning – Truth maintenance systems – closed world assumption – modal and temporal Logics – Bayes Theorem - certainty factors – Bayesian networks – Dempster – Shafer Theory – Fuzzy logic.

UNIT IV NATURAL LANGUAGE PROCESSING 12

Overview of Linguistics – grammars and Languages – Basic parsing techniques – semantic Analysis and representation structures – Natural language generation – natural language systems – Distributed Reasoning systems – Intelligent agents.

UNIT V EXPERT SYSTEMS 12

Architecture – Non production systems Architectures – Knowledge acquisition and validation – Knowledge system building tools – Types of Learning – General Learning model – Learning by induction – Generalization and specialization – Inductive bias – Explanation based Learning.

Total No Of Hours: 60

COURSE OUTCOME

At the end of the course students will,

CO1: Understand the basic concepts of KDD

CO2: Able to analyze the predictive rule, propositional logic and inference rule.

CO3: Able to model the symbolic reasoning and uncertainty.

CO4: Understand and create the concept of NLP.

CO5: Able to analyze Knowledge acquisition, validation and building tools.

TEXT BOOKS

1. Dan W. Patterson, "Introduction to Artificial Intelligence and Expert Systems", Prentice Hall of India, Delhi, 2001.
2. Elaine Rich and Kevin Knight, "Artificial Intelligence" Tata McGraw Hill Pub. Co., Delhi, 2001.

REFERENCE BOOK

1. George F Luger, "Artificial Intelligence, structures and strategies for complex problem solving", Pearson Education Delhi, 2001

COURSE OBJECTIVE:

- This course introduces the basic concepts and applications of compiler design.
- To understand, design and implement a parser.
- To understand, design code generation schemes.

UNIT 1 INTRODUCTION TO COMPILERS

15

Compilers and Translator– Need of Translator – The structure of a Compiler – Lexical analysis – Syntax analysis – Intermediate code generation – optimization – code generation – Compiler – writing tools. Finite automata and lexical Analysis: The role of the lexical analysis – A simple approach to the design of lexical analyzersRegular expressions to finite automata – Minimizing the number of states of a DFA.

UNIT 2 SYNTACTIC SPECIFICATION OF PROGRAMMING LANGUAGES14

Context free grammars – derivations and parse trees – capabilities of context free grammars. Basic parsing techniques: Parsers – shift – reduce parsing – operator – precedence parsing – top down parsing – predictive parsers – automatic construction of efficient parsers: LR parsers – the canonical collection of LR (0) items constructing SLR parsing tables – constructing canonical LR parsing tables.

UNIT 3 SYNTAX – DIRECTED TRANSLATION

16

Syntax – directed translation schemes – Implementation of syntax – directed translators – intermediate code – postfix notation – parse trees and syntax trees – 3 address code – quadruples and triples – translation of assignment statements – Boolean expressions – statements that alter the flow of control. Symbol tables: the contents of a symbol table – data structures for symbol table – representing scope information.

UNIT 4 RUN TIME STORAGE ADMINISTRATION: 15

Implementation of a simple stack allocation Scheme – implementation of blockstructured languages – storage allocation in block structured languages. Error deduction and recovery: errors – lexical phase errors – syntactic phase errors – semantic errors.

UNIT 5 INTRODUCTION OF CODE OPTIMIZATION 15

The principle sources of optimization – loop optimization – the DAG representation of basic blocks – value numbers and algebraic laws – Global data flow analysis. Code generation: Object programs – problems in code generation – a machine model – a simple code generator – register allocation and assignment – code generation from DAG’s – peepholes optimization.

TOTAL HOURS 75

COURSE OUTCOME

At the end of the course students can,

CO1: Understand the basic terminology in compiler design and demonstrate the three phases of compiler.

CO2: Analyze the first phase of compiler – Lexical analyzer and its issues.

CO3: Analyze the second phase of compiler – Syntax Analyzer and its issues.

CO4: Understand SDT and create the parse tree using different parsing techniques.

CO5: Explain the concept of Runtime environment and error detection and recovery

CO6: Analyze the concept of code Optimization.

TEXT BOOK

1. Alfred V.Aho, Jeffrey D.Ullman “Principles of Compiler Design” by , Narosa Pub House.2007.

REFERENCE BOOK

1. Allen I. Holub “Compiler Design in C”, Prentice Hall of India, 2003.
2. C. N. Fischer and R. J. LeBlanc, “Crafting a compiler with C”, Benjamin Cummings, 2003.
3. J.P. Bennet, “Introduction to Compiler Techniques”, Second Edition, Tata McGraw-Hill, 2003.

ORGANIZATIONAL BEHAVIOUR

4 0 0 4

COURSE OBJECTIVE:

- Individual ethical behavior and community responsibilities in organizations and society.
- Management responsiveness to ethnic, cultural, and diversity issues.
- Group and individual dynamics in organizations and Human resource management and development.
- Management and decision-making in an integrative organizational environment and Individual and group decision making processes

UNIT I INTRODUCTION

12

Management Accounting – Meaning and purpose
Financial Accounting – Preparation of Income statement and Balance Sheet – Interpretation and use of these statements by management.
Ratio Analysis and Funds Statement.

UNIT II EXPENDITURE

12

Capital Expenditure Evaluation – Capital budgetary concept – Methods – Limitations
Budgetary Control – Nature and COURSE OBJECTIVE of budgetary control – Limitations.

UNIT III CASH ACCOUNTING

12

Cost Accounting – Elements of cost – Cost of goods manufactured – Pricing of elements – Basis of allocation – Standard costing and variance analysis – Job and process costing.

UNIT IV MANAGING COST

12

Marginal Costing – Cost volume – Profit relationship – Break – Even Analysis – Direct costing vs Absorption costing.

UNIT V REPORT

12

Reporting to management – Uses of Accounting information in Managerial decision-making.

Total No of Hours : 60

.COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Study the outline of the OrganizationalBehavior and know the nature of organizationalBehavior.

CO2: Identify the individual behavior and build the personality and perception of human.

CO3: Develop the attitude of human, their values and learning capacity.

CO4: Organize the group and develop the group cohesiveness.

CO5: Adapt the leadership and relationship between power and politics.

TEXT BOOKS

1. J.R. Batliboi, Double entry Book – Keeping - The Standard Accounting Publication Pvt. Ltd., India.
2. Horngren. Sundem‘ Sralton, Introduction to Management Accounting, New Delhi, Prentice Hall of India Pvt. Ltd., yr.2006.

REFERENCE BOOKS

1. Man Mohan & S.N. Goyal, Principal of Management Accounting – Sahityabhavan, Agra, India.
2. I.M. Pandey, Management Accounting, 3rd edition New Delhi, Vikas Publication, yr. 2000.

GENERIC ELECTIVE (GE)

HTML & CSS

3 0 0 3

COURSE OBJECTIVE:

- To explain the student the major concepts of web designing.
- This course explains the graphics and animation..
- This course gives an outline of Adobe Illustrator CS4 and Corel DrawWX4.

UNIT I INTRODUCTION 10

Basic principles involved in developing a web site , Planning process , Five Golden rules of web designing , Designing navigation bar , Page design , Home Page Layout , Design Concept.

UNIT II HTML 10

What is HTML , HTML Documents , Basic structure of an HTML document , Creating an HTML document , Mark up Tags , Heading-Paragraphs ,Line Breaks , HTML Tags, Elements of HTML.

UNIT III ELEMENTS OF HTML 10

Introduction to elements of HTML, Working with Text, Working with Lists, Tables and Frames, Working with Hyperlinks and Images.

Total No of Hours: 30

COURSE OUTCOME

At the end of the course students can,

CO1: Able to understand the basic concepts of designing a Website

CO2: Able to understand the basic tags of HTML.

CO3: Able to create a website using Hyperlinks,Table , List ,Form and Frames.

TEXT BOOK

1. Ivan Bayross , “HTML 5 and CSS 3 Made Simple”,BPB publications,Dec 2012

REFERENCE BOOK

1. Thomas A.Powell,”HTML COMPLETE REFERENCE”,McGraw – Hill Publications, 2000.

FLASH 3 0 0 3

COURSE OBJECTIVE:

- To know the concepts in flash
- To learn about the common tools available in flash.
- To learn the steps for tweening and masking.

UNIT I INTRODUCTION 10

Motion tweening, Animated object using guide layer, Dynamic masking in textDrive information using URL, Masking, Shapetweening.

UNIT II INPUT DEVICES 10

Displaying item details, Calculator-Mouse Input, Calculator-Keyboard Input.

UNIT III APPLICATIONS 10

Paybill presentation, S-Puzzle problem, Animation with buttons Animation on an image, Quiz program.

Total No of Hours: 30

COURSE OUTCOME

- At the end of the course students can,**
- CO1:** Able to understand the concepts of twinning.
 - CO2:** Ability to learn the input devices.
 - CO3:** Able to create a applications such as pay bill presentation.

TEXT BOOK

1. Nick Vandome, "FLASH 5 in easy steps", Dreamtech press,2001.

REFERENCE BOOK

1. E.A VanderVeer & Chris Graver, "Flash CS3", Orelly Publications.2009.

INTERNET BASICS

3 0 0 3

COURSE OBJECTIVE:

- To make the student understands the overall view of internet.
- To inculcate the students about the various facilities available in internet.
- To gain practical knowledge about internet.

UNIT I INTRODUCTION

10

Describe the important features of the Web and Web browser software, Evaluate e-mail software and Web-based e-mail services. Use search engines and directories effectively, Find, evaluate, and use online information resources

UNIT II MAILING

10

Use mailing lists, newsgroups, and newsfeeds, Create HTML documents and enhance them with browser extensions

UNIT III E-COMMERCE

10

List and describe security threats and counter measures, describe the important features of electronic commerce

Total No of Hours: 30

COURSE OUTCOME

At the end of the course students can,

CO1: Able to understand the important features of the web.

CO2: Able to understand the concepts of mailing.

CO3: Able to understand the security threats and electronic commerce.

TEXT BOOK

1. Rohit Khorana, "Computer Fundamentals and Internet Basics", Aph Publishing Corporation, 2010

REFERENCE BOOK

1. Margaret Levine Young, "Internet Millennium Edition", Osborne Publications, 2000.

ADVANCED EXCEL

3 0 0 3

COURSE OBJECTIVE:

- To make the student understand the special concepts in MS EXCEL.
- To practice the students how to work in list, data forms and records.
- To understand the concepts of filtering data.

UNIT I ADVANCED EXCEL

10

Uses of Advance Excel Formulas -VLOOKUP, HLOOKUP, SUMIF, SUMIFS, SUMPRODUCT, SUM, COUNTIF, COUNTIFS, IF, IFERROR, ISERROR, ISNA, ISNUMBER, ISNONTTEXT, OR, AND, SEARCH, INDEX

UNIT II CONDITIONALS

10

Various Methods and Uses of IF Conditions, When should use the "IF" Conditions? , Creation of Multiple IF Conditions in One Cell, Use the IF Conditions with the Other Advance Functions, How to use nested IF statements in Excel with AND, OR Functions. Sorting, Data Forms, Adding Data Using the Data Form, Finding Records Using Criteria

UNIT III FILTERING AND SORTING

10

Filtering Data, AutoFilter, Totals and Subtotals Total, Row, Various Methods of Filter and Advance Filter options, Creating and Updating Subtotals, Various Method of Sorting Data ,Creating, Formatting and Modifying Chart.

Total No of Hours: 30

COURSE OUTCOME

At the end of the course students can,

CO1: Able to understand the advanced Excels Formulas.

CO2: Able to understand the basic conditional statements.

CO3: Ability to know the advanced concepts of excel such as Filtering and sorting

TEXT BOOK

1. Jordan Goldmeler, "Advanced Excel Essentials" , A Press, 2015 edition.

REFERENCE BOOK

- 1 .John Walkenbach , "Microsoft Excel 2013 Bible" ,Wiley Publications ,2013

SQL

3 0 0 3

COURSE OBJECTIVE:

- To make the student understands how the SQL works in computer.
- To practice the student about creation, deletion, insertion, appending of database in SQL.
- To make the student to create a report of the database created.

UNIT I THEORY, TERMINOLOGY AND CONCEPTS

10

Client/server concepts, database and database objects, data definition using sql , databases , data types, tables ,constraints and indexes ,views.

UNIT II BASIC DATA MANIPULATION USING SQL

10

Recurring sql constructs, adding data, modifying data, removing data, searching data, advanced data manipulation using sql, expressions, grouping and aggregate functions, joining tables.

UNIT III THEORY, TERMINOLOGY AND CONCEPTS

10

Client/server concepts, database and database objects, transactions, transaction concepts, sql for working with transaction ,import/export, Tools for import/export ,sql for import/export.

Total No of Hours: 30

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand the basic concepts data base management.

CO2: Able to formulate SQL queries.

CO3: Develop knowledge in Client/Server technology

TEXT BOOK

1. Paul DuBois, "MySQL Developer's Library,5th Edition, 2013.

REFERENCE BOOK

1. Michael Kruckenberg , "Pro MYSQL",Apress Publications,2005.

CLIENT SIDE SCRIPTING LANGUAGE

3 0 0 3

COURSE OBJECTIVE:

- To explain the student the need of scripting languages in programming environment.
- This subject deals various tags available in scripting language.
- This course explains about the intrinsic event handlers.

UNIT I SCRIPT AND HTML 10

Scripts and name-calling, Scripting Ethics, Embedding scripts into HTML documents, hiding scripts with HTML comments, specifying the scripting language

UNIT II SCRIPT EXECUTION 5

Deferring script execution, Providing alternate content , Defining the default scripting language , Intrinsic event handlers

UNIT III JAVASCRIPT INTRODUCTION 5

JavaScript, History of JavaScript, Basic JavaScript language syntax, Script Elements, Variables, Statements, Functions, Operators and Expressions , Arrays, Loops, and Conditional Statements , Objects and Methods.

UNIT IV DOM 10

Data Types , on event processing , External JavaScript Files , Debugging Tools and Techniques , Document Object Model (DOM) , Objects , Properties , Methods , Mouse events

Total No of Hours: 30

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Identify and make the use of various HTML tags in designing a dynamic website.

CO2: Determine dynamic and interactive web pages by embedding Java Script code in HTML.

CO3: Explain the advantages and use of different types of JavaScript objects.

TEXT BOOK

1. Ivan Bayross , “Teach Yourself Web Technology: part- 1”, BPB publications ,2003

REFERENCE BOOK

1. Miraz Jordan, ”Web Design Reference Guide”, Pearson Edition, 2003

LIST OF LANGUAGES

1. [REDACTED]. [REDACTED], " [REDACTED] 1", [REDACTED], [REDACTED], 1978.

2. [REDACTED]. [REDACTED], " [REDACTED]", [REDACTED], [REDACTED] 1998.

[REDACTED]

1. [REDACTED], " [REDACTED]", [REDACTED], [REDACTED], 1998.

2. [REDACTED]. [REDACTED], " [REDACTED]", [REDACTED], [REDACTED], 1994.

3. [REDACTED]. [REDACTED], " [REDACTED]", [REDACTED], [REDACTED], 2008.

To train the students in the use of Karyalayin Basha.To enable the students to develop the communication skill in Hindi language.

UNIT I GADYA AUR KARYALAYIN BASHA 12

Mamata, -Yogyatha evam vyavasay kaa Chunaav Paribashik shabdavalil prashasanik vakyansh,padanam

UNIT II GADYA AUR SARKARI PATRA 12

Rajneethi kaa Bhantwara, , Samanya sarkari patra,gyapan,karyalay gyapan

UNIT III GADYA AUR SARKARI PATRA 12

Computer nayi krantee kee dastak, , Karyalay aadesh,Ardha sarkari patra paripatra,Adhisoochana

UNIT IV GADYA AUR SAMANYA PATRA 12

Raspriya, Samanya patra- chutti patra,sampadak ke naam patra, shikayati patra, pustak vikretha ke naam patra

UNIT V YAVASAAYIK PATRA 12

Bankon mein bach khaata kholne ke liye – chek buk ke liye, run lene hetu, chek buk gum ho jane hetu, kitaabon kaa krayadesh

Total No of Hours: 60 Hrs

TEXT BOOK

1. Gadya Aur Prayojanmulak Hindi ed by Dr.N.Lavanya Mayura Publishers, edition 2008

COURSE OBJECTIVE:

- To introduce French Language.
- To enable the students to understand and to acquire the basic knowledge of French
- Language with the elementary grammar.

UNIT I INTRODUCTION 12

Introduction - Alphabet – Comment prononcer, écrire et lire les mots- Base : Les prénoms personnel de 1^{er}, 2^{ème} et 3^{ème} personnes – Conjugaisons les verbes être et avoir en forme affirmative, négative et interrogative

UNIT II LEÇONS 1- 3 12

Leçons 1.Premiers mots en français,- 2. Les hommes sont difficiles,- 3 Vive la liberté- Réponses aux questions tirés de la leçon - Grammaire : Les adjectives masculines ou féminines – Les articles définis et indéfinis - Singuliers et pluriels

UNIT III LEÇONS 4- 6 12

Leçons 4. L'heure, C'est 1 ; heure,- 5. Elle va revoir sa Normandie,- 6 .Mettez –vous d'accord groupe de nom - Réponses aux questions tirés de la leçon - Grammaire : A placer et accorder l'adjectif en groupe de nom- Préposition de lieu –A écrire les nombres et l'heure en français

UNIT VI LEÇONS 7- 9 12

Leçons7. Trois visages de l'aventure,- 8. A moi, Auvergne,- 9. Recit de voyage - Réponses aux questions tirés de la leçon - Grammaire : Adjectif possessif – Les Phrases au Présent de l'indicatif - Les phrases avec les verbes pronominaux au présent

UNIT V COMPOSITION 12

A écrire une lettre à un ami l'invitant à une célébration différente ex : mariage – A faire le dialogue - A lire le passage et répondre aux questions

Total No Of Hours : 60 Hrs

TEXT BOOK

1. Jacky GIRARDER & Jean Marie GRIDLIG, « Méthode de Français PANORAMA », Clé Internationales, Goyal Publication, New Delhi., Edition 2004

REFERENCE BOOKS

1. DONDO Mathurin , “ Modern French Course”, Oxford University Press., New Delhi., Edition 1997

2. Nitya Vijayakumar, “Get Ready French Grammar – Elementary”, Goyal Publications, New Delhi., Edition 2010

18LEN001 ENGLISH PAPER I

5 0 0 5

COURSE OBJECTIVE:

- To enable students to develop their communication skills effectively. To make students familiar with the English Language.
- To enrich their vocabulary in English
- To develop communicative competency

	Credit Hours
UNIT I - Preparatory Lesson	12
1. Competition Matters Suzanne Sievert	
2. A Personal Crisis May Change History Dr. A.P.J. Abdul Kalam	
3. Why Preserve Biodiversity Prof. D. Balasubramanian	
UNIT II –Prose	12
1. The Unexpected Robert Lynd	
2. My Greatest Olympic Prize Jesse Owens	
3. If You are wrong, admit it Dale Carnegie	
UNIT III –Poetry	12
1. The Night of the Scorpion Nissim Ezekiel	
2. Pulley or The Gift of God George Herbert	
3. La Bella Dame Sans Merci John Keats	
UNIT IV- Short Story	12
1. The Gift of Magi O Henry	
2. Three Questions Leo Tolstoy	
UNIT V – One Act Play	12
1. The Shirt Francis Dilion	
2. The Pie and the Tart Hugh Chesterman	

Total: 60 Hours

COURSE OUTCOME

At the end of this course the students will be able to,

CO 1 Examine the difference between poetic language and the language of the prose.

CO 2 Utilize instructions on fundamentals of grammar

UNIT I	KAHANI AUR EKANKI	12
Poos Kee Raat.,- Duzhazar		
UNIT 2	EKANKI AUR KAHANI	12
Vaapasi, Akeli, .Akbhari vigyapan		
UNIT 3	KAHANI AUR ANUVAD	12
Sharandatha -Anuvad anuched angreji se hindi me karne ke liye.		
UNIT 4	EKANKI AUR ANUVAD	12
Raat ke Raahi Main Bhi Maanav hoonAnuvad anuched angreji se hindi me karne ke liye.		
UNIT 5	KAHANI ,EKANKI AUR ANUVAD	12
Parda -Yeh Meri Janma Bhoomi Hai -anuvad anuched angreji se hindi me karne ke liye.		

Total No of Hours: 60 Hrs

TEXT BOOK

1.Sankalan Kahani evam Ekankied by Dr.N.Lavanya, Mayura Publishers,edition 2010

18LFR002 FRENCH II 50 0 5

COURSE OBJECTIVE:

- To fortify the grammar and vocabulary skills of the students.

- Enable the students have an idea of the French Culture and Civilization

UNIT I LEÇONS 10 – 11 12

Les affaires marchent,- 11. Un après midi à problèmes- Réponses aux questions tirés de la leçon -
Grammaire : Présent progressif, passé récent ou future proche - Complément d'objet directe -
Complément d'objet indirecte .

UNIT II LEÇONS 12 – 13 12

Tout est bien qui fini bien,- 13. Aux armes citoyens – Réponses aux questions tirés de la leçon -
Grammaire : Les pronoms « en ou y » apporter des paroles - Les pronoms relatifs que, qui, ou où ,

UNIT III LEÇONS 14 – 15 12

Leçons 14. Qui ne risqué rien n'a rien,- 15. La fortune sourit aux audacieux – Réponses
aux questions tirés de la leçon - Grammaire : Comparaison – Les phrases au passé composé

UNIT IV LEÇONS 16 – 18 12

Leçons16 La publicite et nos rêves 17 La France le monde 18 Campagne publicitaire
Réponses aux questions tirés de la leçon - Grammaire :- Les phrases à l' Imparfait - Les phrases au
Future

UNIT V COMPOSITION 12

A écrire une lettre de regret// refus à un ami concernant l'invitation d'une célébration reçue- A écrire
un essai sur un sujet générale - A lire le passage et répondre aux questions

Total No Of Hours : 60 Hrs

TEXT BOOK

1. Jacky GIRARDER & Jean Marie GRIDLIG, « Méthode de Français PANORAMA »,
Clé Internationale , Goyal Publication, New Delhi., Edition 2004

18LEN002 ENGLISH PAPER – II 5 0 0 5

COURSE OBJECTIVE:

- To enable students to develop their communication skills effectively
- To make students familiar with various sentence patterns of the English Language
- To enrich their vocabulary in English
- ~~- To develop communicative competency~~

Credit Hours

UNIT-I Prose

12

1. The Words of Wisdom
Chetan Bhagat
2. Forgetting
Robert Lynd
3. My Early Days
Dr. A.P.J. Abdul Kalam

UNIT II –Poetry

12

1. Ozymandias
Percy Bysshe Shelley
2. Mending Wall
Robert Frost
3. Where the Mind is Without Fear
Rabindranath Tagore

UNIT III –Short Story

12

1. Am I Blue?
Alice Walker
2. The Last Leaf
O' Henry
3. The Selfish Giant
Oscar Wilde

UNIT IV – One Act Play

12

1. Soul Gone Home
Langston Hughes

UNIT V

12

1. Lexical Skills

18LHN003 HINDI III 5 0 0 5

COURSE OBJECTIVE:

- To help the students to have in depth knowledge of Literature. It makes the students to acquire more about the medieval period through the literary works.

UNIT I PRACHIN KAVYA HINDI SAHITYA KA ITIHAS 12

Kabir- Hindi bash aka vikas – Hindi sahitya kaa aavirbahv

UNIT II PRACHIN KAVYA HINDI SAHITYA KA ITIHAS 12

Surdaas, Tulsidass. Hindi sahitya kaa kaal vibhajan, aadikal, kaa Parichay

~~**UNIT III PRACHIN KAVYA HINDI SAHITYA KA ITIHAS 12**~~

Rahim, aadikaal kaa namkran, paristhitiyan, racha evam rachnaakar

UNIT IV BHAKTI KAAL, REETHI KAA 12

Bhakti kal kaa vibhajan paristhitiyan- racha evam rachnaakar - Reethikal ke prakaar, rachna evam rachnakar

UNIT V PRACHIN KAVYA EVAM RACHNAKARON KAA PARICHAY 12

Bihari - Chandbardayee, Ameerkhusaro, Kabir, Surdas, Tulsidas Jaayasi, Kesahv das Bhushan,

Total No Of Hours: 60 Hrs

TEXT BOOK

1.Prachin evam Aadhunik Kavya Sankalan ed by Dr.N.Lavanya, Mayura Publishers, edition 2011

REFERENCE BOOK

1. Hindi Sahitya kaa Itihas, By Dr.Nagendra, Raj kamal Prakashan, 1997

18LFR003 FRENCH III 5 0 0 5

COURSE OBJECTIVE:

- To strengthen the Grammar and Composition in French language.
- To train the students to enhance his skill in French language for communication

UNIT I LA FAMILLE VINCENT 12

Leçon 16 - La famille Vincent (Page 44) - Grammaire : Passé composé'

Leçon 29 - Vers l'hôtel (page 80) Grammaire : Impératif, A mettre les phrases du singulier au pluriel

UNIT II L'EPICERIE, LES LEGUMES ET LES FRUITS 12

Leçon 40 - L'épicerie, les légumes et les fruits (page 112) – Grammaire : Présent de l'indicatif

Leçon 44 - La poste (page 124) – Grammaire : A mettre les phrases à l'imparfait

UNIT III LE CAFE ET TABAC 12

Leçon 51 - Le café et tabac (page 142) - Grammaire : A changer les phrases en Interrogatif Leçon 58

- La Chasse et la pêche (160) - Grammaire : Le plus que parfait

UNIT IV UN MARIAGE A LA 12

Leçon 61 Un mariage à la campagne (page 170) - Grammaire – A changer au participe présent

UNIT V COMPOSITION 12

: A écrire une lettre à un ami l'invitant à une celebration differente ex : mariage –

A faire un essaie sur un sujet générale - A lire le passage et répondre aux questions

Total No Of Hours : 60 Hrs

TEXT BOOKS

1. Les leçons ont été choisi et tiré de I & II degré de G .MAUGER « Cours de
2. Langue et de Civilisation Française » The Millenium, Publication Hachette, Edition 2002

REFERENCE BOOKS

1. Dondo Mathurin, “ Modern French Course”, Oxford University Press, New Delhi., Edition 1997
2. Paul Chinnapan, « Saraswati Grammaire Française facile », Saraswathi Hous Pvt. Ltd., New Delhi., Edition 2010
3. Larouse, “Larouse French Grammar”, Goyal Publication, New Delhi., Edition ,1995

18LEN003ENGLISH PAPER – III 5 0 0 5

COURSE OBJECTIVE:

- To train students in the use of English language in varied literary and non-literary context
- To teach them soft skills and strengthen their foundation in grammar and composition
- To evaluate their comprehension skills.

Credit Hours

UNIT - I- Prose 12

1. Two Gentleman of Verona - A.J. Cronin
2. Judas Iscariot - Bonnie Chamberlain
3. Dangers of Drug Abuse - J. V. S. Henbane

UNIT II - Short Stories 12

1. Journey by Night - Norah Burke
2. The 2000-Mile Turtle - Henry Edward Fox
3. Fools Paradise - Isaac Bashevis Singer

UNIT III – Fiction

12

R. L. Stevenson
company Ltd.

- Dr. Jekyll & Mr. Hyde (Retold by Kennet) – S. Chand &

UNIT IV - Functional English

12

1. Paragraph Writing
2. Comprehension
1. Letter Writing
2. Report writing
 - a) News Paper Report
 - b) Reports for Government Official Attention
 - c) Definition

UNIT V – Conversation In Situations & Conversation Practice

12

1. Conversation in Situations

- a) At the Airport
- b) In a Bank
- c) On the Beach
- d) At the Customs
- e) At the Doctors’
- f) In a Flight
- g) In a Hotel
- h) In a Restaurant
- i) In a Shop
- j) Tea Time
- k) On the Telephone
- l) In a Travel Agency
- m) On a Country Walk
- n) At the theatre
- o) In a Street

2. Conversation Practice

- a) Daily Activities
- b) Asking Directions
- c) Travel plans
- d) Living in an Apartment
- e) Money Problems
- f) Weather Conditions
- g) Dinner Conversations
- h) Common Health Problems
- i) Tag Questions
- j) Office Conversations

3. Expansion of Hints

Total: 60 Hours

பகுதி 1 பாரம்பரியம், பாரம்பரியம்

12 மார்ச் 2020

பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம்
- பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம்
- பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம்
பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம்.

பகுதி 2 பாரம்பரியம்

12 மார்ச் 2020

பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம்.

பகுதி 3 பாரம்பரியம்

12 மார்ச் 2020

பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம், பாரம்பரியம் பாரம்பரியம் பாரம்பரியம் பாரம்பரியம்.

பகுதி 4 பாரம்பரியம்

12 மார்ச் 2020

பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம்
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பகுதி 5 பாரம்பரியம்

12 மார்ச் 2020

பாரம்பரியம் - பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம் - பாரம்பரியம் பாரம்பரியம்.

பாரம்பரியம்: 60 மார்ச் 2020

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Illustrate the life of ancient tamil culture

CO2: Identify the arts used by tamil people

CO3: Apply the ancient tamil people religious activities.

CO4: Interview the past political issues of people.

CO5: Develop the technological impact in a language

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18LHN004

HINDI IV

5 0 0 5

COURSE OBJECTIVE:

To enable the students to acquire knowledge in journalism so as to enhance his skill in effective communication pertaining to Hindi language.

UNIT I AADHUNIK KAVITHA AUR RACHNAAKAR 12

Mythili Sharan Gupt - Apna Sansar, Aadhunik Rachnakar Hazaari prasad Diwedi, Mahaveer Prasad Diwedi,

UNIT II AADHUNIK KAVITHA AUR RACHNAAKAR 12

Jayashankar Prasad Kamayani - Chinta, Aadhunik Hindi Rachanakar Premchand, Jainendra

UNIT III AADHUNIK KAVITHA AUR PATRAKARITHA

12Mahadeviverma, Murjaya PhoolBhavani Prasad Mishra Patrakarita – paribhasha,, arth, prakar, swaroop

UNIT IV AADHUNIK KAVITHA , PATRAKARITHA AUR RACHNAKAR 12

Mukthibodh Tum Logoan se door,Shamsher Bhadur Singh – Bharat kee aarathi,Vigyapan- sampadan kala,-Nirala, -Pant- Mohan Rakesh

UNIT V AADHUNIK KAVITHA , PATRAKARITHA AUR RACHNAKAR 12

Prabhakar Machve Nimna Mdhya varg, **Patrakaritha-** samachar sankalan - Peeth patrakarita, Rachnakaar - Fanishwaranath renu -Mannu bhandari,Bhagawaticharan Verma, Yashpal

Total No of Hours: 60 Hrs

TEXT BOOK

1. Prachin evam Aadhunik Kavya Sankalan ed by Dr.N.Lavanya, Mayura Publishers,
edition 2011

REFERENCE BOOK

1...Patrakaritha Ek Paricahy by Dr.Madhu Dhawan, Bodh Prakashan, edition 1997

18LFR004

FRENCH IV

5 0 0 5

COURSE OBJECTIVE:

- To enable the students to strengthen their knowledge of grammar/composition
- To make the students to develop their skills of communication in French language

UNIT I LEÇON 20

12

Une grande Nouvelle (page 56) – Grammaire : A mettre les phrases au Future Leçon 46. - Le métro ; l'autobus (page 130) - Grammaire : A former ou à changer l'adjectif masculin ou féminin à l'adverbe - A trouver les noms qui corres- -pondent aux verbes

UNIT II LEÇON 48,63

12

A la Préfecture de police (page 132) - Grammaire : Les Pronoms relatifs - Les sports (page 174) Grammaire : Le conditionnel présent

UNIT III LEÇON 56 ,57

12

A Biarritz, la plage (page 156) - Grammaire : Le future antérieure - Dans les Pyrénées (page 158) - Grammaire : Le future antérieure suite)

UNIT IV LEÇONS 65

12

A fin des vacances (page 178) Grammaire : A changer les phrases du pluriel - au singulier - Le présent du subjonctif

UNIT V COMPOSITION 12

A écrire une lettre de regret / refus à un ami concernant l'invitation d'une célébration reçue- A écrire un essai sur un sujet générale - A lire le passage et répondre aux questions

Total No Of Hours : 60 Hrs

TEXT BOOK

1. Les leçons ont été choisis et tirés de I & II degré de G .MAUGER « Cours de Langue et de Civilisation Française » The Millenium, Publication Hachette, Edition 2002

REFERENCE BOOKS

- 1.DONDO Mathurin, " Modern French Course", Oxford University Press, New Delhi., Edition 1997
- 2.Paul Chinnapan, « Saraswati Grammaire Française facile », Saraswathi House Pvt. Ltd., New Delhi., Edition 2010
- 3.Larousse, "Larousse French Grammar", Goyal Publication, New Delhi., Edition 1995

18LEN004ENGLISH PAPER – IV**5 0 0 5****COURSE OBJECTIVE:**

- To train students in the use of English language in varied literary and non-literary context
- To teach them soft skills and strength their foundation in grammar and composition
- To elevate their comprehension skills.

Credit Hours**UNIT I – Prose****12**

1. Walking Tours - R. L. Stevenson
2. All About a Dog - A. G. Gardinar
3. No Man is an Island - Minno Masani

UNIT II - Short Stories**12**

1. The Man Who Likes Dickens - Evelyn Waugh
2. Lamb to the Slaughter - Roald Dahl
3. Buck Hears the Call - Jack London

UNIT III – Drama**12**

1. Selected Scenes from Shakespeare’s Plays – Book I, Emerald Publishers
 - a) Funeral Oration (Julius Caesar)
 - b) Trial for a Pound of Flesh (The Merchant of Venice)
 - c) Patterns of Love (As You Like It)

UNIT IV**12**

1. General Essay Writing & Group Discussion
2. Persuasive Writing and Role Play

UNIT V**12**

1. Notice, Agenda, Minutes.

Total: 60 Hours**COURSE OUTCOME**

At the end of this course the students will be able to,

- CO 1** Illustrate the essential of presentation skills, thoughts, structure, voice modulation, audience analysis and body language
- CO 2** Utilize the psychological skills pertaining to time management, articulation, assertion and stress management
- CO 3** Utilize the psychological skills pertaining to time management, articulation, assertion and stress management
- CO 4** Appraise learners with varied skills needed for expose to interviews
- CO 5** Categorise the nature of questions asked usually in interviews

Books Prescribed:

1. Invitation to English Prose – A. E. Varadarajan & S. Jagadisan, Orient Black Swan, Chennai

**SKILL ENHANCEMENT
COURSE (SEC)**

18SSKU11

Soft Skill – I

2

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0

2

COURSE OBJECTIVE:

- To train the students to improve the vocabulary and reading comprehension.
- To train the students to participate in group discussion
- To elevate their comprehension skills and conversation.

1. Reading Comprehension and Vocabulary

Filling the blanks – Cloze Exercise – Vocabulary building – Reading and answering Questions.

2. Listening and Answering Questions.

Listening and writing – Listening and sequencing sentences – Filling in the blanks – Listening and answering questions.

3. Group Discussions

Why GD part of a selection process – Structure of a GD – strategies in GD – Team Work – Body Language

4. Conversation.

Face to face Conversation and Telephone conversation.

5. Self- Introduction and Role Play

Total No of Hours: 30 Hrs

COURSE OUTCOME

At the end of this course the students will be able to,

- CO 1** Prioritize power of understanding and aids assimilation of vocables. Vocabulary to charge communication with educated words
- CO 2** Develop comprehensive knowledge through listening leading to answering questions
- CO 3** Build observation power and infuse self-confidence through group discussions
- CO 4** Identify methodology for befitting constructional ability
- CO 5** Experiments with inward looking and visualization of the ‘otherness’ of situations

BOOKS RECOMMENDED

Barun K. Mitra. Personality Development and Soft Skills.Oxford University Press.New Delhi.2011.

S.P. Sharma. Personality Development. Pustaq Mahal. New Delhi. 2010.Meenakshi Raman and Sangeetha Sharma. Technical Communication.Oxford University Press. New Delhi. 2009.

18SSKU21

Soft Skill-II

2 0 0 2

COURSE OBJECTIVE :

- To train the students to improve their skills.
- To teach them soft skills and strength their foundation in time and stress management
- To elevate their interview skills

1. Presentation Skills

Elements of an effective presentation – structure of presentation – voice modulation
– Audience analysis – Body language

2. Soft Skills

Time Management – Articulateness – Assertiveness – Stress management

3. Resume / Report preparation / Letter Writing

Structuring the resume / Report – Business letters – E-Mail Communication

4. Interview Skills

Kinds of Interviews – Required by Skills – Corporate Culture – Mock Interviews

5. 30 Frequently asked questions

Total No of Hours : 30

COURSE OUTCOME

At the end of this course the students will be able to,

- CO 1** Illustrate the essential of presentation skills, thoughts, structure, voice modulation, audience analysis and body language
- CO 2** Utilize the psychological skills pertaining to time management, articulation, assertion and stress management
- CO 3** Construct methodology for preparation of resume, reports, business letters and email communication
- CO 4** Appraise learners with varied skills needed for exposure to interviews
- CO 5** Categorize the nature of questions asked usually in interviews

BOOKS RECOMMENDED

Barun K.Mitra. Personality Development and soft skills.Oxford University Press. New Delhi. 2011.

S P Sharma.Personality Development. Pustaq Mahal. New Delhi. 2010.

Meenakshi Raman and Sangeetha Sharma.Technical Communication.Oxford University Press. New Delhi. 2009.

PERSONALITY ENRICHMENT

2 0 0 2

COURSE OBJECTIVES

- To make students understand the concept and components of personality, thereby to apply the acquired knowledge to themselves and to March towards excellence in their respective academic careers.
- To enable students to keep themselves abreast of general knowledge and current information.

UNIT I INTRODUCTION 10

Definition of Personality - Determinants of Personality- biological, psychological and socio-cultural factors. - Misconceptions and clarifications - Need for personality development

UNIT II SELF-AWARENESS AND SELF MOTIVATION 10

Self analysis through SWOT and Johari window - Elements of motivation - Seven rules of motivation - Techniques and strategies for self motivation - Motivation checklist and Goal setting based on principle of SMART - Self motivation and life - Importance of self-esteem and enhancement of self-esteem.

UNIT III MEMORY AND STUDY SKILLS 10

Definition and importance of memory - Causes of forgetting - How to forget (thought stopping), how to remember (techniques for improving memory) - The technique of passing exams-management of examination fear.

Total No of Hours : 30

COURSE OUTCOME

At the end of the course students can,

CO1: Can able to understand the various factors of Personality.

CO2: Able to improve their self awareness.

CO3: Able to improve their self motivation.

CO4: Able to improve their presentation and learning skills.

CO5: Able to improve the memory skill

TEXT BOOKS

1. Mile, D.J (2004). Power of positive thinking. Delhi: Rohan Book Company.
2. Pravesh Kumar (2005). All about self- Motivation. New Delhi: Goodwill Publishing House.

REFERENCE BOOK

- 1.Dudley, G.A. (2004). Double you're learning power. Delhi: Konark Press. Thomas Publishing Group Ltd.

ETHICS AND VALUES

2 0 0 2

COURSE OBJECTIVE:

- To increase ethical sensitivity.
- To increase ethical knowledge.
- To improve ethical judgment.

UNIT-I INTRODUCTION 10

Why Value Education – Ethical Reflections – What is Ethics? Swami Vivekananda

UNIT: II APPROACH TO LIFE 10

Approach to Life - Happiness as Goal - Historical Perspective – Life in the Past Economic Awareness – Economic

UNIT: III KINDS OF VALUES 10

Kinds of Values S.Ignacimuthu S.J – Living Excellence Anthony Robbins – Concern for Influence of Science and Technology in Human’s Social Life Social Relevance of Science and Technology Features – Status of Women – Mass Media and Values.

Total No of Hours : 30

COURSE OUTCOME

At the end of the course students can,

CO1: Can able to understand the ethical value defined by swami Vivekananda.

CO2: Able to face the obstacles in life and to reach the goal.

CO3: Able to know the status of women in this society

CO4: Learn the influence of science & technology in Human Life.

CO5: Able to understand the economic drive.

TEXT BOOK

1. Touchstone: Synergy of Values – University of Madras.

REFERENCE BOOK

1.In harmony- Value Education at College Level- Dept. of Ethics and Religious Studies Loyolla College, Madras.

**ABILITY ENHANCEMENT
COMPULSORY COURSES (AECC)**

ENVIRONMENTAL STUDIES

2 0 0 4

COURSE OBJECTIVE:

- To train students to locate and comprehend relationships between the natural, social and cultural environment.
- To develop an understanding based on observation and illustration, drawn from lived experiences and physical, biological, social and cultural aspects of life, rather than abstractions.
- To create cognitive capacity and resourcefulness to make the students curious about social phenomena.

UNIT I INTRODUCTION

10

The multidisciplinary nature of Environment of studies – Definition - Scope and Importance - Need for Public Awareness.

UNIT II NATURAL RESOURCES

10

Natural resources and associated problem - Renewable and Non- Renewable resources:-Forest Resources-Mineral Resources-Food Resources - Energy Resources -Land Resources; Role of an individual in conservation of natural resources-Equitable use of resources of sustainable lifestyles.

UNIT III ECO SYSTEM

10

Concepts of an Ecosystem - Structure and Functions of an Ecosystem - Procedures, Consumers and Decomposers - Energy flow in the ecosystem - Food chains, Food webs and ecological pyramids - Introduction, types, Characteristics features - Structures and functions of the following ecosystem :Forest ecosystem, Grass land ecosystem, Desert ecosystem, Aquatic ecosystem.

Total No Of Hours : 30

COURSE OUTCOME

At the end of this course the students will be able to,

CO1: Understand core concepts and methods in environmental problem-solving.

CO2: Apply key concepts from economic, political, and social analysis.

CO3: Apply the ethical, cross-cultural, and historical context of environmental issues.

CO4: Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.

CO5: Develop roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.

TEXT BOOK

1. Dr. Shradha sinha, Dr.Manisha shukula, Dr. Ranjana Shukla

REFERENCE BOOK

1.P.Venugopala Rao,"Textbook Of Environmental Engineering", Eastern Economy Edition,2006.