

MANNAR THIRUMALAI NAICKER COLLEGE

(Autonomous)

B.Voc. Programme

Software Development

II yr Curriculum

PROGRAMME SPECIFIC OUTCOMES

- PSO1: To serve as Assistant Software Publisher, System Manager in software development and the role of modeling.**
- PSO2: To analyze, identify and define the technology required to build and implement a web site.**
- PSO3: To work as Programmer, Entry level software developer, web Designer in software industry.**
- PSO4: To apply the skills to edit professionally, create digital content, design print and web-based products, develop and manage writing and editing projects.**

MannarThirumalaiNaickerCollege(Autonomous)

Madurai- 4

- I. Programme** : **B.Voc. inSoftware development**
- II. Sector Skill council** : IT-ITeS Sector Skill Council
- III. Selected Job roles** : Web Developer, Java Programmer
- IV. Eligibility Criteria** :12th Pass with Mathematics, No age limit, Any gender
- V. Industrial Partners List** : (i) Vega Tech Solutions Private Limited,
178,I floor ,Vakkil New Street, Madurai-625001.
- VI. Teaching Methods** : Lecture with Charts/ models/ chalkboard
Role Play
Demonstration cum Lecture
Group Discussion
Power Point presentation
You tube Video Presentation
- VII. Methods of Evaluation**
- Theory : Objective Test, Class Test, Oral Presentation, Quiz, Assignment
- Practical : Assessment, Care Note, Case Presentation, Survey Report, Training Industry Report, Assignment for Lab Internals
- Internship : Evaluation form, Case Study/ Project work, Viva-Voce

VIII. Examination Pattern :

Internal Exam : Internal Test - 20 Marks

Practicals : Assignment / Seminar /
Oral Presentation / Practical Test /
Record - 20 Marks

Total 40 Marks

Summative Exam : Multiples Choice Question 15x1=15marks
Short Answers 3x5 =15 marks
Essay 3x10=30 marks

Total 60 marks

INTERNSHIP ASSESSMENT

(Req. Max: Formative:60 marks, Summative: 40 marks)

Formative Evaluation (Industrial Partner)

- Evaluation Form (60 marks)

Application of Knowledge	Care for Tools & Equipment	Economic use of Material	Safety Consciousness	Speed	Accuracy	Quality of Workmanship	Amount of Work	Number of Attempts	Attitude

Rating Scale: Excellent- 6; Very Good- 5; Good-4; Fair- 3; Satisfactory -2; Poor-1.

Summative Evaluation (Course Teacher)

- Case Study/ Project (20 marks)
- Viva (20 marks)

**B.VOC. IN SOFTWARE DEVELOPMENT
IIYEAR COURSE PROFILE**

S. No	Sem	Category	Course Code	Course Title	No. of Hours/Week	No. of Credits
1	III	Part – I	18VSWG31	Life coping skills	3	3
2		General Education	18VENG31	General Business Communication	3	3
3			18VEVG31	Environmental Studies	2	2
4			18VMTG31	Statistics and Numerical Methods	4	4
			Total			12
5		Part – II Skill component	18VSDS31	Computer Organization	6	6
6			18VSDS32	Multimedia Technology	6	6
7			18VSDS33	Programming in Java Lab	6	6
		Total			18	18
1		IV	Part – I	18VSWG41	Employability Skills	3
2	General Education		18VENG41	Written Business Communication	3	3
3			18VVLG41	Value Education	2	2
4			18VSDG41	Enterprise Resource Planning	4	4
			Total			12
5	Part – II Skill component		18VSDS41	Computer Networks	6	6
6			18VSDS42	Programming in PHP Lab	6	6
7			18VSDS43	Internship	6	6
	Total			18	18	
	Grand Total			60	60	

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class : B.Voc. Programme

Semester : III

Subject Code :18VSWG31

Part I : GE

Hours : 03

Credits : 03

LIFE COPING SKILLS

COURSE OUTCOMES:

On successful completion of the course the student will be able to

CO1: Demonstrate skills to handle fear and anger

CO2: Explain the management of conflict

CO3: Understand the symptoms depression and its management

UNIT – I: COPING WITH HESITATION AND FEAR

Coping with

Hesitation: Causes, Symptoms, Managing Hesitation – Fear: Meaning, Kinds of fear, Understanding and managing fear.

UNIT – II: COPING WITH FAILURE AND CRITICISM

Coping with Failure: Positive attitude towards failure – Winners Vs Losers – Rational approach to failure. Coping with Criticism: Definition – Beliefs about Criticism – Types – Self criticism– Coping mechanisms for criticism.

UNIT – III: COPING WITH CONFLICT AND ANGER

Coping with Conflict : Meaning, Types of conflicts – Constructive nature of conflicts – Strategies for managing conflicts – Coping with Anger : Myths and facts, Importance of anger management, Understanding and managing anger

UNIT – IV: COPING WITH ANXIETY AND DEPRESSION

Anxiety: Causes, Symptoms and Managing anxiety – Depression: Causes, Symptoms, Managing depression.

UNIT– V: COPING WITH TECHNOLOGY

Meaning – Usage of technology – Social Media handling – Abuse of technology and coping mechanism

TEXT BOOK:

1. Alphonse Xavier S.J. *We Shall Overcome – A Text Book on Life Coping Skills*. Chennai: MCRDCE Publications, March, 2004. Print.

REFERENCE BOOK(S)

1. Bender Peter Urs, Robert A. Tracz. *Secrets of Face to Face Communication*. New Delhi: Macmillan India Limited, 2005. Print.
2. Shiv Khera. *You Can Win*. New Delhi: Macmillan India Ltd, 1998. Print.
3. Shiv Khera. *Living with Honour*. Macmillan India Ltd, New Delhi: 2003. Print.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class : B.Voc Programmes
Semester : III
Subject code : 18VENG31

Part I : GE
Hours : 03
Credits : 03

GENERAL BUSINESS COMMUNICATION

COURSE OUTCOME :

On successful completion of this course, the students will be able to

CO1: Identify the importance of communication in business

CO2: Acquire communication skills in business.

CO3: Imitate formal enquiry and elicit formal response

UNIT I : BUSINESS COMMUNICATION

Meaning and Definition of Business Communication- Objectives- Principles- Benefits-
Types of Communication- Barriers to Communication

UNIT II : DIGITAL COMMUNICATION

Fax - Email - Video Conferencing

UNIT III : APPLICATION FOR A SITUATION

Object of an Application- Application with the Principles of Sales Letter- Form and
Content of the Letter of Application- Testimonials- References- Specimen Applications

UNIT IV : ENQUIRIES AND REPLIES

Trade Enquiries- Classification of Enquiry Letters- Opening and Closing Sentences-
Replies to Enquiry- Specimen Letters of Enquiry and Reply

UNIT V : OFFERS AND QUOTATIONS

Meaning of an Offer- Meaning of Quotation- Distinction between Offer and Quotation-
Kinds of Offer- Specimen Letters of Offers and Quotations

REFERENCE

Material will be supplied by the Department of English

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class : B.Voc. Programme

Part I : GE

Semester : III

Hours : 02

Subject Code :18VEVG31

Credits : 02

ENVIRONMENTAL STUDIES

COURSE OUTCOME:

On successful completion of the course the student will be able to

CO1: Impart knowledge on the importance of environmental education and ecosystem.

CO2: Acquire knowledge about environmental pollution- sources, effects and control measures of environmental pollution

CO3: Understand the various energy sources, exploitation and need of alternate energy resources. To acquire knowledge with respect to biodiversity, its threats and its conservation and appreciate the concept of interdependence

CO4: Make the student to understand the various pollution problems control mechanisms

UNIT – I: Environment and Earth

Environment :Meaning – Definition - Components of Environment – Types of Environment. Interference of man with the Environment.Need for Environmental Education.Earth – Formation and Evolution of Earth– Structure of Earth and its components – Atmosphere, Lithosphere, Hydrosphere and Biosphere.

Natural Resources:

Renewable Resources and Non-Renewable Resources.Natural Resources and Associated Problems.Use and Exploitation of Forest, Water, Mineral, Food, Land and Energy Resources.

UNIT – II: Ecology and Ecosystems:

Ecology and Ecosystems: Ecology – Meaning - Definition – Scope – Objectives – Subdivisions of Ecology.

Ecosystem: Concept - Structure - Functions – Energy Flow – Food Chain and Food Web – Examples of Ecosystems (Forest, Grassland, Desert, Aquatic).

UNIT – III: Biodiversity

Biodiversity: Definition – Biodiversity at Global, National and Local Level. Values of Biodiversity – Threats to Biodiversity – Conservation of Biodiversity.

Biodiversity of India:

Biogeographically Distribution – Hotspots of Indian Biodiversity – National Biodiversity Conservation Board and Its functions. Endangered and Endemic Species of India

UNIT – IV: Pollution Issues

Pollution Issues :Definition – Causes – Effects and Control Measures of Air, Water, Soil, Marine, Noise, Thermal and Nuclear Pollutions.

Global Issues:

Global Warming and Ozone Layer Depletion. Future plans of Global Environmental Protection Organisations.

UNIT– V: Sustainable Development

Sustainable Development:Key aspects of Sustainable Development – Strategies for Sustainable Development - Agriculture – Organic farming – Irrigation – Water Harvesting – Water Recycling – Cyber Waste and Management.

Disaster Management:

Meaning – Types of Disasters - Flood and Drought – Earth quake and Tsunami – Landslides and Avalanches – Cyclones and Hurricanes – Preventions and Consequences. Management of Disasters .

TEXT BOOK:

1. *Study Material for Environmental Studies*, MannarThirumalaiNaicker College, Pasumalai, Madurai – 625 004.

REFERENCE BOOK(S)

1. Study Material for *Environmental Studies*, Publications Division, Madurai Kamaraj University, Madurai – 625 021.
2. Sharma.R.C. and GurbirSangha,*Environmental Studies*,Kalyani Publishers, 1, Mahalakshmi Street, T.Nagar, Chennai – 600 017.
3. Radha,*Environmental Studies for Undergraduate Courses of all Branches of Higher Education, (Based on UGC Syllabus)*,Prasanna Publishers & Distributors, Old No. 20, Krishnappa Street, (Near SanthoshMahal), Chepak, Chennai – 600 005.
4. .TripathyS.N and SunakarPanda,*Fundamentals of Environmental Studies*,Vrinda Publications (P) Ltd. B-5, Ashish Complex, (opp. To Ahicon Public School), MayurVihar, Phase-1, Delhi– 110 091.
5. Rajah.G.,*Environmental Studies for All UG Courses*, (Based on UGC Syllabus), Margham Publications, 24, Rameswaram Road, T.Nagar, Chennai – 600 017.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class	:B.Voc .Programme	Part I	: GE
Semester	: III	Hours	: 04
Subject code	: 18VMTG31	Credits	: 04

STATISTICS AND NUMERICAL METHODS

COURSE OUTCOMES:

On successful completion of this course, the students will be able to

CO1: Develop skills in basic statistical concepts.

CO2: Understand the concepts of deviation.

CO3: Learn about various techniques on correlation and regression

CO4: Understand the concepts to determine approximate solutions to the systems of linear equations.

CO5: Understand the concepts of Solving Simultaneous equations.

UNIT I: Measures of Central Tendency

Arithmetic Mean – Median – Mode – Geometric Mean

UNIT II: Measures of Dispersion

Quartile deviation – Standard deviation.

UNIT III : Correlation and Regression

Correlation -Rank correlation coefficient – Regression.

UNIT IV : Algebraic and Transcendental Equations

Iteration method – Bisection method – Regula falsi method – Newton Raphson method.

UNIT V: Simultaneous Equations

Gauss Elimination Method – Gauss Jordan Elimination Method – Finding Inverse of a Matrix - Gauss Jacobi Method.

TEXT BOOKS:

1. Arumugam.S.& Isaac,*Statistics*, New Gamma Publications, July 2009.

Unit I : Chapters 2 – Section 2.1 – 2.4

Unit II : Chapters 3 – Section 3.1

Unit III : Chapters 6– Section 6.1, 6.2, 6.3

2. Arumugam and S., A. Thanga Pandi Isaac, A. Soma Sundaram,
Numerical Methods, Scitech Publication, Second Edition, Reprint December 2013.

Unit IV : Chapters 3– Section 3.1, 3.2, 3.3, 3.4

Unit V : Chapters 4 – Section 4.1, 4.3, 4.4, 4.5

REFERENCE BOOKS:

1. Gupta.S.C., V.K. Kapoor, *Elements of Mathematical Statistics*, Sultan Chand & Sons Publications, New Delhi, 2001.

2. Veerarajan.T., and T. Ramachandran, *Numerical Methods*, Tata McGraw Hill, Second Edition, New Delhi, 2006.

3. Sastry.S.S., *Introduction Method of Numerical Analysis*, Prentice Hall India Private Limited, Fourth Edition, New Delhi, 2008.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
Madurai – 04

Class	:B.Voc (Software Development)	Part II	:Skill
Semester	: III	Hours	: 06
Subject code	:18VSDS31	Credits	: 06

COMPUTER ORGANIZATION

COURSE OUTCOMES

On successful completion of this course, the students will be able to

CO1:Identify various Number systems and Logic gates.

CO2: Expose the students with different ways of communicating with I/O devices and standard I/O interfaces.

CO3: Understand the Basic Structure and Operation of Digital Computer.

CO4: Familiarize the students with hierarchical memory system including cache memories and virtual memory.

UNIT I:Digital Logic Circuitand Data representation

Digital Computers - Logic Gates-Boolean Algebra -Data representation: Data Types - Number Systems - Octal and HexaDecimal Representation - Decimal Representation - Alphanumeric Representation – Other Binary Codes.

UNIT II:Basic Computer Organization and Design

Basic Computer Organization and Design: Instruction Codes - Computer Register - Computer Instructions - Timing and Control - Instruction Cycle- Memory Reference Instruction- Input-Output and Interrupt.

UNIT III :Central Processing Unit:

Central Processing Unit:Introduction - General Register Organization - Stack Organization - Instruction Formats - Addressing Modes - Data Transfer and Manipulation - Program Control.

UNIT IV :Input Output Organization

Input Output Organization: Peripheral Devices - Input Output Interface - Asynchronous Data Transfer - Modes of Data Transfer -Priority Interrupt - Direct Memory Access.

UNIT V: Memory Organization

Memory Organization: Memory Hierarchy - Main Memory - Auxiliary Memory - Associative Memory - Cache Memory - Virtual Memory - Memory Management Hardware.

TEXT BOOKS:

1. ManoMorris.M.,*Computer System Architecture*, Pearson Education, Third edition, New Delhi, 2007.

Unit I: Chapter 1 – Section:1.1 to 1.3, Chapter 3 – Section:3.1, 3.5

Unit II: Chapter 5 – Section:5.1 to 5.7

Unit III: Chapter 8– Section:8.1 to 8.7

Unit IV: Chapter 11– Section:11.1 to 11.6

Unit V: Chapter 12(Full)

REFERENCE BOOKS:

1.RamanRaja.V., Radhakrishnan.T, *Computer Organization and Architecture*, PHI, New Delhi,2011.

2.Hamacher Carl,VranesicZvonko, SafwatZaky,*Computer Organization*,TataMcGrawHill, Fifth Edition, New Delhi, 2011.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
Madurai – 04

Class	:B.Voc (Software Development)	Part II	:Skill
Semester	: III	Hours	: 06
Subject code	:18VSDS32	Credits	: 06

MULTIMEDIA TECHNOLOGY & APPLICATIONS

COURSE OUTCOMES:

On successful completion of this course, the students will be able to

CO1: Understand the basics of multimedia and its components.

CO2: Identify the basic hardware and software requirements for multimedia development and playback.

CO3: Develop their animated video using multimedia.

UNIT -I:History of Multimedia

History of Multimedia: Its market - Content and Copyright - Resources for Multimedia Developers - Types of Products- Evaluation - Hardware Architecture - OS and Software - Multimedia Architecture - Software Library - Drivers.

UNIT -II:Text and Graphics

Text and Graphics: Elements of Text - Text Data Files - Using Text in Multimedia Application - Hypertext - Elements of Graphics - Images and Color - Graphics Files and Application Formats - Creating Images for Multimedia use - Using Graphics in Application.

UNIT-III:Digital Audio and Video

Digital Audio and Video : Characteristics of Sound and Digital Audio - Digital Audio Systems - MIDI - Audio file formats - Using Audio in Multimedia Applications - Audio for content - Background as video - Characteristics of Digital Video -Digital Video Data Sizing - Video Capture and Playback Systems -Computer Animation.

UNIT -IV:Product Design and Authoring Tools

Product Design and Authoring Tools: Building Blocks - classes of products - Content Organizational Strategies -Story boarding - Multimedia Tool Selection - Tool Features- Categories of Authoring Tools – Selecting the right authoring paradigm.

UNIT -V:Multimedia and Internet

Multimedia and Internet: Internet-HTML and Web Authoring - Multimedia Considerations for Internet— Design Considerations for Web pages.

LIST OF PRACTICAL:

Flash Lab Programs:

1. Moving a Ball using flash.
2. Bouncing a Ball using flash.
3. Animating a Star using flash.
4. Frame by Frame Animation using flash.
5. Text masking using flash.
6. Photo masking using flash.
7. Creating Simple Buttons in Flash.
8. Creating Symbols in Flash.
9. Working with photos, titles and graphics using Adobe Premier.
10. Creating Sequence using Adobe Premier.

TEXT BOOK:

1. HillmanDavid, *Multimedia Technology and Applications*, Galgotia Publications Pvt. Ltd, Delhi, 1998.

Unit I: Chapter 1 – Section:1.1 to 1.3, Chapter 3 – Section:3.1, 3.5

Unit II: Chapter 5 – Section:5.1 to 5.7

Unit III: Chapter 8– Section:8.1 to 8.7

Unit IV: Chapter 11– Section:11.1 to 11.6

Unit V: Chapter 12(Full)

REFERENCE BOOKS :

1. VaughanTay, *Multimedia making it work*, TataMcGrawHill, Publishing Company Limited, New Delhi, 1997.

2. ParekhRanjan, *Principles of Multimedia*, Tata McGraw Hill Publishing Company Limited, New Delhi, 2008.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
Madurai – 04

Class :B.Voc (Software Development)
Semester : III
Subject code :18VSDS33

Part II:Skill
Hours: 06
Credits: 06

PROGRAMMING IN JAVA LAB

COURSE OUTCOMES

On successful completion of this course, the students will be able to

CO1: Understand the concept of object oriented programming.

CO2: Understand the concept of multithreading, package and exception.

CO3 :Acquire programming knowledge in Java

UNIT I: Java Evolution

Java Evolution: Java Features – How Java Differs from C and C++ - Java and Internet. Java and World Wide Web - Web browsers – Hardware and Software Requirements – Java Support Systems – Java Environment. Overview of Java Language: Simple Java Program – Java Program Structure – Java Tokens – Java Statements – Implementing a Java Program – Java Virtual Machine – Command Line Arguments.

UNIT II: Decision Making and Branching, Looping

Decision Making with If Statement – Simple if Statement – The If-Else Statement – Nesting of If-Else Statements – The Else If Ladder – The Switch Statement – The ?: Operator. The While Statement – The Do Statement – For Statement – Jumps in Loops.

UNIT III: Classes, Objects and Methods

Defining a Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing Class Members – Constructors- Method Overloading – Static Members – Nesting of Methods – Inheritance: Extending a Class– Overriding Methods. Arrays, Strings and Vectors: One Dimensional Array – Creating an Array – Two Dimensional Arrays – Strings – Vectors.

UNIT IV: Packages & Multithreaded Programming

Putting classes together - Creating Packages – Accessing a Package – Using a Package – Adding a Class to a Package Creating Threads – Extending the Thread Class – Stopping and Blocking a Thread – Life Cycle of a Thread – Using Thread Methods – Thread Exceptions – Thread Priority.

UNIT V: Managing Errors and Exceptions & Applet Programming

Types of Errors – Exceptions – Syntax of Exception Handling Code – Multiple Catch Statements - Using Finally Statement – Throwing Our Own Exceptions – Using Exceptions for Debugging. How Applet Differ from Applications – Preparing to Write Applet – Building Applet Code – Applet Life Cycle – Creating an Executable Applet – Designing a Web Page – Applet Tag – Adding Applet to HTML File – Running The Applet.

LIST OF PRACTICALS

PROGRAMMING IN JAVA LAB

1. Java program to find ASCII value of a character.
2. Java program to computer quotient and remainder.
3. Java program to calculate the sum of natural numbers.
4. Java program to find GCD and LCM of two numbers.
5. Java program to check whether the number is palindrome or not.
6. Java program to display Armstrong numbers between intervals using functions.
7. Java program to convert binary number into decimal number.
8. Java program to multiply two matrixes using multi-dimensional array.
9. Java program to perform the string operations using string handling methods.
10. Java program to display current date and time.
11. Java program to create thread.
12. Java program to handle the error using Exception handling methods.
13. Java program for all the Key events.
14. Java program to Display shapes using applet.
15. Applet program to design a web page.

TEXT BOOKS:

1. Balagurusamy. E, *Programming With Java*, Tata McGraw Hill Private Limited, Fourth Edition, New Delhi, 2013.

UNITS	CHAPTERS
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Unit I:	Chapters - 2 - Section 2.2 to 2.9. Chapters - 3 - Section 3.2, 3.5 to 3.7, 3.9 to 3.11.
Unit II:	Chapters - 6 - Section 6.2 - 6.8. Chapters - 7 - Section 7.2 - 7.5.
Unit III:	Chapters - 8 - Section 8.2 -8.12. Chapters – 9 - Section 9.2 - 9.6.
Unit IV:	Chapters - 11 - Section 11.5 - 11.8. Chapters - 12 - Section 12.2 – 12.8.
Unit V:	Chapters - 13 - Section 13.2 - 13.8 Chapters - 14 - Section 14.2 to 14.10.

REFERENCE BOOKS:

1. RadhaKrishnan.P, *Object Oriented Programming With Java*, University Press India Private Limited, 3rd Edition, Hyderabad, 2008.
2. Debasish Jana, *Java Object Oriented Programming Paradigm*, Prentice Hall of India Private Limited, 3rd Edition, New Delhi, 2008.
3. Herbert Schildt, *The Complete Reference Java*, Tata McGraw Hill, 7th Edition, New Delhi, 2007.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class : B.Voc. Programme

Semester : IV

Subject Code :18VSWG41

Part I : GE

Hours : 03

Credits : 03

EMPLOYABILITY SKILLS

COURSE OUTCOMES:

On successful completion of the course the student will be able to

- Acquire skills in communication
- Discuss the importance of team work at workplace
- Demonstrate skills for effective interpersonal relations and emotional intelligence competencies

UNIT – I: COMMUNICATION

Communication: Definition – Process of communication – Type of communication – Importance of communication – Barriers of communication – Hierarchy order in communication.

UNIT – II: MOTIVATION AND SELF ACTUALISATION

Motivation :Definition – Maslow hierarchy theory – Need of motivation – Types of motivation – Push and pull motives – Demotivating factors .

UNIT – III: PROBLEM SOLVING AND DECISION MAKING

Problem Solving: Meaning, Problem Solving as a Skill – Steps and Techniques – Decision Making – Decision making Process – Individual versus Group Decision Making, Decision Making Methods.

UNIT IV :TEAM WORK

Meaning – Duties and responsibilities – Team learning – Concept of team work – Training to improve team work – Drawbacks and benefits.

UNIT – V: WORK PLACE ETIQUETTE

Work Place Etiquette – Making Positive Impressions –Office Etiquette – Presentation Skills – Verbal – Body Language – Dress Code

TEXT BOOK:

1. Alphonse Xavier S.J. *We Shall Overcome – A Text Book on Life Coping Skills*. Chennai: MCRDCE Publications, March, 2004. Print.

REFERENCE BOOK(S)

1. Bender Peter Urs, Robert A. Tracz, *Secrets of Face to Face Communication*. New Delhi: Macmillan India Limited, 2005. Print.
2. Goleman Daniel, *Working with Emotional Intelligence*. Bantam Publishers, 1998. Print.
3. Shiv Khera, *You Can Win*. New Delhi: Macmillan India Ltd, 1998. Print.
4. Shiv Khera, *Living with Honour*. New Delhi: Macmillan India Ltd, 2003. Print.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
Madurai – 04

Class	: B.Voc Programmes	Part I	: GE
Semester	: IV	Hours	: 03
Subject Code	: 18VENG41	Credits	: 03

WRITTEN BUSINESS COMMUNICATION

COURSE OUTCOMES

On successful completion of this course, the students will be able to

CO1: Experiment orders and their executions in business

CO2: Construct fair complaints

CO3: Draw variety of letters used in business

UNIT I : ORDERS AND EXECUTION

Contents of an Order Letter- Special Order Forms- Execution of an Order- Delay in the Execution of an Order- Inability to Execute an Order- Cancellation of an Order- Specimen Order Letters

UNIT II : CLAIMS, COMPLAINTS AND ADJUSTMENTS

Complaints- Attitude to Complaints- Causes for Complaints- Elements of an Effective Complaint Letter- Replies to Complaint Letter- Classification of Adjustment Letters- Specimen Letters of Complaint

UNIT III : COLLECTION LETTERS

Principles for Collection- Drafting Collection Letters- Stages- Specimen Collection Letters

UNIT IV : CIRCULAR LETTERS

Objectives- Situations for Writing a Circular Letter- Specimen Circular Letters

UNIT V : SALES LETTERS

Purposes- Advantages- Structure- Do's and Don'ts- Follow-up Letters- Specimen Sales Letters

REFERENCE

Material will be supplied by the Department of English

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
Madurai – 04

Class	: B.Voc. Programme	Part I	: GE
Semester	: IV	Hours	: 02
Subject Code	: 18VVVG41	Credits	: 02

VALUE EDUCATION

LEARNING OUTCOME:

On successful completion of the course the student will be able to

CO1: Inspire **students** to develop their personality and social **values** based on the principles of human **values**.

CO2: Develop a sense of Love, Peace and Brotherhood at the local, national and international level.

CO3: Enable the students to understand the social realities and to inculcate essential value system towards building a health society

CO4: Enable the students to understand the social realities and to inculcate an essential value system towards building a health society

UNIT – I: Values and The Individual

Values – Meaning – Definition – Importance – Classification of Values, Value Education – Meaning – Need for Value Education. Values and the Individual – Self-Discipline – Meaning – Tips to Improve Self-Discipline. Self-Confidence – Meaning - Tips to Improve Self-Confidence. Empathy – Meaning – Role of Empathy in motivating Values. Compassion – Role of Compassion in motivating Values. Forgiveness – Meaning - Role of Forgiveness in motivating Values. Honesty – Meaning – Role of Honesty in motivating Values. Courage – Meaning – Role of Courage in motivating Values.

UNIT – II: Religions and Communal Harmony

Religions – Meaning – Major Religions in India - Hinduism – Values in Hinduism. Christianity – Values in Christianity. Islam – Values in Islam. Buddhism – Values in Buddhism. Jainism – Values in Jainism. Sikhism – Values in Sikhism. Need for Religious Harmony in India. Caste System in India – Need for Communal Harmony in India. Social Justice – Meaning – Factors Responsible for Social Justice.

UNIT – III: Society and Social Issues

Society – Meaning – Values in Indian Society. Democracy – Meaning – Values in Indian Democracy. Secularism – Meaning – Values in Indian Secularism. Socialism – meaning – Values in Socialism. Social Issues – Alcoholism – Drugs – Poverty – Unemployment.

UNIT – IV: Human Rights and Marginalised People

Human Rights – Meaning – Problem of Violation of Human Rights in India – Authorities available under the Protection of Human Rights Act in India. Marginalised People like

Women, Children, Dalits, Minorities, Physically Challenged – Concept – Rights – Challenges. Transgender – Meaning – Issues.

UNIT– V:Social Institutions in Value Formation

Social Institutions – Meaning – Important Social Institutions. Family – Meaning – Role of Families in Value Formation. Role of Press & Mass Media in Value Formation – Role of Social Activists – Meaning Contribution to Society – Challenges.

TEXT BOOK:

1. Text Module for *Value Education*, MannarThirumalaiNaicker College, Pasumalai, Madurai – 625 004

REFERENCE BOOK(S)

1. Text Module for *Value Education*, Publications Division, Madurai Kamaraj University, Madurai – 625 021.
2. Raghunathan.N.S.,*Value Education*, Margham Publications, 24, Rameswaram Road, T.Ngar, Chennai – 600 017.
3. Saravanan.P, and P.Andichamy, *Value Education*, Merit India Publications, (Educational Publishers), 5, Pudumandapam, Madurai-625001.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class	:B.Voc (Software Development)	Part II	:GE
Semester	: IV	Hours	: 04
Subject code	: 18VSDG41	Credits	: 04

ENTERPRISE RESOURCE PLANNING

COURSE OUTCOMES:

On successful completion of this course, the students will be able to

CO1: Understand the business process of an enterprise

CO2: Grasp the activities of ERP project management cycle

CO3: Understand the emerging trends in ERP developments

UNIT 1:INTRODUCTION

Introduction to ERP– Basic ERP Concepts – Justifying ERP Investments – Risks of ERP – Benefits of ERP.

UNIT – II: ERP AND TECHNOLOGY

ERP Related Technologies – Business Intelligence – E-Commerce and E-Business – Business Process Reengineering – Product LifeCycle Management – Supply Chain Management – Customer Relationship Management.

UNIT- III: ERP IMPLEMENTATION

ERP Implementation Strategies – ERP Implementation Life Cycle – Requirement Definition – Implementation Methodologies – Training & Education – Data Migration – Post Implementation activities.

UNIT- IV: THE BUSINESS MODULES

Business Modules of an ERP Package – Finance – Manufacturing – Human Resources – Plant Maintenance – Materials Management – Quality Management – Marketing – Sales, Distribution and service.

UNIT- V:THE ERP MARKET

ERP Marketplace and marketplace Dynamics – SAP AG – Oracle Corporation – People Soft – JD Edwards – QAD Inc.

TEXT BOOK:

1. Alexis Leon, *ERP demystified*, second Edition Tata McGraw-Hill, New Delhi 2008.

Units	Chapters
Unit I	Chapters – 1-5
Unit II	Chapters – 7-10, 14-16
Unit III	Chapters – 20,21,23 31,32,34
Unit IV	Chapters – 40-48
Unit V	Chapters – 49-54

REFERENCE BOOKS:

1. Sinha P. Magal and Jeffery Word, *Essentials of Business Process and Information System*, Wiley India, Noida2012
2. Jagan Nathan Vaman, *ERP in Practice*, Tata McGraw-Hill, New Delhi, 2008
3. Alexis Leon, *Enterprise Resource Planning*, second edition, Tata McGraw-Hill, New Delhi, 2008.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class	:B.Voc (Software Development)	Part II	:Skill
Semester	: IV	Hours	: 06
Subject code	:18VSDS41	Credits	: 06

COMPUTER NETWORKS

COURSE OUTCOMES

On successful completion of this course, the students will be able to

CO1: Know about the goals of networking and the web.

CO2: Know about the Host-to-Host communication, packet switching and the logical connections.

CO3: Enrich knowledge in various networks legal

UNIT I: BASICS OF NETWORKS

Basics of Networks: Uses of Computer Networks – Network Hardware – Network Software – Reference Models –Types of Networks – LAN –WAN- MAN

UNIT II: THE PHYSICAL LAYER

The Physical Layer: Transmission Media – Guided Media – Unguided Media – Wireless Transmission – Radio Waves – Micro Waves – Infrared – The Telephone System.

UNIT III: THE DATA LINK LAYER

The Data Link Layer: Data Link Layer Design Issues – Error Detection and Correction - Elementary Data Link Protocols– The Medium Access Sub Layer: Multiple Access Protocols: ALOHA – Carrier Sense Multiple Access Protocols - Ethernet, Token Bus, Token Ring.

UNIT IV:THE NETWORK LAYER

The Network Layer:Network Layer Design Issues – Routing Algorithms – Shortest Path Routing- Flooding- Flow Based Routing- Distance Vector Routing-Broadcast – Routing
The Transport Layer: The Transport Service – Elements of Transport Protocols.

UNIT V:THE APPLICATION LAYER

The Application Layer: Functions of Application Layer – Design issues with
Application Layer - Network Security –Program Threats – System Threats – Electronic
mail – The World Wide Web.

LIST OF PRACTICALS

1. Study of different types of Network cables and Practically implement the cross-wired cable and straight through cable using clamping tool.
2. Study of Network Devices in Detail.
3. Study of network IP.
4. Connect the computers in Local Area Network.
5. Study of basic network command and Network configuration commands.
6. Configure a Network topology using packet tracer software.
7. Configure a Network topology using packet tracer software.
8. Configure a Network using Distance Vector Routing protocol.
9. Configure Network using Link State Vector Routing protocol.

TEXT BOOKS:

1. Andrew S. Tanenbaum, *Computer Networks*, PHI , United States, Third Edition, 1996.

Units

Chapters

Unit I

Chapters - 1.1 To 1.5

Unit II

Chapters - 2.2, 2.3, 2.4

Unit III

Chapters - 3.1, 3.2, 3.3, 4.2.1, 4.2.2, 4.3.1, 4.3.2, 4.3.3

Unit IV Chapters - 5.1, 5.2, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.9, 6.1, 6.2

Unit V Chapters - 7.1, 7.4, 7.6

REFERENCE BOOKS:

1. Behrouz A. Forouzan, *Data communication and Networking*, MGH Publisher, New York, II Edition, 2001.
2. Kenneth C.Mansfield Jr. and James L.Antonakes, *An Introduction to Computer Networking*, Prentice Hall of India Private Ltd, New Delhi, 2002.
3. Comer. D.E and Narayanan M S, *Computer Networks & Internets: With Internet Applications*, Pearson Education, IVEdition,New Jersey 2007.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
Madurai – 04

Class	:B.Voc (Software Development)	Part II	:Skill
Semester	: IV	Hours	: 06
Subject code	:18VSDS42	Credits	: 06

PROGRAMMING IN PHP LAB

COURSE OUTCOMES

On successful completion of this course, the students will be able to

CO1: Learn about creating dynamic web pages

CO2: Understand the concept of File handling and Managing sessions in PHP

CO3: Acquire the knowledge of maintaining the database in MySQL

UNIT: FUNDAMENTALS OF PHP

Introduction – My First PHP Program – Whitespace – Echo – Echo Quotes - Variables – Constants – Operators – Pre/Post – Increment & Pre/Post-Decrement.

UNIT II : LOOPS, STRINGS AND STATEMENTS

While Loop – For Loop – For Each Loop – Do While Loop – Strings – If and Switch Statement.

UNIT III: ARRAYS AND FUNCTIONS

Arrays: Creating an Array with Array identifier – Creating Array in Mix Environment – Counting Number of elements in Array – Calculating Array values – Checking Element Existence inside an array – Associative arrays. Functions: Returning Function – Function within function – Passing argument by value – Passing argument by Reference – Returning values from function – Variable Functions.

UNIT IV: DATABASES

Introduction – PHP MySQL Creating Database and Tables – Cookies, Sessions and Forms: Cookies – Sessions – Forms – Running the program.

UNIT V: MORE ON PHP

Date and Time – Files – Reading a File – Appending in a File – Deleting a File - Include function – Require function – PHP Database ODBC.

LIST OF PRACTICALS

PHP Programming Lab

1. Write a PHP Program to display message
2. Write a PHP Program to perform Arithmetic Operation
3. Write a PHP Program to perform String Operation
4. Write a PHP Program to validate Name, Email and Password and display error messages.
5. Write a PHP Program by passing a value
6. Write a PHP Program by passing a Reference
7. Write a PHP Program to insert a record in MySQL Database.
8. Write a PHP Program to view the record in database
9. Write a PHP Program to sort a record by using Order By clause
10. Write a PHP Program to delete and update a record in MySQL
11. Write a PHP program to start a PHP Session.
12. Write a PHP program to display current date-time.
13. Write a PHP Program to Opening and Closing a File
14. Write a PHP Program to perform include Function

TEXT BOOK:

Dinesh Maidasani ,*Straight to the point PHP*, Firewall Media, New Delhi 2013.

REFERENCE BOOKS:

1. Kevin Tatroe, Peter MacIntyre, Rasmus Lerdorf, *Programming PHP*, O'Reilly Media, USA 2013.
2. Mladen Gogala, Peter MacIntyre, Brian Danchilla, *Pro PHP Programming*, Apress Publication, New York, 2011.
3. Nino Paoletta, *PHP Programming*, Youcanprint, New Delhi, 2018.

MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)

Madurai – 04

Class : B.Voc(Software Development)

Part II : Skill

Semester :IV

Hours : 06

Subject code : 18VSDS43

Credits : 06

INTERNSHIP

INTERNSHIP ASSESSMENT

(Req. Max: Formative:60 marks, Summative: 40 marks)

Formative Evaluation (Industrial Partner)

- Evaluation Form (60 marks)

Applicat ion of Knowle dge	Care for Tools& Equipm ent	Econo mic use of Materi al	Safety Conscious ness	Spe ed	Accur acy	Quality of Workman ship	Amo unt of Work	Numb er of Attem pts	Attitu de

Rating Scale: Excellent- 6; Very Good- 5; Good- 4; Fair- 3; Satisfactory -2;Poor.1.

Summative Evaluation (Course Teacher)

- Case Study/ Project (20 marks)
- Viva (20 marks)