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VEER NARMAD SOUTH GUJARAT UNIVERSITY

University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.

વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી

યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.

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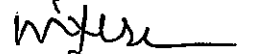
-: પરિપત્ર :-

યુનિવર્સિટી સંલગ્ન વાણિજ્ય વિદ્યાશાખા હેઠળની તમામ કોલેજોના આચાર્યશ્રીઓને જણાવવાનું કે, શૈક્ષણિક વર્ષ ૨૦૨૫-૨૬થી અમલમાં આવનાર કોમર્સ ઈન્કલુડિંગ બિઝનેસ એડમિનિસ્ટ્રેશન વિષય અંતર્ગત T.Y.B.Com. Sem.-5 & 6(Major. Minor)Computer Application વિષયનો પેટાસમિતિ દ્વારા તૈયાર કરવામાં આવેલ અભ્યાસક્રમ કોમ્પ્યુટર સાયન્સ વિષયની અભ્યાસ સમિતિના ચેરમેનશ્રીએ અભ્યાસ સમિતિવતી મંજૂર કરી વાણિજ્ય વિદ્યાશાખાને કરેલ ભલામણ વાણિજ્ય વિદ્યાશાખાના અધ્યક્ષશ્રીએ વિદ્યાશાખાની મંજૂરીની અપેક્ષાએ વિદ્યાશાખાવતી ડીનશ્રીએ મંજૂર કરી એકેડેમિક કાઉન્સિલને કરેલ ભલામણ એકેડેમિક કાઉન્સિલની તા.૨૪/૧૨/૨૦૨૪ ની સભાના ઠરાવ ક્રમાંક:૩૫૩ અન્વયે માન.કુલપતિશ્રીને આપેલ સત્તા અંતર્ગત માનનીય કુલપતિશ્રી દ્વારા મંજૂર કરેલ છે. જેનો અમલ કરવા આથી જાણ કરવામાં આવે છે.

(બિડાણ: ઉપર મુજબ)

ક્રમાંક:ઓથો./પરિપત્ર/સિલેબસ/૧૫૨૦૦/૨૦૨૫

તા.૧૯/૦૬/૨૦૨૫


કુલસચિવ(જી)

પ્રતિ,

૧) વાણિજ્ય વિદ્યાશાખા હેઠળની સંલગ્ન તમામ કોલેજોના આચાર્યશ્રીઓ,
..... આપશ્રીની કોલેજના સંબંધિત શિક્ષકો/વિદ્યાર્થીઓને જાણ કરી અમલ કરવા સારું.

૨) અધ્યક્ષશ્રી, વાણિજ્ય વિદ્યાશાખા,

૩) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ.ગુ.યુનિવર્સિટી, સુરત.

.....તરફ જાણ તેમજ અમલ સારું.

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B. Com. (Computer Application) 3rd Year
Syllabus
SEMESTER 5
Effective From : June 2025

[Subject code (Major)-2508000605020004] [Subject code (Minor)-2508000605050006]

Paper No.: 5

Paper Title: Computer Application Paper-V

Credits: 4

(Visual Basic .NET)

Course Type: Major/Minor

Teaching per Week 4 hours per week (2 hours Theory + 2 hours Practical)

A. Visual Basic .NET

[50%]

1. Visual Basic .Net Overview

1.1 Introduction to .NET

- Introduction to .NET
- IDE - VB.Net Hello World Example
- Compile and Execute VB.NET Program
- Identifiers
- VB.Net Keywords

1.2 Overview of Microsoft .NET Frame work

- Introduction to .NET Frame work
- Common Language Runtime (CLR)
- Common Type System (CTS)
- Modules and Assemblies
- Common Language Specification (CLS)
- Intermediate Language (IL) and Just-In-Time (JIT) Compilation
- .NET Framework Namespaces

2. Programming in VB.NET

2.1 Variable, Data Types and Operators

- Declaration and Initialization of Variable
- Data types Available in VB.NET
- Type Conversion Functions in VB.NET
- Boxing and Unboxing
- Operators: Arithmetic, relational, and logical operators

2.2 Msg Box and Input Box

2.3 Control Flow Statements

- Conditional Statements
(If...Then Statement, If...Then...Else Statement, If ... Then Elif Else Statement, Nested if Statement, Select Case Statement)
- Loop Statements
(Do Loop, For ... Next, While End While, With End With Statement, Nested Loops)
- Loop Control Statements
(Exit Statement, Continue Statement, Go To Statement)

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- 2.4 Array, String and Date – Functions & Methods**
 - Creating Array, Dynamics Array and Multi-Dimensional Array
 - String Functions and Methods
 - Date Functions and Methods
- 2.5 Modules, Procedures and Functions**
 - Passing variable number of arguments
 - Optional arguments
- 3. Introduction to Windows Controls**
 - 3.1 Working with Toolbox Controls**
 - Common controls
(Label, Text Box, Button, Check Box, Radio Button, Date Time Picker, List Box, Combo box, Picture Box. Rich Text Box, Tree View, Tool Tip. Progress bar, Masked Text box, Notify Icon, Link Label, Checked List box)
 - Containers controls
 - Data –Data Set, Data Grid
 - Components –Image List, Help Provider, Error Provider, Timer
 - 3.2 Working with Menus and Dialogue Boxes**
- 4. Database Access using ADO.NET**
 - Working with data sources using ADO.NET
 - Connecting to a database
 - Executing queries, and retrieving data
- 5. Introduction of Bhartiya Knowledge System:**
 - 5.1 Vedic Mathematics – A Briefing**
 - Introduction: Sixteen Sutras and Thirteen Sub-Sutras
 - Terms and Operators: Ekadhika, Ekanyuna, Purak, Rekhank, Beejank
 - 5.2 Addition using Vedic Mathematics**
 - Addition - Completing the whole method
 - Addition from left to right
 - Addition from list of number - Shudh method

B. Practical

[50%]

- Out of Unit 1 to 4

Evaluation Methods:

- 50% Internal Evaluation:
(Out of which 50% Theory Evaluation, 50% Practical Evaluation (Unit 1 to 4))
- 50% External Evaluation:
(Out of which 50% Theory Evaluation, 50% Practical Evaluation (Unit 1 to 4))

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Reference Books

1. Visual Basic .NET Programming (Black Book) -By Steven Son Holzner, Dream Tech Publication
2. Mastering Visual Basic.NET by Evangelos Petroustos BPB Publication
3. Moving to VB.NET: Strategies, Concepts, and Code -by Dan Appleman - Api.ess Publication
4. Microsoft Visual Basic .NET Step by Step -by Michael Halvorson, PHI Publication
5. Database Programming with Visual Basic.NET and ADO.NET –by F. Scott Barker -Sams Publication
6. Beginning .NET Web Services Usmg Visual Basic .NET -by JoeBustos and Karlli Watson, Wrox Publication
7. .NET -Complete Development Cycle -by G. Lenz, T. Moclei.,Peal.son Education.
8. Professional VB.NET, 2nd Edition -by Fred Barwell, et al –Wrox Publication
9. Fundamentals and Applications of Vedic Mathematics, SCERT - State Council of Educational Research & Training, 2014
10. “Vedic Math Genius”,By Kenneth Williams, Inspiration Books, 2003
11. Fundamentals and Applications of Vedic Mathematics, SCERT - State Council of Educational Research & Training, 2014
12. “Vedic Math Genius”, By Kenneth Williams, Inspiration Books, 2003
13. Sri BharatiKrsnaTirthaji, “Vedic Mathematics”, published by MotilalBanarsidass, 1965. ISBN 81-208-0163-6.
14. Williams K.R. “Discover Vedic Mathematics.” Vedic Mathematics Research Group, 1984. ISBN 1-869932-01-3
15. Williams K.R. and M. Gaskell “The Cosmic Calculator”. MotilalBanarsidass, 2002.ISBN 81-208-1871-7.
16. Nicholas A.P., Williams, J. Pickles. “Vertically and Crosswise”. Inspiration Books, 1984. ISBN 1-902517-03-2.

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Paper No.: 6	Teaching Hours: 4Hours/Week
Paper Title: Computer Application Paper-VI (SOFTWARE ENGINEERING)	Credits: 4 Course Type: Major

Prerequisite: Fundamentals of Basic Computer Concepts.

Aim: To make students aware of methodology of system design and analysis and there by introducing the concept of Software Engineering.

Expected Outcome: The students will be able to understand, design and develop projects in a systematic way. Students will also be able to prepare proper documentation of the projects.

A. SoftwareEngineering **[50%]**

1. Introduction

- 1.1. Software, Software Characteristics, Applications, Myths.
- 1.2. Software Engineering General View
- 1.3. Software Process Models, Waterfall, Prototyping
- 1.4. 4 GL Techniques
- 1.5. Efforts Distribution

2. Requirement Analysis

- 2.1. Introduction
- 2.2. Requirement gathering techniques
- 2.3. DFD, Data Dictionary and Process Specification
- 2.4. Importance of Requirement Analysis
- 2.5. Software Requirement Specification Document

3. System Design

- 3.1. Design Model
- 3.2. Principles and Concepts
- 3.3. Functional Independence
- 3.4. Mapping Requirements into Design
- 3.5. Design Documentation

4. Software Testing

- 4.1. Testing Fundamentals
- 4.2. Functional and Structural Testing
- 4.3. Testing Process
- 4.4. CaseStudiescarriedoutinthefollowingTopicswithDFD-
GUIApplicationse.g.Payroll System, Sales Management System

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5. Introduction to Bhartiya Knowledge System – Vedic Mathematics

- 5.1. Subtraction using Vedic Mathematics
 - Subtraction – Base Method
 - Subtraction – Completing the whole
 - Subtraction from left to right
- 5.2. Digit sums, casting out 9's and 9' check method
- 5.3. Eleven Check Method

B. PROJECT WORK

[50%]

Project Work to be based on the guidelines of Software Engineering.
Prepare and submit Project Report for the selected project(Excluding Coding)

Reference Books:

1. PankajJalote:AnIntegratedApproachtoSoftwareEngineering–NarosaRichard
2. Fairley, Software Engineering concepts–McGrawHill
3. IanSommesille:Softwareengineering–AdditionWesley
4. R.S.Pressman:SoftwareEngineering–APractitioner’sapproach–McGrawHill
5. Prof. Parthasarathy& B.W. Khalkar - System Analysis Design and Introduction to Software Engineering
6. SoftwareEngineeringTheory&Practice,ShariLawrencePfleeger,PearsonEd.
7. Fundamentals and Applications of Vedic Mathematics, SCERT - State Council of Educational Research & Training, 2014
8. “Vedic Math Genius”, By Kenneth Williams, Inspiration Books, 2003
9. Sri BharatiKrsnaTirthaji, “Vedic Mathematics”, published by MotilalBanarsidass, 1965. ISBN 81-208-0163-6.
10. Williams K.R. “Discover Vedic Mathematics.” Vedic Mathematics Research Group, 1984. ISBN 1-869932-01-3
11. Williams K.R. and M. Gaskell “The Cosmic Calculator”. MotilalBanarsidass, 2002.ISBN 81-208-1871-7.
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17. Sri BharatiKrsnaTirthaji, “Vedic Mathematics”, published by MotilalBanarsidass, 1965. ISBN 81-208-0163-6.

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Effective From: June 2025

Paper No.: 7 **Teaching Hours:** 4 Hours/Week
Paper Title: **Computer Application: Paper VII** **Credits :** 4
(BUSINESS INFORMATION SYSTEM) **Course Type:** Major/ Minor

Prerequisite: Basic Computer operating skills.

Aim: To make students aware of the available Business Information Systems. Also motivate the students towards the operation of Information system with several security aspects.

Expected Outcome: The students will be able to work under the environment of different Business Information systems and have ability to trace malfunctioning of the computer system and take appropriate action against it.

A. Business Information System [100%]

1. Introduction

- 1.1. Information System Concepts
- 1.2. Data, Information, Knowledge, Wisdom
- 1.3. Characteristics of valuable information
- 1.4. Value of Information
- 1.5. Information system in an organization

2. E-Commerce and M-Commerce

- 2.1. Introduction-B2B, B2C, C2C, e-Government
- 2.2. E-Commerce Challenges
- 2.3. E-Commerce and M-Commerce Applications
- 2.4. M-Commerce Hard ware and Software
- 2.5. Electronic Payment System

3. Transaction Processing System (TPS)

- 3.1. Over view of Traditional Transaction Processing System
- 3.2. Transaction Processing Activities
 - 3.2.1. Data Collection
 - 3.2.2. Data Editing
 - 3.2.3. Data Corrective
 - 3.2.4. Data Manipulation
 - 3.2.5. Data Storage
 - 3.2.6. Document Production and Reports

4. MIS and ERP

4.1 Management Information System(MIS)

- 4.1.1. Concepts of MIS
- 4.1.2. Characteristics of MIS ,Need of MIS
- 4.1.3. Role of MI Sinanorganization
- 4.1.4. Role of MIS as decision support system, as decision making system

4.2 Enterprise Resource Planning(ERP)

- 4.2.1 Introduction to ERP
- 4.2.2 Advantage and Disadvantage of ERP
- 4.2.3 Leading ERP System
- 4.2.4 ERP for SME's.

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5. Security & Privacy Issues

- 5.1. Computer Waste, Mistakes and Its Prevention
- 5.2. Computer Threats: Hacker, Cracker, Insiders, Virus, Worms, Trojanhorse, Logic Bomb
- 5.3. Proper use of Antivirus software
- 5.4. Security issues related to online transactions.
- 5.5. Privacy at work
- 5.6. E-Mail Privacy
- 5.7. Internet Privacy
- 5.8. Efforts to protect privacy

Reference Books:

1. Ralph Stair and George Reynolds – Information System – Cengage Learning.
2. Ralph Stair and George Reynolds – Principle of Information System, A Managerial Approach – Cengage Learning.
3. Kenneth Laudon and Jane – Management Information System: Managing the Digital Firm, Laudon, Prentice Hall of India
4. Management Information System, W.S. Jawadekar, Tata McGraw Hill.
5. Thomas F. Wallace, Michale H. Kremzar, ERP: Making It Happen, Wiley Publication
6. C.S.V. Murthy, Management Information System: Text & Applications – Himalaya Publication

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Paper No.:	8	Teaching Hours: 4 Hours/Week
Paper Title:	Computer Application: Paper VIII	Credits:4 (PROJECT)
		Course Type: Major

Prerequisite: Knowledge of Operating System, Project System design and analysis skills, Database Management System, and GUI Tools.

Aim: To let students develop business application development skills.
Expected Outcome: The students will be able to develop business application using GUI tools.

- **Project** **[100%]**

Guidelines for the project:

Duration of the Project Work should be THREE months parallel to the sixth semester's their subject study. All the students will have to submit following reports to their respective examination centers.

1. The Joining Report(Once).
2. Project Title Report(Once).
3. Progress Reports(Fortnightly)signed by the guide & submitted to the internal guide in person.
4. ProjectCompletionCertificateissuedfromtheOrganizationwheretheprojectwasdone(in case the project is not done in the college/institute).

The student shall not be allowed to appear for the Final Examination if the student fails to submit the above mentioned documents.

Project Viva-voce will be conducted at the end of the semester.

Internal Evaluation: Minimum two faculties (preferably senior most)should be nominated by the Head of the Department or the senior most faculties in absence of the Head to evaluate the performance of the students' presentation.

External Evaluation:

The evaluation should be as per the following breakup:

1. Analysis: 25% weight age
2. Design: 25% weight age
3. Understanding of the Problem & Technology Used: 25% weightage
4. Presentation & Viva: 15% weightage
5. Project Report: 10% weightage