

**VEER NAMAD SOUTH GUJARAT UNIVERSITY, SURAT**  
**M.Sc. (I.T.) [Five Years Integrated Course]**  
**B.Sc. (Information Technology)**  
**1<sup>st</sup> Semester Syllabus**

Effective From July-2003

**Paper No : 103**

**Paper Title : Computer Programming & Programming Methodology.**

**[L : 4, P : 0 Hrs]**

- 1. Algorithm & Flowcharting**
- 2. Programming Language & Structured Programming**
  - 2.1 Structured Programming
  - 2.2 Levels of Programming languages
  - 2.3 Compiler/Interpreter, Editor
  - 2.4 Problem Analysis
- 3. Program Bugs & Testing**
  - 3.1 Program Bugs
  - 3.2 Preparing Test data
  - 3.3 Functional & Structural Testing
- 4. Constants & Variables**
  - 4.1 Character Set
  - 4.2 Constants, Variables - needs & definition
- 5. Expressions & Operators**
  - 5.1 Operators, Expression
  - 5.3 Evaluation & Assignment of Expression
- 6. Input & Output Statements**
- 7. Jumping, Branching & Looping Statements**
- 8. Mathematical & String Built-in functions**
- 9. Array**
- 10. User Defined Functions and Procedures**
- 11. File Organization**
  - 11.1 Sequential, Binary
  - 11.3 Random

**Main Readings :**

1. Programming in BASIC - Balaguruswamy – TMH
2. Qbasic For MS DOS 5.0. – Venkateswaran, Jaico publication
3. Programming expertise in BASIC - Kenetkar – BPB
4. Programming with BASIC - Gottfried – TMH

**Supplementary Readings :**

1. Structured Programming Concepts - La Budde - Mc.Graw Hill
2. Foundations of Programming - James – BPB
3. BASIC Programming self taught - Seymour C. Hirsch – PHI
4. BASIC Programming with Applications - Jain, TMH
5. Program Design - Juliff, PHI