

Veer Narmad South Gujarat University

Udhna Magdalla Road, Surat

Proposed syllabus for IDS of T Y B Sc (Electronics)

IDS: Python programming and Computer Interfacing

1 Unit I

Introduction to LINUX Operating System, Installation of LINUX, Filing system, Desktop and other menu, terminal window, general commands like ls, cd, mkdir etc..., installing packages in Linux, text editor, opening, saving and editing files with gedit, getting help.

2 Unit II

2.1 getting started

Introduction to programming, introduction to compilers and interpreters, understanding python interpreter, editing and execution environment

2.2 Lexical Structure and operators

Values and types, variables, variable names and keywords, statements, operators and operands, expressions, order of operation, string operation, comments, lines and indentation, data type, lists and tuple,

2.3 Iteration and Decision making

WHILE structure, importance of indentation, writing programmers for the while structure, for statement and the range, programming with for statement, Decision making if , else if, and else statements, programming

3 Unit III

3.1 Modular Python

Functions, passing parameters, local variables programming, concept of libraries
Study of various python library

3.2 Phoenix

Introduction the Phoenix, understanding various aspects of Phoenix, understanding the phoenix library, phoenix library functions, programming the phoenix, applications of phoenix

4 Unit IV

Introduction to data analysis, errors, handling errors, error minimization techniques, Least Square Method for Linear Fitting, using GRACE for data analysis, importing data, curve fitting, other data analysis techniques.

Reference Books

1. Introduction to Linux
2. A Byte of Python BY Swaroop C H
3. Beginning Python From Novice to Professional Second Edition BY Magnus Lie Hetland
4. Core Python Programming, Second Edition BY Wesley J. Chun Prentice Hall
5. Learning Python Fourth Edition BY Mark Lutz O'REILLY
6. Python Create modify and reuse BY Jim Knowlton Wiley