

## SRI A S N M GDC(A) PALKOL

### DEPARTMENT OF COMPUTER SCIENCE

#### 1.1.1 Curriculum developed in relevance to local, regional needs in the subject

| Name of the Course                                    | Modules relevant to local needs   | Modules relevant to regional needs | Modules relevant to National Needs | Modules relevant to Global Needs   |
|---|---|------------------------------------|------------------------------------|--|
| <b>COMPUTER FUNDAMENTALS AND PHOTOSHOP</b>            | Understand the Digital Computer,<br>Understand the hardware and software parts of a digital computer<br>Understanding the applications & tools utilization in Photoshop<br>Applying the logical and technical skills to design a photo<br>Applying different features on images to produce desired images |                                    |                                    |  |
| <b>PROBLEM SOLVING IN C</b>                           |   |                                    |                                    | Algorithms and Programming Languages<br>Decision Control and Looping Statements<br>Arrays, Functions,<br>Structure, Union, Pointers, Files   |
| <b>INTRODUCTION TO DATA SCIENCE AND R PROGRAMMING</b> |   |                                    |                                    | Data Science , Overview of R, Data Science Process<br>Getting Data in and out of R<br>Handling large Data on a Single Computer<br>Machine Learning, modeling process,<br>Generating programming tips<br>Sub setting R objects, Coding Standards in R |

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| <b>INFORMATION TECHNOLOGY</b>              | Operating System, MS word, Mail Merge, MS Excel Macros ,MS Power point ,Objects and charts, MS Access<br>Querying a Database |  |  |   |
| <b>DATA STRUCTURES USING C</b>             |  |  |  | Principles of Programming and Analysis of Algorithms<br>Arrays, Linked Lists, Stacks, Queue, Binary Trees<br>Operations on a Binary Search Tree, Searching and sorting<br>Graphs  |
| <b>DATA MINING CONCEPTS AND TECHNIQUES</b> |  |  |  | Data Warehouse, Mining Methods<br>Data mining query languages, Data transformation<br>Concept Description, Data Mining Techniques<br>Classification Basic Concepts, Tree Pruning<br>Classification by Back Propagation, Cluster Analysis  |
| <b>E-COMMERCE AND WEB DESIGNING</b>        | Website designing, Frames<br>Security and Encryption, Hacking  |  |  | Technology used in E-commerce, E-payment System<br>Electronic Fund Transfer, On-line Business Transactions<br>E-Tailing, Website designing, Frames<br>Security and Encryption, Hacking  |
| <b>OOPS USING JAVA</b>                     |  |  |  | Fundamentals of Object – Oriented Programming<br>Overview of Java Language, Constants, Variables & Data Types, Operators and Expressions , Decision Making & Branching, Decision Making & Looping<br>Classes, Objects & Methods, Inheritance , Arrays, Strings and Vectors, Interfaces, Multithreaded Programming<br>Managing Errors And Exceptions, Applet Programming<br>Packages |

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| <b>OAT</b>                  | MS-Excel, different cell references, Formatting options<br>Functions, Charts, Macro, MS Access, Tables, Finding, Sorting and Displaying Data, Relational Databases |  |  |  |
| <b>DATA STRUCTURES</b>      |  |  |  | Concept of Abstract Data Types (ADTs)<br>Linear Lists, Arrays, Stacks: Queues, Trees , Binary Search Trees , Graph Traversals, Minimal Spanning Trees<br>Sorting , Searching                                     |
| <b>BUSINESS ANALYTICS</b>   |  |  |  | Business Analytics Life Cycle , Data exploration & visualization , Automated Data Analysis, ANOVA Hypothesis Testing, Logistic Regression , Business Data Management OLTP and OLAP, SPSS Packages , Case Studies |
| <b>DBMS</b>                 |  |  |  | file-based system, Overview of Database Management System, Entity-Relationship Model, IS A relationship<br>Relational Model, QBE, Structured Query Language Embedded SQL, PL/SQL: Database Triggers              |
| <b>SOFTWARE ENGINEERING</b> |  |  |  | Process paradigms, Empirical estimation models Requirements Analysis, Feasibility Study<br>Software Design, Architectural de User Interface Design And Real Time ,Interface standards, Software Testing          |
| <b>WEB TECHNOLOGIES</b>     | Website designing, Frames Security and Encryption, Hacking   |  |  | HTML, Multimedia objects, Cascading Style Sheets Formatting blocks of information, Introduction to JavaScript<br>Exception handling, DHTML with JavaScript, Rollover buttons, XML, Presenting XML                |

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| <b>DISTRIBUTED<br/>SYSTEMS</b> |  |  |  | Introduction to Distributed Computing Systems<br>Distributed Operating System, Message Passing<br>System<br>Communication Protocols , DSM, Synchronization<br>Load Balancing Approach, Process Migration and<br>Threads<br>File Accessing Models, Cryptography    |
| <b>CLOUD<br/>COMPUTING</b>     |  |  |  | Cloud Computing Overview, Limitations-<br>Application<br>Security concerns, Cloud architecture, Software as a<br>Service (SaaS), Platform as a Service ( PaaS ),<br>Infrastructure as a Service ( IaaS), Amazon EC2 ,<br>Virtualization, Microsoft Implementation |
| <b>E-COMMERCE</b>              | Business Strategy, Business-<br>to-Business Electronic<br>Commerce, Electronic<br>marketing in B2B |  |  | Business Strategy, Business-to-Business Electronic<br>Commerce, Electronic marketing in B2B, Internet<br>and Extranet , Electronic Payment Systems, Public<br>Policy<br>Gambling, Infrastructure For EC , Analyzing Web<br>Visits                                 |