

Syllabus C, C++ Computer Science Engineering Session 2013-2016



GOVERNMENT POLYTECHNIC, NAGPUR

(An Autonomous Institute of Govt. of Maharashtra)

Continuing Education Programme

“Advance Technologies in Software Development”

Duration: 05 Months
Batch: Morning (7:30am to 10:00am),

Course Fee: 9,500/-
Evening (06:00pm to 08:30pm)

C

Module I

- Data types and variables.
- Sequence, decision, repetitive case control instructions.
- Functions call by value, call by reference recursive functions. Exploring user defined and library functions.
- Storage classes, preprocessor directives types of integers, floats, char.
- Arrays, single dimensional, double dimensional, three-dimensional and multi dimensional.
- Strings, string functions etc.
- Structures, its uses in real life programs.
- Union and its uses in real life programs.
- Bit wise operators and its uses.
- File handling, binary file handling & ASCII files.

Module II

- Encrypting/Decrypting files.
- File copy utilities.
- Command line arguments.

Module III

- Booting of computer as regards to C, C++.
- Memory organization.
- Physical and logical structure of disk.
- Boot record, FAT, Directory, Data space.
- Hardware and software interrupts.
- CPU registers.
- VDU memory.
- ASCII values and scan codes.

Module IV

- Graphics in C and C++.
- Display monitors and Display Adapters
- Color generation.
- Drawing regular shapes.
- Pattern and fill styles.
- Freehand drawing using mouse.

Module V

- Writing vaccines and removing viruses.

Module VI

- Writing text to VDU.
- Changing file attributes.
- Issuing interrupts.
- Data structures linked list.

C++

- OOP Methodology
- Classes and Objects.
- Function and Operator overloading.
- Inheritance and Polymorphism.
- Static and Dynamic binding.
- Virtual, pure virtual and friend functions, Upcasting.
- Template and Exception handling.
- Collection classes.
- File handling, Binary and ASCII files.

VC++

Module I

- MFC class and Application framework.
- Application class and windows class.
- Pens, brushes, font, etc.
- Message mapping Macro.
- Handling keyboard and mouse messages.
- Dialog boxes, buttons, edit controls etc.
- Windows common controls.
- Menu's toolbars, status bars.

Module II

- Sequence driver model v/s Event driven programming model.
- Queued and Non-queued Messenger.
- Win16 and Win32 API.
- GDI and device context.
- Windows messaging.

Module III

- Concept Document/View Architecture.
- CDocument class, CView class.
- Serialization.
- SDI Application.
- MDI Application.
- Runtime class structure.
- Advanced MFC programming

Module IV

- Active X controls.
- Concept of COM and DCOM.
- ODBC Application.

ORACLE

Module I

- Oracle 9i Introduction and concept.
- Introduction to SQL*plus, referential integrity and join operation.
- Alter table, Group by, SQL*reports.
- PL/SQL, cursors, Triggers, procedures and functions.
- Objects / Database Administration, Remote Data Access.

Module II

- Distributed Database System.
- Database operation and structure.
- Data ware house concept and Data Mining, Data ware house v/s Operational system.
- Data Mart concept.
- Definition of OLAP, MOLAP, ROLAP.
- Need of OLAP.
- Concept of Parallel processing.
- Bitmap indexes.
- Star Queries.

- Data warehouse
- Principles of Software Engineering.
- Software Project management and Quality Assurance.
- Concepts of versions.
- General IT trends.
- Project

For details contact:

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