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# SIT INTERNATIONAL<sup>TM</sup>

*SMARTBTR INSTITUTE OF TECHNOLOGY INTERNATIONAL*



GOSSAIGAON, KOKRAJHAR BTR ASSAM



+91-8472843238

# Course Title : POST GRADUATE DIPLOMA IN COMPUTER APPLICATION(PGDCA)

**Course Duration: 12 months (Two Semester)**

**Course Fees:** INR. 12,000.

**Eligibility:** Graduate or above

## SEMESTER-I

### TOPICS

1. Computer Fundamentals and Programming
2. Number Systems
3. Database Management Systems (DBMS)
4. Web Technologies
- 5: MS Office Suite MySQL)
6. Introduction to Accounting and Finance
7. Projects

## SEMESTER-I I

### TOPICS

1. Object-Oriented Programming (OOP) Programming
2. Data Structures and Algorithms
3. Advanced Networking
- 4.Tally and Accounting Software
- 5: Adobe Photoshop
7. Projects

## SEMESTER-I(6 MONTHS)

### UNIT-1. Computer Fundamentals and Programming

- Topics: Introduction to Computers, Operating Systems, Programming Basics, C Programming Language, Data Types, Control Structures, Functions, Arrays, Pointers.
- Lab: Basic programming exercises, implementing algorithms, debugging.

### UNIT-2. Database Management Systems (DBMS)

- Topics: Introduction to DBMS, Database Models, SQL, Normalization, ER Diagrams, Transactions, and Recovery.
- Lab: SQL queries, database design, and implementation using MySQL or similar RDBMS.

### UNIT-3. Web Technologies

- Topics: HTML, CSS, JavaScript, Client-Server Architecture, Web Development Frameworks, Introduction to PHP.
- Lab: Designing and developing basic web pages, forms, and simple web applications.

### UNIT-4. Software Engineering

- Topics: Software Development Life Cycle (SDLC), Software Models (Waterfall, Agile), Requirements Analysis, Design, Implementation, Testing, Maintenance.
- Lab: Case studies, project documentation, and design exercises.

### UNIT-5. MS Office Suite

- Topics: Advanced features of Microsoft Word, Excel (Formulas, PivotTables, Charts), PowerPoint (Presentations, Animations).
- Lab: Creating complex documents, spreadsheets, and presentations.

### UNIT-6. Introduction to Accounting and Finance

- Topics: Basics of Accounting, Financial Statements, Ledger Maintenance, Introduction to Financial Management, Budgeting.
- Lab: Hands-on exercises with accounting principles, using accounting software.

### UNIT-7. Number Systems

- Topics: Binary, Decimal, Octal, Hexadecimal Number Systems, Conversion between Number Systems, Arithmetic Operations in Binary.
- Lab: Exercises on number system conversions, binary arithmetic operations.



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## SEMESTER-II(6 MONTHS)

1. Object-Oriented Programming (OOP)
  - Topics: OOP Concepts, Classes and Objects, Inheritance, Polymorphism, Encapsulation, and Abstraction, Introduction to Java or C++.
  - Lab: Designing and implementing object-oriented programs, exercises on class hierarchies.
2. Data Structures and Algorithms
  - Topics: Data Structures (Stacks, Queues, Linked Lists, Trees, Graphs), Algorithms (Sorting, Searching, Recursion), Complexity Analysis.
  - Lab: Implementing data structures and algorithms, performance analysis.
3. Advanced Networking
  - Topics: Network Protocols (TCP/IP, UDP), Routing and Switching, Network Design and Management, Network Security, Wireless and Mobile Networks.
  - Lab: Configuring network devices, using network simulation tools, understanding and implementing network protocols.
4. Tally and Accounting Software
  - Topics: Introduction to Tally, Ledger and Voucher Management, GST and Taxation, Financial Statements Generation, Inventory Management.
  - Lab: Practical exercises in Tally for managing financial records and generating reports.
5. Adobe Photoshop
  - Topics: Basics of Photoshop, Image Editing, Graphic Design, Photo Manipulation, Layer Management, Using Filters and Effects.
  - Lab: Hands-on projects for creating and editing images, designing graphics.
6. Project Work
  - Topics: Practical implementation of knowledge gained in previous subjects, working on real-life projects, project management, documentation.
  - Lab: Development and presentation of a comprehensive project.

### Evaluation

- Theory Exams: At the end of each semester.
- Practical Exams: Lab work, software applications, and project presentations.
- Assignments and Project Work: Throughout the course.



**Contact Us For  
More Info**



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