



SIT INTERNATIONAL TIME

SMARTBTR INSTITUTE OF TECHNOLOGY INTERNATIONAL



GOSSAIGAON, KOKRAJHAR BTR ASSAM



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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-II

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
- 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.

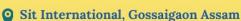
UNIT-6. Introduction to Accounting and Finance

- · 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

- o 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

- o 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

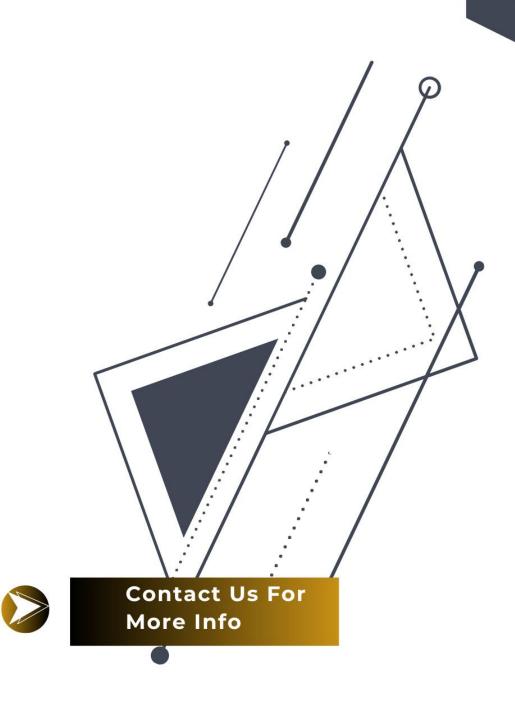
- Topics: Basics of Photoshop, Image Editing, Graphic Design, Photo Manipulation, Layer Management, Using Filters and Effects.
- · Lab: Hands-on projects for creating and editing images, designing graphics.

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.





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