AXOMTECH
SKILL EDUCATION COUNCIL

Syllabus: Post Graduate Diploma in Computer Applications (PGDCA)

- **Duration:** 1 Year (Two Semesters)
- **Eligibility:** Graduation (in any stream)

Evaluation Scheme

- **Full Marks:** 200
- **Theory:** 100 Marks
- **Practical/Project Works:** 80 Marks
- **Internal Assessment/Viva:** 20 Marks

Course Syllabus

This post-graduate diploma is engineered for graduates seeking to build a strong foundation in high-level computing, programming, data management, and modern software development practices.

SEMESTER I

Module 1: Computer Fundamentals & Office Productivity

- **Computer Systems & OS:** In-depth study of computer organization, architecture, and core concepts of operating systems.
- **Office Automation Suite:** Mastering MS Word for documentation, MS Excel for data analysis & reporting, and MS PowerPoint for professional presentations.

Module 2: Programming & Data Structures with C

- **Programming in C:** Advanced topics including pointers, structures, unions, file handling, and dynamic memory allocation.
- **Data Structures:** Implementing Arrays, Linked Lists, Stacks, and Queues using C.
- **Algorithms:** Introduction to algorithms for sorting and searching.

Module 3: Database Management Systems (DBMS)

- **RDBMS Concepts:** In-depth study of database design, ER diagrams, and normalization.
- **SQL:** Writing complex queries, joins, subqueries, and understanding database transactions.

SEMESTER II

Module 4: Object-Oriented Programming (OOP)

- **OOPs with C++:** Concepts of classes, objects, inheritance, polymorphism, and encapsulation.

Module 5: Web Technologies

- **Front-End:** HTML5, CSS3, JavaScript for dynamic web pages.
- **Back-End:** Introduction to server-side scripting with PHP or Python.
- **Database Connectivity:** Connecting web applications to a MySQL database.

Module 6: Business & Design Applications

- **Financial Accounting:** Using Tally Prime for accounting, inventory management, and GST compliance.
- **Image Editing:** Fundamentals of photo editing, retouching, and graphic design using Adobe Photoshop.

Module 7: Software Engineering

- Introduction to the Software Development Life Cycle (SDLC) and various models (Waterfall, Agile).
- Concepts of software testing and quality assurance.

Module 8: Final Project

- Development of a database-driven web application or a desktop application.
- **Example Project:** Create a web-based "Library Management System" or "Student Information System" using PHP/Python and MySQL, demonstrating database design and programming skills. The project could also include business reports from Tally or graphics designed in Photoshop.