

(Building Futures Through Digital Knowledge and Innovation)

Advanced Diploma in Computer Applications (ADCA) 12 Months

Syllabus

1. Introduction to Computers

- ✓ Fundamentals of Computer
- ✓ Computer hardware and software
- ✓ Computer networks and the Internet
- ✓ Operating systems and their functions
- ✓ Basics of computer security and data privacy

2. Office Productivity Tools

- ✓ Microsoft **Paint**
- ✓ Microsoft **Notepad**
- ✓ Microsoft **WordPad**
- ✓ Microsoft Office **Word**
- ✓ Microsoft Office **Excel**
- ✓ Microsoft Office **PowerPoint**
- ✓ Microsoft Office **Access**
- ✓ Microsoft Office **Outlook**
- ✓ Microsoft **Copilot & ChatGPT**

3. Advanced Programming Concepts

- ✓ Introduction to **Python** programming language
- ✓ Variables, data types, and operators
- ✓ Control structures: loops and conditional statements
- ✓ Object-oriented programming principles
- ✓ Debugging and error handling techniques
- ✓ Introduction to **C/C++** programming languages

4. Web Development Front-end

- ✓ Complete **HTML** and **CSS** for creating web pages
- ✓ Creating interactive web forms and validating user input
- ✓ Introduction to web hosting and domain management

5. Database Management System

- ✓ Relational database concepts and design
- ✓ Advanced **SQL** queries and optimization
- ✓ Database normalization and denormalization
- ✓ Introduction to **NoSQL** databases

6. Web Application Development

- ✓ Server-side scripting using **PHP**
- ✓ Interaction with databases in web applications
- ✓ Front-end frameworks (**Bootstrap**) for dynamic interfaces
- ✓ Web security best practices and vulnerabilities

7. Cyber Security and Data Privacy

- ✓ Fundamentals of cybersecurity and cryptography
- ✓ Secure coding practices
- ✓ Threats, vulnerabilities, and risk management
- ✓ Privacy laws and regulations

8. Introduction to Artificial Intelligence (AI)

- ✓ What is AI? Overview and real-world applications
- ✓ Types of AI: Narrow AI, General AI, and Super AI
- ✓ Machine learning vs. traditional programming
- ✓ Overview of popular AI tools and frameworks
- ✓ Using AI in daily productivity (ChatGPT, Copilot, DeepSeek, etc.)
- ✓ Ethical considerations and future of AI

9. Accounting in Tally Prime

Introduction to Tally Prime

- ✓ Understanding the basics of Tally Prime software.
- ✓ Navigating the Tally Prime interface.
- ✓ Creating a company in Tally Prime.
- ✓ Configuring company settings and preferences.

Fundamentals of Accounting in Tally Prime

- ✓ Understanding accounting principles and concepts.
- ✓ Creating and maintaining ledgers.
- ✓ Recording journal entries in Tally Prime.
- ✓ Entering sales and purchase transactions.
- ✓ Bank reconciliation in Tally Prime.

Inventory Management in Tally Prime

- ✓ Creating and maintaining stock items and groups.
- ✓ Recording inventory transactions (stock in, stock out, transfers, etc.).
- ✓ Managing units of measurement and their conversions.
- ✓ Generating inventory reports.

GST (Goods and Services Tax) in Tally Prime

- ✓ Understanding GST concepts and rules.
- ✓ Configuring GST settings in Tally Prime.
- ✓ Recording GST transactions (sales, purchases, reverse charges, etc.).