

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY | PGDIT PROGRAMME CURRICULUM

Semester – I

Principles and Practices of Management

1. Business - The Purpose of Management
2. Designing Organisation for Business
3. Need for Managing Organisation and Business
4. Management of Standard Functions
5. Managing Resources
6. Planning
7. Decision Making
8. Organising
9. Staffing
10. Leading - Directing , Communicating, Motivating
11. Controlling
12. Coordinating (Synchronising)
13. Evolution of Management Thought
14. Pursuing Management as a Career

Business Communication

1. Communication in Business
2. Process of Communication
3. Psychological and Cultural Dimensions of Business Communication
4. Listening
5. The Writing Process – Planning
6. Writing Process : Organizing, Composing and Revising Business Messages
7. Writing Routine, Good News and Goodwill Messages
8. Writing Indirect Messages
9. Short and Long Reports
10. Developing and Delivering Effective Presentations
11. Interviews and Meetings
12. Group Communication Strategies
13. Resumes and Employment Letters
14. Communicating with Technology
15. Formats for Business Documents

Information Technology Concepts

1. Introduction to Information Technology
2. Fundamentals of Computers
3. Data Storage and Data Processing
4. Computer Software
5. Common Office Applications
6. Operating Systems
7. Networking and Security
8. E-Business
9. Mobile Computing
10. Social Media

Database Management Systems

1. Basic Concepts
2. Data Models
3. Relational Models
4. Relational Algebra
5. Structured Query Language (SQL)
6. Advanced Structured Query Language (SQL)
7. Integrity and Security
8. Normalisation
9. Transaction Management
10. Concurrent Execution
11. Solved Examples
12. SQL Syntax

Algorithms and Programming Concepts

1. Pseudocodes
2. Algorithms
3. Designing and Analysing Algorithms
4. Writing Language- Neutral Algorithms
5. Algorithms for Programming Cases
6. Advanced Constructs using Algorithms
7. Searching Algorithms
8. Sorting Algorithms
9. Special Problems and Algorithms

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY | PGDIT

PROGRAMME CURRICULUM

Semester II

Business Requirement Analysis

1. Basics of Requirement Engineering
2. Requirements Elicitation
3. Requirements Analysis
4. Requirements Specification
5. Requirements Verification and Validation
6. Requirements Management Principles and Practices
7. Adapting Requirement Practices to Project
8. Requirements using User Stories (Agile Requirements)
9. Writing Effective Use Cases

Project Management (IT)

1. Software Project Management Concepts
2. Project Initiating
3. Managing Scope of the Project
4. Estimating and Scheduling
5. Managing Cost
6. Managing Quality
7. Managing Team
8. Managing Communication
9. Managing Risks
10. Software Configuration Management (SCM)
11. Update yourself: Current Trends

Business Applications and ERP

1. Basics of Business Applications
2. Business as a System
3. Development of Business Applications
4. Classification of Business Applications
5. Key Modules of Business Applications
6. Introduction to ERP
7. ERP Implementation Lifecycle
8. ERP Related Technologies
9. ERP Vendors and Case Study

Software Engineering with UML

1. Introduction to Software Process Models
2. Software Project Planning and Estimation
3. System Engineering and Business Process Engineering
4. System Modelling and UML – I
5. System Modelling and UML – II
6. Design Concepts and Principles
7. Architectural Design
8. Software Testing Techniques
9. Software Configuration Management

Data Warehousing and Data Mining

1. Introduction to Data Warehouse
2. Data Warehouse Architecture
3. Dimensional Modeling
4. Data Warehouse Implementation
5. Data Warehouse and OLAP Technologies
6. Introduction to Data Mining
7. Mining Association Rules
8. Classification and Prediction
9. Mining Complex Types of Data
10. Data Mining Applications and Trend

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY | PGDIT

PROGRAMME CURRICULUM

Semester III

Software Quality Management

1. Introduction to Quality
2. Software Configuration Management
3. Validation and Verification
4. Software Metrics
5. Defect Management
6. Quality Improvement
7. Software Quality Models
8. Internal Audit
9. Organizing QA Function and Quality Culture
10. Software Quality Assurance

Introduction to Data Science, Machine Learning and AI

1. Basics of Data Science
2. Big Data, Datafication & its impact on Data Science
3. Data Science Pipeline, EDA & Data Preparation
4. Data Scientist Toolbox, Applications & Case Studies
5. Basics of Machine Learning
6. Supervised Machine Learning
7. Unsupervised Machine Learning
8. Deep Learning
9. Artificial Intelligence
10. Business Intelligence
11. Web Analytics

Software Documentation

1. Introduction to Software Documentation
2. Principles of Technical Writing
3. Types of Software Documents
4. System Documentation
5. System Maintenance Documentation
6. Operations Manual
7. User Documentation/ User Manual
8. Software Documentation Metrics
9. Software Documentation Standards

E-Business

1. Computer Network
2. Web Publishing
3. E-Commerce
4. The Web Presence
5. E- Marketing
6. Technologies for E-Commerce
7. Electronic Data Interchange (EDI)
8. E-Payment
9. E-Security
10. E-Services
11. E-Business- An Evaluation
12. E-Business Intelligence
13. M-Commerce
14. The impact of e-business on different fields and industries
15. Case Studies

Information Security Management

1. Introduction to Information Security
2. Access Control
3. Communications Security
4. Risk Management and Business Continuity Planning
5. Policy, Standards and Organisation
6. Computer Architecture and Systems Security
7. Application Program Security
8. Computer Operation Security
9. Physical Security
10. Law, Investigation and Ethics

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY | PGDIT

PROGRAMME CURRICULUM

Semester IV

Current Trends in IT

1. Pervasive Computing
2. Unified Communication and Collaboration (UCC)
3. Disruptive Technologies
4. Virtual Reality
5. Big Data
6. Crowdsourcing
7. Gartners' Trends- I
8. Gartners' Trends- II
9. The Indian Scenario-Road ahead

Business Process Modeling

1. Introduction to Business Processes
2. Business Process: Concepts and Fundamentals
3. Essentials of Process Modeling
4. Business Process Mapping
5. Business Process Analysis and Modeling
6. Business Process Analysis and Modeling - Tools and Methods
7. Business Process Architecture & Approaches
8. Business Process Reengineering - Concepts and Applications
9. Business Process Automation
10. Business Process Intelligence

Cloud Computing

1. Introduction to Cloud Computing
2. Principles of Parallel Computing
3. Principles of Distributed Computing
4. Virtualization
5. Virtualization- Technology Examples
6. Cloud Computing Architecture
7. Aneka: Cloud- Application Platform
8. Concurrent Computing: Thread Programming
9. Concurrent Computing: Multithreading with Aneka
10. High-Throughput Computing: Task Programming
11. Cloud Platforms in Industry – I
12. Cloud Platforms in Industry – II
13. Cloud Applications – I
14. Cloud Applications – II

Project

Student is required to submit a project by the end of Semester IV. A student should choose a technical or Techno-business topic of his/her interest and is required to develop the Project based on the provided guidelines.