

## Program Curriculum

### SEMESTER I

#### Principles & Practices of Management

1. Business - The Purpose of Management
2. Designing Organisation for Business
3. Need for Managing Organisation & 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 & Cultural Dimensions of Business Comm.
4. Listening
5. The Writing Process – Planning
6. Writing Process: Organizing, Composing & 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
16. International Business Communication

#### Information Technology Concepts

1. Introduction to Information Technology
2. Software & Hardware Services
3. Operating Systems
4. Networking & Security
5. Mobile Computing
6. Social Media
7. Fundamental of Data ware house
8. Data Warehouse Architecture
9. Data Warehouse & OLAP Technologies
10. Introduction to Data mining
11. Mining Association Rule
12. Data Mining Applications and Trends

#### 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 & Security
8. Normalization
9. Transaction Management
10. Concurrent Execution
11. Solved Examples
12. SQL Syntax

#### Algorithms & 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

## Program Curriculum

### SEMESTER II

#### Business Requirement Analysis

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

#### Project Management (IT)

1. Software Project Management Concepts
2. Project Initiating
3. Managing Scope of the Project
4. Estimating & Scheduling
5. Managing Cost
6. Managing Quality
7. Managing Team
8. Managing Communication
9. Managing Risks
10. Software Configuration Management
11. Current Trends in Project Management (IT)
12. Project Management Framework

#### Business Process Modeling

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

#### Software Engineering with UML

1. Introduction to Software Process Models
2. Software Project Planning & Estimation
3. System Engineering & Business Process Engineering
4. System Modelling & UML – I
5. System Modelling & UML – II
6. Design Concepts & Principles
7. Architectural Design
8. UML Tools

#### Software Testing & Agile Methodology

1. Fundamentals of Testing
2. Testing throughout the SDLC
3. Static Testing
4. Test analysis & Design
5. Managing test activities
6. Testing tools
7. Agile Manifesto & Principles
8. Scrum
9. Scrum for Software Development
10. Agility Measures
11. Agile & other Frameworks
12. Lean Six Sigma

## Program Curriculum

### SEMESTER III

#### Software Quality Management

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

#### Introduction to Data Science, Machine Learning & AI

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

#### 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 Manual
8. Software Documentation Metrics
9. Software Documentation Standards
10. Software Documentation Tools

#### E-Business

1. E-business strategy
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 & Industries
15. Case Studies

#### Information Security Management

1. Introduction to Information Security
2. Access Control
3. Communications Security
4. Risk Management & Business Continuity Planning
5. Policy, Standards & Organization
6. Computer Architecture & Systems Security
7. Application Program Security
8. Computer Operation Security
9. Physical Security
10. Law, Investigation & Ethics
11. Overview of ISO27001, Overview of ISO22301

**Program Curriculum****SEMESTER IV****Latest Trends in IT**

1. Pervasive Computing
2. Unified Communication & Collaboration (UCC)
3. Disruptive Technologies
4. Augmented and Virtual Reality
5. Crowdsourcing
6. Gartner's' Trends
7. The Indian Scenario-Road ahead
8. Microsoft Tools
9. IOT
10. Block Chain

**Cloud Computing**

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

**Business Applications & 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 & Case Study
10. ERP Domains

**Project**

Student is required to submit a project by the end of the semester 4