

SEMESTER III

Course Title: I.T. PROJECT MANAGEMENT

Course Code: CSIT705

Course Objectives:

IT Project management is an area of project management that has an emphasis on computer technology. Often projects failure due to the approach towards its implementation. Software project management consists of the various methodologies and tools that assist in the successful completion and implementation of an Software project. This course covers the nitty-gritties of project management where students will learn what project management involves and how to approach it successfully.

Course Contents/Syllabus:

Module I

Introduction to Project, Project Management and IT Project Management. Project dimensions, Portfolio Management, Program Management, and Relationship between Project, Program and Portfolio Management. Project vs. Operations Management, PMO Functions, Enterprise environmental factors. Role of Project Manager and Competences of Software Project Manager, Stakeholders, Project Roles, Role of Organisations Culture, Style and Structure on Project Management, Product and Project Life cycle. Process Overview, Project Management Process Interaction, Introduction to PMI Process Groups and Knowledge Areas, Project and Product Life cycles. Software Development Product Life Cycle Processes and Activities, SDLC selection criteria.

Module II

Project Charter, Develop Project Management Plan, Direct and Manage Project Execution, Monitor and Control project work, Perform Integrated Project control, Close project or phase. Define goal and scope, Verify scope, Control Scope, Flexibility Matrix, Creating Project Charter, SPMP, Approaches to create WBS. Define Activities, Sequence Activities, Dependencies consideration, Estimate Activity Resources, Estimate Activity Duration, and Activities for various Life Cycle Models.

Module III

Different Size Measures, process of Estimating the Size of a software, Reuse Estimation, LOC, Function points. Scheduling fundamentals, Gantt Charts Control Schedule, PERT, CPM Scheduling Levelling Resource Assignment, Crashing and Fast Tracking. Implementation on MS Project 2010.

Module IV

Project Cost Management, Effort Measures, Types of Cost Estimates Model, Cost Estimation Tools and Techniques, COCOMO Cost Estimation Model, Problems with Cost Estimation, Cost

Budgeting, Preparing Cost Baseline. Project Progress Management Earned Value Management and Earned Value Tracking.

Module V

Risk Management Introduction, Risk Management Models, Risk Identification, Analysing and Quantifying Risks. Monitoring and Controlling Risks, Risk Categories, Sensitivity Analysis, Risk response Planning Developing Risk Management Plan. Quality planning, Quality Assurance, Quality Control, Total Cost of Quality, Building SQAP. Keys to Managing People, HRP, Acquiring, developing and managing the Project Team, Resource Assignment, Loading and Levelling. Communication Planning, Information Distribution, Performance Reporting, Managing Stakeholders. Planning purchase and acquisition, Planning Contracting, Administering the Contract and Closing the Contract. Identification of objects in s/w conf., version control, change control, configuration audit, status reporting. Handling challenges of Large Projects.

Text & References:

- PMI-PMBOK 4th Edition
- Shaffer & Shaffer(2006),Quality Software Project Management, Pearson Education.
- Hughes B & Cotterell M (2010), Software Project Management, Tata McGraw-Hill
- Leffingwell D (2009), Managing Software Requirements: A Unified Appr
- Henry J (2009), Software Project Management, Pearson Education

Course Title: Business Intelligence & Data Analytics

Course Code: CSIT709

Course Objectives:

Data mining is the discovery of hidden information from historical data. With data mining, it is possible to better manage product warranties, predict purchases of retail stock, unearth fraud, determine credit risk, and define new products and services. This course introduces basic data mining technologies and their use for business intelligence.

Course Contents/Syllabus:

Module I : An Overview of Business Intelligence, Analytics and Decision Support

A Framework for Business Intelligence (BI). Intelligence Creation Use and BI Governance. Transaction Processing Versus Analytic Processing. Successful BI Implementation. Analytics Overview. Brief introduction to Big Data Analytics.

Module II Data Warehousing

Data Warehousing Process Overview. Data Warehousing Architectures. Data Integration and the Extraction, Transformation, and Load Processes. Data Warehouse Development. Data Warehousing Implementation Issues. Real-Time Data Warehousing. Data Warehouse Administration, Security Issues and Future Trends

Module III Business Reporting, Visual Analytics and Business Performance Management

Business Reporting Definitions and Concepts. Data and Information Visualization. Different Types of Charts and Graphs. The Emergence of Data Visualization and Visual Analytics. Performance Dashboards. Business Performance Management. Performance Measurement. Balanced Scorecards. Six Sigma as a Performance Measurement System

Module IV: Data Mining

Data Mining Concepts and Applications. Data Mining Applications. Data Mining Process. Data Mining Methods. Data Mining Software Tools. Data Mining Myths and Blunders.

Module V: Text and Web Analytics

Text Analytics and Text Mining Overview. Natural Language Processing. Text Mining Applications. Text Mining Process. Sentiment Analysis. Web Mining Overview. Search Engines. Web Usage Mining (Web Analytics). Social Analytics

Module VI Big Data and Analytics

Definition of Big Data. Fundamentals of Big Data Analytics. Big Data Technologies. Data Scientist. Big Data and Data Warehousing. Big Data Vendors. Big Data and Stream Analytics. Applications of Stream Analytics

Module VII Analytics: Emerging Trends and Future Impacts

Location-Based Analytics for Organizations. Analytics for Consumers. Recommendation Engines. The Web 2.0 Revolution and Online Social Networking. Cloud Computing and BI.

Impacts of Analytics in Organizations: An Overview. Issues of Legality, Privacy, and Ethics. The Analytics Ecosystem

Text Book:

- Business Intelligence: A Managerial Approach (2011) Turban, Sharda, Delen, King, Publisher: Prentice Hall, Edition: 2nd, ISBN: 13-978-0-136-
- Business Intelligence Roadmap: The Complete Project Lifecycle for Decision-Support Applications by Larissa T. Moss

Reference Text

- The Visual Display of Quantitative Information by Edward R. Tufte
- Business Intelligence: Making Better Decisions Faster by Elizabeth Vitt , Michael Luckevich, Stacia Misner
- Business Intelligence Competency Centers: A Team Approach to Maximizing Competitive Advantage (Hardcover)by Gloria J. Miller

Course Title: E-Business and Trade**Course Code: CSIT723****Course Objectives:**

To acquaint the students with basic principles e-commerce and to develop a broad understanding of e-business and its dimensions, including driving forces and impact on business, individuals, culture, and global economics. Also, to know the various aspects of e-commerce transactions.

Course Contents/Syllabus:**Module I: Foundation of Digital-commerce**

Digital Commerce Foundation. Definitions Advantages and Limitations of EC. The Driving Forces behind EC. Impact of Digitization on business operations. Launching a Business on the Internet. Digital Challenges of a traditional management strategy

Module II: Digital Business Models

E-business: Characteristics. What is a business model. Digital as a business model. Digital business models in practice. Asymmetric business models – creating unfair advantage

Module III: B2B Marketing

What is B2B Marketing. Push & Pull and the 4W's Approach. B2B: Product Marketing. B2B: Price Marketing. B2B: Promotion Marketing. B2B: Place Marketing

Module IV: E -Security & Electronic Payment Systems

Electronic Payment Media. Payment System Models. Cyber Banking. Risks in Cyberspace. Protection and Recovery. Encryption

Module V: Emerging Trends in Digital Business

New trends & technologies (cloud computing, mobile and tablet apps, etc.). Embedding new technology in organisations. Developing competitive advantages through technology. Communities of practice, diverse venture teams and socio-technical systems needed to create successful digital models. The creation and development of a digital transformation plan

Text Reading:

- Turban, Lee, King and Chung, Electronic Commerce- A Managerial Perspective, Pearson Education
- Awad Elias M, 2004, Electronic Commerce: From Vision To Fulfillment Prentice Hall, 4th Edition

References:

- Joseph P T, 2000- Electronic Commerce: A Managerial Perspective Prentice Hall.
- Ravi Kalakota and Andrew B Whinston, 2002, Frontiers of Electronic Commerce Addison Wesley

- Parag Diwan and Sunil Sharma, 2002, Electronic Commerce (Excel Books, New Delhi)
- Kenneth Laudon and Jane Laudon – Management Information Systems: Managing the Digital Firm 2005, (Ninth Edition) Prentice Hall.
- Raymond Frost and Judy Strauss, 2002, "E Marketing", Prentice Hall

Course Title: SYSTEM ANALYSIS & DESIGN

Course Code: CSIT729

Course Objectives:

The objective of this course is to provide adequate understanding of systems concept, system analysis, and systems design, which would help them in having efficient and workable information system for management. To provide an understanding the role of Hardware and Software for realizing organizational Objectives and automation. To provide an understanding of the role of systems analyst and software development firms for their role in distributing meaningful ERP modules and other business intelligent system. To provide an understanding of the role of system analysis and design within various systems development stages. To develop an awareness of the different approaches that might be taken to systems design. To understand the activities of the management and systems analyst, and in the overall development of system. To develop an understanding of Testing software and complying the various software quality parameters. To develop an understanding of how to migrate old data within newly developed system with the help of various techniques.

Course Contents/Syllabus:

Module I – Understanding System Concepts and Use within Industry

Importance and Meaning of System, Role of system / Information system in creating effective organization, Role of system / information system in value generation within organizational level/structure Role of automation system in business process and integrated business modules- manufacturing and service industry Traditional verses Online based ERP system Types of Systems and its element.

Module II – Understanding System Analysis and Design

Understanding the meaning of System Analysis and Design Figure out various reasons for Conducting system analysis Role of Management in conducting system analysis to cater competition and incorporating latest technology within the process Role of Software development firms-SAP, ORACLE, BAAN, PEOPLESOFT, MICROSOFT and GOOGLE in providing ERP and Business Intelligent Software/System. Role of System Analyst and its function Attributes of System Analyst

Module III – Requirement Determination and Development Life Cycle

Understanding the needs for developing/upgrading system Defining the type of system-Integrated, stand alone, Automated and Online based System Methods / tools used for collecting and recording facts and requirements from users Various system development tools- Computer Aided Software Engineering (CASE), Joint Application Development (JAD) and Rapid Application Development (RAD) Introduction of System Development Life Cycle (SDLC) and Agile

Module IV Feasibility Study and Negotiation

Understanding / Importance of Feasibility Study/ Analysis Various Consideration while conducting Feasibility Study Steps of Conducting Feasibility Study Understanding feasibility Aspects: - Economical, Technological and Behavioral Understanding the system performance

aspects- Data Center, Traditional HDD verses SSD, RAID, Integration of hardware and Software and Mainframe by giving examples of YouTube, Flipkart and Google Services Preparing Feasibility report and presenting final draft for system proposal Negotiation strategy

Module V- System Analysis, Design and Testing

Understanding the structured Tools- System Flow Chart, Data Flow Diagram, Data Dictionary, Decision Table, Decision Tree, and structured English for defining system specification with examples. Designing candidate system using structured tools Steps in Designing system Designing of –output system, input system, process, file design/Data base and interfaces Understanding the role of testing and its types Understanding the various software quality assurance

Module VI – System Implementation/ Maintenance and Review

Understanding the importance of Implementation within organization Training to the Users on candidate system Conversion Strategy / integrating old system into new system Choosing the best implementation strategy Maintenance plan/ AMC Review of organizational effectiveness Understanding the various reasons for success and failure of ERP system within organization

Text & References:

- Avison, D. and Fitzgerald, G. Information systems development: methodologies, techniques and tools, McGraw-Hill
- Silver and Silver, System Analysis and Design, Addison Wesley
- James A. Senn-Analysis and Design of Information Systems
- System Analysis and Design, Elias M Awad

Course Title: Web based Business Process

Course Code: CSIT717

Course Objectives:

To acquaint the students with basic principles of the principles of the Internet and the World Wide Web, to develop a broad understanding of digital customers;

Course Contents/Syllabus:

Module I : Web enabled Business fundamentals

Internet Basics: Internet, Intranet, Extranet, Portals, Web and Wireless, e-Business & e-Marketing. Markets (including B2C, B2B and C2C), the web media landscape - key trends emerging trends, the impact of web on businesses. How significant is web in doing businesses?

Module II: Virtual Value Chain

The Virtual Value Chain: Marketplace vs. Market space - Visibility, Mirroring Capability and New Customer Relationships - The Network Economy - "Moore's Law" and "Gilder's Law" - E-Marketplaces and Economic Impacts, Consumer Behavior on the Internet: Demographic, geographic, psychographic and behavioral factors.

The Web Marketing Mix: Continuum of purely virtual to purely physical products- Product in the Internet Marketing Mix - presenting product online, building a brand – Price in the Internet Marketing Mix - Importance of price competitiveness to e-Business - Place in the Internet Marketing Mix : the importance of fulfillment, logistical considerations- Promotion in the Internet Marketing Mix - reaching the e-consumer

Module III: Understanding Online Customer

Understanding customer on the Internet: Motivations for shopping on the net – attributes of online shopping, Sources of data collection on the web, (HitWise, comScore demos), Using surveys, Observational research - click-tracking, heat-mapping ,Third-party data sources, Site centric systems. Principles of website design: customer experience and usability: Alternative approaches to website design, Usability and accessibility, researching your site visitors

Module IV : Planning and managing website development:

The role of the website, Planning and briefing web projects - internal stakeholders and selecting / briefing external partners , The project plan - key elements to be included, Web technologies - CMS, XHTML, CSS, mash-ups, XML feeds, AJAX etc., video streaming and rich media, Information architecture - planning customer journeys. Principles of effective website design: content, page layout, style sheets and navigational tools, Copywriting for the web. Wireframes - testing and implementing website designs, Budgeting for web projects

Module V: Customer Experience on the web

Customer Experiences on the Web: The web's 'unique capabilities' – Interactive communications with customers for - organizational learning, service capability, convenience. Application of web in different businesses: Marketing, Accounting, Human Resource, Advertising, Operations.

Regulation, permission and codes of practice: An overview of today's online legal environment - key legislation affecting web businesses, Intellectual Property Rights - how to protect your assets online, Data Protection - everything you need to know about protecting customer data, Digital signatures, Global trading perspectives, Domain names and registered trademarks (TM) online, Social media and the law - what are the implications of Wikis, blogs, peer-2-peer communities etc, Web analytics - what are the options and their respective benefits? Module I : Web enabled Business fundamentals 10%. Internet Basics: Internet, Intranet, Extranet, Portals, Web and Wireless, e-Business & e-Marketing. Markets (including B2C, B2B and C2C), the web media landscape - key trends emerging trends, the impact of web on businesses. How significant is web in doing businesses?

Text & References:

- Joseph P T, 2000- Electronic Commerce: A Managerial Perspective Prentice Hall.
- Ravi Kalakota and Andrew B Whinston, 2002, Frontiers of Electronic Commerce Addison Wesley
- Parag Diwan and Sunil Sharma, 2002, Electronic Commerce (Excel Books, New Delhi)
- Kenneth Laudon and Jane Laudon – Management Information Systems: Managing the Digital Firm 2005, (Ninth Edition) Prentice Hall.
- Raymond Frost and Judy Strauss, 2002, "E Marketing", Prentice Hall
- Online Marketing- Richard Gay, Alan Charlesworth and Rita Esen,
- Understanding Digital Marketing –Damian Ryan and Calvin Jones

SEMESTER IV

Course Title: ENTERPRISE MANAGEMENT

Course Code: CSIT723

Course Objectives:

Today Enterprise comprises of various stakeholders, such as employer, partners, customers and managing them is the key factor. This course is designed to provide a comprehensive insight into theoretical foundations, concepts, tools and current practice of enterprise systems. This course exposes students to core business processes and how these processes are implemented with enterprise resource planning (ERP) systems in organizational settings.

Course Contents/Syllabus:

Module I Decision Support and Business Intelligence

Managerial Decision Making and Information Systems, Decision Support Developments, Executive Information Systems, Data Warehousing, Access, Analysis, Mining and Visualization, Group Decision Support Systems, Intelligent Decision Support Systems, Knowledge-based Decision Support Systems, Knowledge Acquisition and Validation, Knowledge Representation, Knowledge Management

Module II Overview of ERP Systems and Business Processes

e-Business Backbone, Introduction to ERP, Mapping business processes in an organization and case for process improvement (BPR), Managerial issues in implementing ERP systems for organization- Risks and Benefits, Implementation Drivers: Critical Success Factors, Implementation Models, Selection Process, “ERP gone bad” Lessons from real-world failures. ERP and Related Technologies, Extending ERP systems to suppliers and customers. (SRM, CRM, SCM), Emerging Trends in Enterprise Systems,

Module III e-CRM

Commerce in the 21st century, e-Business Models, Enterprise 2.0, Social CRM and CMR – social networks, wikis, blogs, e-Marketing, e-CRM, e-Business Security/Payment Services, Sales 2.0, Sales Intelligence, Analytics.

Module IV Enterprise Systems and Supply Chain Management

Collaborative Value chain, Overview of Enterprise Systems and Supply Chain Business Processes, The sales order-to-cash process and purchase-to payment, The Procurement Process and SRM Systems, eSCM, e-Procurement, Integrated Processes and Supply Chain, VRM, Logistics Activity Profiling and Mining, Logistics Information Systems, Web Based Logistics, OLTP

Text & References: Turban, Efraim; Sharda, Ramesh; Delen, Dursun Decision Support and Business Intelligence Systems Leon, A., “Enterprise Resource Planning”, Tata McGraw-Hill, INDIA Paul Greenberg, CRM at the speed of light, , Tata McGraw-Hill, INDIA Essentials of Business Processes and Information Systems Simha Magal and Jeffrey Word. ISBN-13: 978-0-470-23059-6 Integrated Business Processes with ERP Systems (2010),

Course Title: INFORMATION SECURITY & RISK MANAGEMENT

Course Code: CSIT726

Course Objectives:

This course focuses on the fundamentals of information security that are used in protecting both the information present in computer storage as well as information traveling over computer networks. Interest in information security has been spurred by the pervasive use of computer-based applications such as information systems, databases, and the Internet. Information security has also emerged as a national goal in the United States and in other countries with national defense and homeland security implications. Information security is enabled through securing data, computers, and networks. In this course, we will look into such topics as fundamentals of information security, computer security technology and principles, access control mechanisms, cryptography algorithms, software security, physical security, and security management and risk assessment. By the end of this course, you will be able to describe major information security issues and trends, and advise an individual seeking to protect his or her data.

Course Contents / Syllabus:

Module I: Introduction of Information Security

Goals of Computer Security . CIA triangle, Identifying the Assets, Threats, Impact, vulnerabilities, User Authentication, System Access Control, Password Management, Privileged User Management, User Account Management , Data Resource Protection , Sensitive System Protection, Cryptography, Intrusion detection , Computer-Security Classifications

Module II: Computer Security

Hardening (Operating System and Application Code, File System Security, Local Security Policies, Services, Default Accounts), Network Activity, Malicious Code, Firewall , Fault Tolerant System , BACKUP and UPS

Module III: Network Security

Network security issues, threats & solutions, cryptography, algorithms (encryption, substitution, sequential and random, transposition), crypto-analysis, methods of breaking these algorithms.

Module IV: Disaster Management

Types of Disaster, Challenge in Global operations, Understanding disaster recovery & business continuity, Business Continuity Management, Preparing BCP – a 10 step process, case (eg WTC)

Module V: Management of Security taking Windows OS as example (Practical)

Security Management , Users and Groups Management , Managing Local and Global Groups, Managing User Accounts , Windows NT Domain Management,, Registry Management , Logical Structure , Physical Structure , DNS Management , Managing Group Policy, User Authentication Management, Creating Domain User Accounts, Files and Folder Management, Files and Folder Permission Shared Resources Management, Encrypting File System (EFS)

Text:

- D.P. Sharma, E-retailing Principles and Practice, Himalaya Publications
- Carroll & Broadhead, Selling Online: How to Become a Successful E-Commerce Merchant, Dearborn publishers
- Janice Reynolds, The Complete E-Commerce Book: Design, Build, and Maintain a Successful Web-Based Business, CMP Media.
- Dennis, Fenech & Merrilees, E-retailing, Routledge Press
- Levy & Weitz, Retailing Management, Tata McGraw Hill

Course Title: BUSINESS PROCESS MANAGEMENT

Course Code: CSIT715

Course Objectives:

The course addresses the methods and techniques required to analyze, design, implement, automate, and evaluate business processes. Structured along the phases of the Business Process Management (BPM) life cycle, students learn to analyze organizational performance from a process perspective, redesign processes using value-focused techniques, design workflows and implement them in BPM systems. Upon completion of this course participants will be able to assess the efficiency and effectiveness of an organization from a process perspective, conduct process improvement projects, and determine the role of technology in supporting corporate processes.

Course Contents / Syllabus:

Module I: Business Process Optimization

Understanding Business Process, Cross functional business process, .Business process optimization, Work flow automation, and value chain. BPM road blocks

Module II Business Process Management Life Cycle

Implementation of Business Process Life Cycle. Business Modeling, Process Design, and Optimization. BPM best practices

Module III Module III: Introduction to Data Modeling Techniques

Methodology, tools and techniques. Systems Modeling, Logical and Physical Models, Data Modeling, Types of Data Modelling, Entity relationship Diagram, Entity, Types of Entities, Attributes, Types of Attributes, Domain

Module IV: Introduction to Modern Structured Analysis

Methodology, tools and techniques, process and concepts - Decomposition, Decomposition Diagram, Logical Process and conventions, Structured English, Decision Table, Event Decompositions Diagram, Developing DFD, information engineering, Prototyping, Rapid Application Development model driven development. BPM trends

Module V: Introduction to Object Oriented Analysis & Modeling

Reading and interpreting an object model, describing object modeling in the context of systems analysis with the help of class diagram, state diagram and event diagram.

Text:

Harmon, Paul: Business Process Change. A Guide for Business Managers and BPM and Six Sigma Professionals. 2nd Edition, Morgan Kaufmann, San Francisco, ISBN-10: 0123741521 ISBN-13: 978-0123741523. Metters, King-Metters, Pullman, Walton (2007) Business Process Management. Davis, R.: An Introduction to Business Process Modeling: getting started with BPM, (1st ed.) Springer, New York, 2007. □ Dumas, M.; van der Aalst, W.M.P. and A.H.M. ter Hofstede (eds.): Process-Aware Information Systems.