

Course Title: MIS and E-Business

Course Code: CACS301

Year/Semester: III/V

Class Load: 5Hrs. /Week (Theory: 3Hrs, Practical 2Hrs.)

### Course Description

This course provides the fundamental knowledge of Management Information System and E-Business and its associated infrastructure, security and protection issues, payment system and ultimately live implementation of any web application in Web server.

**Objectives:** The general objectives of this course is to know fundamental knowledge of MIS/E-Business and implement the web application in Web Server.

#### Unit 1:

**Introduction to E-Commerce:** Definitions and Concepts; Defining E-Business; Pure Versus Partial EC; EC Framework, Classification of EC; Benefits of E-Commerce; Electronic Markets; Role of Internet and Web in E-Commerce; The Limitations and Barriers of EC; Social Networks and Social Network Services; **M-Commerce:** Concept, Scope, Attributes, Benefits; Location-based I-commerce, I-Commerce Infrastructure, Location-Based Services and Applications. 7LH

#### Unit 2:

**The Network Infrastructure for E-Commerce:** Introduction to Information Superhighway (I-Way), Components of the I-Way, Internet as a network infrastructure. **Wireless Application Protocol:** Wireless Application Protocol (WAP); Architecture of WAP; Working of WAP; Wireless Technologies: ADSL, WiMAX, WLAN, WMAN Wi-Fi, UMTS (3G), LTE (4G), (5G NR). Security Issues related to Wireless Communications. 8LH

**Unit 3: Introduction to Management Information System:** Data, information, computer based information system (CBIS), Information System Resources, Management information system, Transaction processing (TPS) system, decision support system (DSS), and executive information system (EIS), *SCM, CRMS and International Systems:* Introduction, Supply Chain Management Systems, Customer Relationships Management Systems, enterprise systems and Challenges of Enterprise Systems Implementations- Managing the implementation, International Information Systems-Outsourcing and off-shoring. 8LH

**Unit 4: E-Commerce Security and Fraud Issues and Protections:** Basic EC Security Terminology, The Threats, Attacks, and Attackers, **EC Security Requirements:** Confidentiality, Integrity, and Availability, Authentication, Authorization and Nonrepudiation; Technical Malware attack: Viruses, Worms, and Trojan Horses, Heartbleed, Distributed Denial of Service, Cryptolocker, Page hijacking, Botnets, Malvertising, ransomware, sniffing; Non-Technical Malware attack: Social Phishing, Pharming, Identity

Theft and Identify Fraud, Spam Attacks; EC defense Strategy: access control(Authorization and Authentication, Biometric Systems), encryption and PKI (Symmetric Key Encryption, Asymmetric Key Encryption, Certificate Authority(CA), Secure Socket Layer (SSL). Securing e-commerce networks: Firewalls, Virtual Private Networks, Intrusion Detection Systems (IDS), intrusion prevention System (IPS). 10LH

#### Unit 5: E-payment systems:

Online payment cards (credit cards, charge cards, debit cards, smart cards), processing cards in online, credit card payment procedure, e-micropayments, e-checking and its processing in online. Automated clearing house (ACH) network, mobile payments (Digital wallet), mobile payment participants and issues, international payments, emerging EC payment systems and issues: crypto currency, virtual currency. A case study of emerging trends in online payment system in Nepal. 6 LH

#### Unit 6: Launching a Successful EC Website:

Planning Online Businesses (Business Plan, The cost-benefit, risk elements of a business case, funding a New Online Business, EC Model selection), The process of building a website, basic hierarchical website structure, website hosting and obtaining a domain name (cPanel management, upload EC site to the web Server), web content creation and management: (Web content, Categories and Types of Content, Content Management and Maintenance, Catalog Content and its Management), Website design criteria, Site Map and Navigation, Web page layout grid, Colors and Graphics, Website Usability, Performance, Website Promotion, implementation of Payments system, Website Promotion, Search Engine Optimization (SEO). 10LH

#### Laboratory Works:

32LH

Laboratory works should be done covering all the topics listed above and a project work should be carried out by individually implementing a fully functioning e-commerce web application along with payment system.

#### Text Book

Efraim Turban, D. K. (2018). *Electronic Commerce: A Managerial and Social Networks Perspective*. New York: Springer

#### References Book

Chaffey, D. (2009). *E-Business and E-Commerce Management: Strategy, Implementation and Practice (4th Edition)*. Harlow: Prentice Hall.

Kalakota, A. B. (1996). *Frontiers of Electronic Commerce*. Pearson.

Kenneth C. Laudon, C. G. (2014). *E-commerce: business.technology.society*. New York: Pearson Education Limited.

Kenneth C. Laudon, J. P. (2014). *Management Information System: MANAGING THE DIGITAL FIRM*. New York: Pearson Education Limited.

