Tribhuvan University
Faculty of Management
Office of the Dean

Course detail of
BIM (Bachelor of Information Management) 6th Semester

FIN 201: Business Finance	3 Cr. hrs
MGT 202: Human Resource Management	3 Cr. hrs
MGT 206: Business Environment in Nepal	3 Cr. hrs
IT 224: Software Engineering	3 Cr. hrs
IT 225: Computer Security and Cyber Law	3 Cr. hrs
IT 351: Summer Project	3 Cr. hrs

2016

FIN 201: Business Finance

Course Objective

The basic objective of this course is to impart basic knowledge and required skills of business finance to students to understand the nature and functions of finance and to professionally use the knowledge to analyze financial issues and take appropriate financial decisions and actions thereto.

Course Description

The course deals with nature of finance functions, financial statement and cash flow analysis, time value of money, risk and return, bond and stock valuation, capital budgeting analysis, and working capital management.

Course Details

Unit 1: Introduction   LH 3

Nature of business finance and role of a financial manager; Goals of the firm; Finance functions; The agency problem; Financial markets and the firm.463

Unit 2: Financial Statements, Taxes, Cash Flow and Analysis   LH 5

Nature of financial statements; The balance sheet; The income statement; Cash flow; Common size statements; Ratio analysis; The Du Pont identity; Using financial statement information

Unit 3: The Time Value of Money   LH 6

Concept of the time value of money; Future value and compounding – single and multiple periods; Present value and discounting – single and multiple periods; Present value vs. future value – multiple cash flows; Finding number of periods; Loan amortization
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Unit 4: Risk and Return   LH 7

Nature of risk and return; Expected returns and variances; portfolio analysis; Risk – systematic and unsystematic; Diversification and portfolio risk; Systematic risk and beta; The security market line; The SML and the cost of capital.

Unit 5: Bond Valuation and Interest Rates   LH 5

Bonds and bonds valuation; Bond ratings; Types of bonds; Bond markets; Inflation and interest rates; Determinants of bond yields.

Unit 6: Stock Valuation   LH 7

Features of common and preferred stocks; Common stock valuation – zero growth, constant growth, nonconstant growth and two stage growth; The stock markets – dealers and brokers, organization of stock exchange

Unit 7: Capital Budgeting Analysis   LH 8

Nature of capital expenditures; Significance of capital budgeting; Techniques of capital budgeting and decision rule – payback rule, average accounting return, internal rate of return and profitability analysis; Estimates of project cash flows; Role of depreciation; Evaluating NPV estimates; Replacement problems.

Unit 8: Working Capital Management   LH 7

Nature and objectives of working capital management; Cash management – objectives of cash management and cash budget; Receivables management – credit policy, credit period, cash discount and analyzing credit policy; Inventory management – nature of inventory, objectives of inventory management, economic order quantity and quantity discounts.

Basic Textbook:

Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan. ***Fundamentals of Corporate Finance***. New Delhi: Tata McGraw Hill Education Pvt. Ltd.

Reference Books:

James C. Van Horne and John M. Wachowicz, Jr. ***Fundamentals of Financial Management***. New Delhi: Prentice-Hall Limited.

Eugene F. Brigham and Joel F. Houston. ***Fundamentals of Financial Management***. Singapore: Thomson, South-Western.

MGT 202: Human Resource Management

Course Objectives
This course aims to develop student's understanding of the basic concepts, practices and approaches of human resource management.

Course Description
This course contains introduction, human resource planning, job analysis and design, recruitment and selection, training and development, performance appraisal, rewards management, Career development, employee grievances and disciplines, labour relations and labour Act of Nepal.

Course Details

Unit 1: Introduction   **LH 6**

Concept, characteristics, objectives, and components of HRM. HRM and Personal management, HRM environment (globalization, technological advances, nature of work, workforce diversity, and legal trends). Contemporary HR issues, challenges and responsibilities of HR manager.

Unit 2: Human Resource Planning   **LH 7**

Concept, characteristics, and importance. HRP process. Major HRP activities: assessment of current HR (HR inventory – management inventory and skills inventory, HR information system, and succession planning), HR demand and supply forecasting. Techniques of HR demand and supply forecasting.

Unit 3: Job Analysis and Design   **LH 6**

Job analysis: concept and terminology (task, job, position and occupation). Purpose and methods of collecting job analysis information. Job analysis Technique. Job description and job specification. Job design: concept, approaches and techniques (scientific management, Hertzberg's model, job characteristics, socio-technical, and team).

Unit 4: Employee Recruitment and Selection   **LH 5**

Recruitment: concept and sources. Selection: concept, and importance. Selection Process. Selection tests and interviews: concept and types. Recruitment and selection practices in Nepalese organization.

Unit 5: Training and Development   **LH 7**

Concept and needs of HR training and development. Training needs assessment. HR training: objectives and methods (on-the-job and off-the-job). Evaluation of training program. Management development: concept, objectives, and methods (on-the-job and off-the-job). Career planning and development, Mentoring and counseling; Training and development practices in Nepalese organizations.

Unit 7: Performance Appraisal   **LH 5**

Concept, uses and methods (simple ranking, alternative ranking, paired comparison, forced distribution, critical incident, behaviorally anchored rating scale). Appraisal interview. MBO approach to appraisal. Problems in performance appraisal.

Unit 8: Rewards Management   **LH 3**

Concept and types (intrinsic and extrinsic, financial and non-financial). Qualities of effective rewards, Types of employee benefits, practices of pay determination in Nepal.

Unit 9: Employee Grievances and Disciplines **LH 3**

Employee grievances: concept and handling grievances. Employee discipline: concept, causes, and process of managing discipline. grievances handling practices in Nepalese organizations.

Unit 10: Labor Relations and Labour Regulations in Nepal **LH 6**

Labor relations: concept, objectives, and actors of labor relations. Reasons for joining trade unions. Trade unionism: concept, functions and types. Collective bargaining: concept and process, Labor disputes: causes and settlement provisions. Features and provisions of Labour Act.

Addendum: At least one case will be administered at the end of each chapter. The students will also complete a project work and a few other assignments as specified by the faculty member.

References

Armstrong, M., *A Handbook of Human Resource Management*, NewDelhi: Aditya Books.

D.A. Decenzo and Robbins S.P., *Human Resources Management,* John Wiley and sons (Asia) Pte. Ltd. Singapore.

D.R. Adhikari, *Fundamentals of Human Resource Management.* Buddha Academic Publishers and Distributors Pvt. Ltd.

Cascio, W., *Managing Human Resources,* McGraw-Hill.

Labor Act of Nepal.

MGT 206: Business Environment in Nepal

Credits: 3
Lecture Hours: 48

Course Objectives

This course examines the economic, social, political, and legal interfaces between the business institution (especially the corporation) and the environment. The course intends to provide students with an overview of the environmental forces within which business must operate, and an understanding of some of the analytical tools that managers use to solve business and economic problems. The focus is to enable students to identify, understand and evaluate the environmental forces causing change in business performance and future strategic options.

Course Description

The topics include socio-economic, political-legal, technological, and global business environment, business-government relations, performance of industry and agricultural sectors, and financial sector policy reforms.

Course Details

Unit 1: Introduction   LH 5

Business and its environment, types of business environment, environmental analysis – process and techniques, scanning methods, use of environmental analysis in strategic management.

Unit 2: Macroeconomic Environment   LH 15

Dimensions of the economy, major problems and challenges facing Nepalese economy, employment trends and labour market issues, migration and foreign employment, economic development plans, industry and agricultural sectors – performance and emerging challenges, economic policies and reforms - industrial policy, privatization policy, trade policy, tourism policy, and monetary policy; liberalization of the Nepalese economy and capital market reforms, factors contributing to competitive business environment in Nepal.

Unit 3: Political-Legal Environment   LH 9

Political structure in Nepal, political parties, Nepalese Constitution, Government and its branches, business-government relations, risks involved with Nepalese political environment and the emerging issues, an overview of business legislation in Nepal, legislations relating to labour, finance, investment, intellectual property, e-business, and consumer protection.

Unit 4: Socio-cultural Environment   LH 5

Components of socio-cultural environment, family structure and social organizations, class structure and classification, socio-cultural changes and their effects on business.

Unit 5: Technology and Energy Management   LH 5

Business and technology, current status of technology, technology transfer issues, IT Policy of Nepal, natural environmental issues, energy situation in Nepal, and environment and energy management issues in Nepal.

Unit 6: Global Business Environment   **LH 9**

Concept of globalization – trends and issues, regional grouping of nations, regional trade agreements in South Asia – SAARC, SAPTA, SAFTA and BIMSTEC, foreign direct investment in Nepal, WTO and Nepal.

Basic Books

Pant, Prem R. *Fundamentals of Business Environment in Nepal*, Buddha Academic Enterprises.

Agrawal, Govind. *Dynamics of Nepalese Business Environment*. M. K. Publishers.

Business Legislations and related publications of the Government of Nepal.

IT 224: Software Engineering

Course Objectives
This module aims to introduce students with problems in large-scale software production. It should be associated with laboratory experiments to augment the concepts taught in the class.

Course Description
Introduction, software processes, Agile Software development, Requirements Engineering, System modeling, Architectural Design, Design and Implementation, Software testing, Software evolution, Sociotechnical Systems, Dependability and Security, Dependability and Security Specifications

Course Details

Unit 1: Introduction LH 3
- Professional software development
- Software engineering ethics
- Case studies

Unit 2: Software processes LH 3
- Software process models
- Process activities
- Coping with change
- The rational unified process

Unit 3: Agile Software development LH 5
- Agile methods
- Plan-driven and agile development
- Extreme programming
- Agile project management
- Scaling agile methods

Unit 4: Requirements engineering LH 5
- Functional and non-functional requirements
- The software requirements document
- Requirements specification
- Requirements engineering processes
- Requirements elicitation and analysis
- Requirements validation
- Requirements management

Unit 5: System modeling LH 4
- Context models
- Interaction models
- Structural models
- Behavioral models

- Model-driven engineering

Unit 6: Architectural design   **LH 5**
- Architectural design decisions
- Architectural views
- Architectural patterns
- Architectural architectures

Unit 7: Design and implementation   **LH 6**
- Object oriented design using the UML
- Design patterns
- Implementation issues
- Open source development

Unit 8: Software testing   **LH 4**
- Development testing
- Test-driven development
- Release testing
- User testing

Unit 9: Software evolution   **LH 3**
- Evolution processes
- Program evolution dynamics
- Software maintenance
- Legacy system management

Unit 10: Sociotechnical systems   **LH 3**
- Complex systems
- Systems engineering
- System procurement
- System development
- System operation

Unit 11: Dependability and security   **LH 3**
- Dependability properties
- Availability and reliability
- Safety
- Security

Unit 12: Dependability and security specifications   **LH 4**
- Risk-driven requirements specification
- Safety specification
- Reliability specification
- Security specification
- Formal specification

Text Book
Software engineering, Ian Sommerville, ninth edition
References

A software engineering approach to labVIEW, Jon Conway
Software engineering: A Practitioner's Approach, Roger Pressman
Software Engineering Best Practices: lessons from successful Projects in the top companies, Capers Jones

IT 225: Computer Security and Cyber Law

Course Objectives

This module aims to introduce the fundamental knowledge of computer security and the recent development in the enactment of cyber laws.

Course Description

Introduction to Computer Security, Cryptography and Cryptographic Algorithms, Introduction to Network Security, Digital Signatures and Authentication Protocols, Design Principles and Common Security related programming problems, Malicious Logic and protection, Intrusion Detection System(IDS), Web security and Email Security, Database Security, Policy and Procedures, Issues with Internet in college.

Course Details

Unit 1: Introduction to computer security   LH 5

Basic components of security (Confidentiality, Integrity and Availability), Security threats (Snooping, Modification, Masquerading, repudiation of origin, denial of receipt, Delay, Denial of service), Issues with security (Operational issues, human issues), Security Policies, Type of security policy, Access control, Type of access control (Introduction to MAC, DAC, Originator Controlled Access Control, Role Based Access Control) Overview of the Bell-LaPadula Model and Biba integrity model.

Unit 2: Cryptography and Cryptographic Algorithms   LH 4

Cryptography, Data Encryption Standard, Symmetric key Cryptography(Block and stream ciphers), Asymmetric key Cryptography, Public key Cryptography (RSA), Message Digest 5, Hash Function, Message Authentication Code (MAC).

Unit 3: Introduction to Network Security   LH 4

Fundamentals of Network security, Principal methods of protecting Network (Encryption, Decryption, Encryption in network), Network organization (Firewalls and proxies, Analysis of the network infrastructure), DMZ, Types of Firewalls(Packet Filtering, State-full Packet Filtering Circuit Level Gateway, Application level/proxy), IPSec, VPN.

Unit 4: Digital Signature and Authentication Protocols   LH 5

Authentication Basic , Password (Attacking a password system, countering password guessing, Password aging), Challenge Response, Biometrics, Location, Multiple Methods, ,Mutual (Symmetric, Public Key), One-way (Symmetric, Public Key) Digital

Signature, Direct Digital Signature, Arbitrated Digital Signature, Digital Certificate, X.509 Certificate, Authentication Protocols, Authentication Services, Kerberos V4, Digital Signature Standards (DSS) , DSS approach Vs RSA approach.

Unit 5: Design Principles and Common Security related programming problems   LH 4

Eight principles for the design and implementation of security mechanisms, Common Security related programming problems (Improper choice of initial protection domain, Improper Isolation of implementation detail, Improper change, Improper Naming, Improper de-allocation or deletion, Improper validation, Improper indivisibility, Improper Sequencing, Improper choice of operand or operation).

Unit 6: Malicious programs and Protection   LH 4

Computer Viruses and Worms, Rabbits and Bacteria Defenses (Sandboxing, Information flow metrics, reducing the rights, malicious logic altering files, proof carrying code and notion of trust). Antivirus and features.

Unit 7: Intrusion Detection   LH 4

Intruders, Intrusion techniques, Intrusion detection (Anomaly modeling, misuse modeling, specification modeling), Architecture (Agent (Host based information gathering, Network based information gathering, combining sources), Director, Notifier), Organization of intrusion detection system (Monitoring Network traffic for Intrusions(NSM), combining host and network monitoring (DIDS), Autonomous Agents(AAFID)), Intrusion Response (Incident prevention, Intrusion Handling (Containment Phase, Eradication Phase, Follow-up Phase).

Unit 8: Web security and Email Security   LH 5

Web security, Threats, SSL (Architecture, Handshake protocol, Handshake protocol action), overview of TLS and HTTPS, Secure Electronic Transaction overview, Dual Signature, Payment Processing, E-Mail, SMTP, PEM, PGP, Concept of Secure Email.

Unit 9: Database Security   LH 5

Issues regarding the right to access information, system related issues: system levels: physical hardware, Operating system, DBMS level, Multiple security level and categorization of data and users, Loss of integrity, Loss of availability, Loss of confidentiality, Access control, Inference control, flow control, data encryption.

Unit 10: Policy and Procedures   LH 3

Computer Crime and Categories, Cyber Crime, Digital Forensics (overview of (Digital Evidence, Investigation Procedures, Categories of evidence (Impressions, Bioforensics, Trace evidence, Material evidence)), Intellectual Property Rights, Copyrights, Trademarks, Patents Licenses, Agreements, Plagiarism, Digital rights management,

Privacy protection, Cyber Law, Electronic Transaction Act, Electronics Transaction Rules, IT Policy, Information Security and policies.

Unit 11: Issues with Internet in college   LH 5

Cyberbullying: Curbing student use of technology to intimidate and harass others; Student use of the Internet: Reducing inappropriate Internet behaviors; Staff use of the Internet: Drawing a Line between teachers' public and private lives; Privacy and security: Protecting student information; The school as an Internet service provider: Providing access and protecting students; Copyright law in the classroom: steering clear of legal liability; Policies, procedures and contracts: communicating expectations to teachers, students and parents; Ethical Issues: Developing responsible internet citizens

References

Bishop M, Venkatramanayya S. S, Introduction to Computer Security

Stallings W. Cryptography and Network Security

Bishop M, Computer Security Art and Science

Pfleeger C. P., Pfleegar S. L., Security in computing.

Kaufman C., Perlman R., Speciner M.: Network Security: Private Communication in a Public World.

Electronic Transaction Act(ETA), Government of Nepal.

Electronic transaction Rule (ETR), Government of Nepal.

IT policy Of Nepal.

Copyrights Acts, Government of Nepal.

Eoghan Casey Handbook of Digital Forensics and Investigation, Academic Press, 2010, 2e.

Katz J., Lindell Y. Introduction to Modern Cryptography. CRC Press, 2007.

Cyber Law: Maximizing safety and Minimizing risk in classrooms, Aimee M. Bissonette, Worwin