MGT 421 Management Information System

	Theory	Practical	Total
Sessional	30	20	50
Final	50	-	50
Total	100	-	100

Objectives:

1. *To provide the basic knowledge of information and it application*
2. *To provide the conceptual knowledge of information system specially the use of MIS*
3. *To provide application of KDD for knowledge generation*
4. *To provide the concept of the knowledge management with the use of ICT.*

Course Description:

This course covers the all of today's leading edge technologies explaining their relationship to organization and management and emphasize, how managers can and should be involved with system planning, development, and implementation. The course also present several electronic commerce projects to provide students through a deep exploration of Internet-based electronic commerce functions such as ordering products, making travel arrangements, finding investment support unities.

Course Contents:

Unit I: Information and System Concept **6 hours**

Data and Information, Introduction, Difference between data and Information, Types of Information Component/Dimension of Information, Quality, Cost and value of Information, Organization Dimension of Information (Information Flow and granularity), System: System Concepts with general model, Elements of a system, Types of System, Subsystem, Feedback Control, Systems approach to organization, Application of System Concepts, Mini cases related to Feedback Control

Unit II: Information System **2 hours**

Introduction of IS, Components of I formation System, Types of Information System (Office Information System, Transaction Processing System, Management Information System, Decision Support System, Integrated Information System etc.)

Unit III: Management Information System **4 hours**

Definitions, Historical Development of MIS, Characteristics of MIS, Components of MIS, Advantages and Disadvantages of MIS, Role of MIS, Importance of MIS for Managers, Simple Case study

Unit IV: Strategic and Competitive Opportunities **4 hours**

Introduction, Organizational Horse Power (OHP), The Strategies for Increasing OHP, Selecting and Adopting Organizational Horsepower Strategies, Simple Case Study

Unit V: Data warehouse and Data Mining **9 hours**

Preview of Introduction to data, information, field, record, table, file, database, data repository and data warehouse, Database Management system, Types of data, Objectives of Data base approach, Data base system and Hierarchy. Knowledge discovery in database (KDD), KDD process, Need for a data warehouse, Building a data warehouse, Data warehousing Terminologies, OLTP and OLAP with differential table, Data Mart, Metadata, Drill-down and Roll-up Analysis, ROLAP and MOLAP

Star and Snowflake Schemas, Data Mining, Classification of Data Mining Algorithm, Data Mining Techniques, Implementation of Data warehouse and Data Mining (Lab.)

Unit VI: Decision support system and Artificial Intelligence **9 hours**

Concept of Decision support System (DSS), Components of DSS, Phases of Decision Making Process, Types of DSS, Group Decision Support System (GDSS), Phases of GDSS process Components of GDSS, Geographical Information System, Artificial Intelligence and types Expert System, Components of Expert System, Neural Networks, Genetic Algorithms, Intelligent Agent, Combining IT Brainpower System, Executive Information and Support Systems, Enterprise & Executive Information System Concept and Definition, Information needs of Executives, Characteristics and, benefits of EIS, Comparing and Integrating EIS and DSS, Case study

Unit VII: Managing IT System **3 hours**

Managing Information, Managing Information Technology, Managing Knowledge

Unit VIII: Knowledge Management **3 hours**

Introduction, Managing Knowledge and Knowledge worker, Knowledge Management in E-business

Unit IX: Legal and Ethical Issues **2 hours**

Ethical and Social Issues, Ethics and Moral Dimension Management Challenges, Implementation of Information system, Change Management, Critical Success factors Advanced balanced Scored

- Advanced Strategic foundations development
- Advanced objective & strategy map development
- Advanced performance management
- Implementation & Visualization
- Strategic initiative prioritization & management
- Advanced scorecard alignment and Cascading

Unit X: Future Trends in MIS **3 hours**

Trend and information, Intellectual Computing (Speech Recognition, decision, making), Technology and mobility, Technology Challenges

Lab: Implementation of Data warehouse and Data Mining

- Developing SQL Server Data warehouse from foodmart.mdb using DTS package
- Implement the ETL process and create the OLAP cubes. And also retrieve the data from the OLAP cubes using MDX Sample Application.
- Implement K-nearest neighbor technique to demonstrate prediction and analysis under XL Miner/SPSS.
- Implement Decision Tree algorithm to demonstrate the concept of classification using XL Miner/SPSS.

Reference Books

1. ***Management Information Systems*** by Stephen Haag, M Cummings, A Phillips, Tata McGraw Hill P. L., 6th Edition
2. ***Management Information Systems*** by P.T. Joseph, Sanjay Mohapatra, PHI,
3. ***Management Information Systems*** by Indrajit Chatterjee, PHI,
4. ***Management Information Systems*** by C.S.V. Murthy, Himalayan Publishing House

Information Technology for *Management* by Efraim Turban, Linda Volonino, 7th Edi

CMP 404 Mobile Application Development Technology (3-0-2)

	Theory	Practical	Total
Sessional	30	20	50
Final	50	-	50
Total	100	-	100

Evaluation:

Objectives:

1. *To provide students with the knowledge of recent trends in mobile application development.*
2. *To give the overview of existing mobile operating systems and the development SDKs required to develop applications based on them.*
3. *To teach students the basics of application development with reference to Android environment.*

Course Contents:

Unit I: Introduction to Mobile OSes **7 hours**

Introduction to Mobile OSes: Android, iOS, Ubuntu, Touch, Blackberry, Tizen. Firefox OS, Symbian. Windows Phone, Build and Structures of Mobile OSes, Introduction to development environment (Native v/s HTML5), Introduction to Android, API levels/versions of Android, Pros and Cons of Android - Comparison of Android with other Mobile OSes, Introduction to Android VM and Runtime (Dalvik and ART), Installation and configuration of Android SDKs and Eclipse IDE - Their integration using ADT Plugin - Running an emulator, Using ADB command line interface

Unit II: Java Architecture and OOPS **7 hours**

Java Classes and Objects, Class Methods and Instances, Inheritance and Polymorphism in Java, Interface and Abstract Class

Unit III: Android Classes an Basics **9 hours**

Android Fundamentals, Creating an Android App, Android Manifests File, The Activity Class, Activity Lifecycle, Extending the activity class, Creating Default Activity, Creating Splash and Login Activities, The Intent Class, Creating Intent, Switching between Activities, using Intent, Permissions, Allow APP permissions in Android Manifest, The Fragment Class and Its usage

Unit IV: Android User Interface **8 hours**

Introduction to Multiple Screen Size and Orientation Interfaces, User Interface Classes, Android XML Layouts. Resources and Style, Android 3rd party UI/UX Libraries

Unit V: Advanced Topics **6 Hours**

User Notifications, The Broadcast Receiver class, Threads, Async Task and Handlers, Alarms, Networking

Unit VI: Graphics and Multimedia **6 hours**

Graphics and Animations, Multitouch and Gestures, Multimedia

Unit VII: Packaging and Monetizing **8 hours**

Data Management (using sqlite database, local storage), The Content Provider Class, The Service Class, Google Mobile Ads SDK, Signing and Exporting an APP, Publishing your app to the play Store

Laboratory: The laboratory classes should be based on the topics covered in the lecture classes that should give the students a hands-on training and familiarize them the development environment. The Laboratory works should enable students to setup and run their own development environment and provide them with the base for their application development and publishing. It should also focus on publishing the application to the App Store and also monetize the app using one of the advertising networks provided by the SDK.

Text Books:

1. ZigurdMednieks, Liard Dornin, G. Blake Meike, Mausami Nakamura "*Programming Android: Java Programming for the New Generation of Mobile Devices*", 2nd Edition, O' Reilly 2012
2. Reto Meier, "*Professional Android Application Development*:,Weily Publishing Inc, 2009, ISBN: 978-0-470-34471-2

Reference Book:

1. Barry Burd, *Android Application Development* All-in-One For Dummies, John Wiley & Sons, INc 2012