Yarmouk University
College of Information Technology and Computer Sciences
Management Information Systems Department

Study Plan
for the Bachelor's Degree in
Management Information Systems (MIS)

2016-2017

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Courses Codes used in Course Plan

SE	Software Engineering
CS	Computer Science
CIS	Computer Information Systems
MIS	Management Information Systems
NIS	Network and Information Security
AL	Arabic Language
EL	English Language
PS	Political Sciences
MILT	Military
STAT	Statistics
MATH	Mathematics
BA	Business Administration
MKT	Marketing
ECO	Economics
BF	Business Finance
COMP	Computing
ACC	Accounting

Overview of Management Information Systems Department

The department of Management Information Systems was established along with the Faculty of Information Technology and Computer Sciences at the beginning of 2002/2003 academic year. The department offers a bachelor's degree in Management Information Systems program. This program was designed carefully to provide the graduates with the technical and managerial skills and knowledge needed to analyze, design, develop, put into practice, and manage information and information systems in organizations. The department has various advanced computer labs that being used in teaching programming languages, project management related to MIS, decision support systems, and electronic commerce. In addition, the department has a research lab dedicated to graduate student. In the beginning of 2007/2008, the Master program was established and offers a Master degree in Management Information Systems, this program was recognized as the only of its kind in Jordanian universities.

Vision:

The best management information systems department in the region capable of competing globally

Mission:

To supply the labor market with graduates equipped with the skill and knowledge needed to construct, develop, manage, and utilize business information systems and able of being creative and innovative.

Objectives:

The department's objective is to provide a leading "Management Information Systems" graduates capable of the following:

- Analyze, Design and develop systems with a high quality that address the needs of Jordanian organizations and other local and regional markets.

- The utilization of business intelligent information systems that provide firms with the needed information for all managerial levels to be used for effective decision-making process.

- The design of solutions and applications that increase the capacity, and effectiveness of operations in local organizations.

- The utilization of innovative and new development in the market for the purpose of better competitive edge.

- The management of information systems and IT projects.

- Develop new strategies that fit with the business strategies in local and regional market.

- Analysis of revenue generated from IT/IS and the justification of IT investment.

- The effective communication, and the team spirit initiative, and the capacity of leading teams to achieve the organizational objectives.

- Serving the community with the entrepreneurship, initiative, and belonging spirit.

Learning Outcomes for Management Information Systems Bachelor Program

Upon the successful completion of program courses, the graduate is expected to be able to

1. Demonstrate a skill of communication with others and within the teamwork.

2. Show the skill of critical thinking and analysis to achieve best administrative decisions.

3. Show the ability of leadership in business environment and leading business workgroups.

4. Utilize the latest technology and decision support tools to achieve the organizational objectives.

5. Demonstrate a deep understanding for business environment and the different organization areas and its relation with information technology and information systems.

6. Realize how management information systems contribute to the improvements of the organizational performance.

7. Demonstrate insightful understanding for relational databases and systems, and understand how to connect these databases with analyzing and designing and developing information systems.

8. Understand the fundamental steps to utilize information systems development lifecycle.

9. Demonstrate the skill of programming to provide solutions for managerial issues and problems, and show a skill of developing web application.

10. Understand the fundamental principles of communication, business networks, and security elements related to information systems.

11. Realize and understand the ethical and legal issues related to information systems and information technology in the business environment and communities as well.

Academic Plan for the Bachelor's Degree in
Management Information Systems (MIS)

The academic plan that leads to attain a Bachelor degree at the Faculty of Information Technology and Computer Sciences at Yarmouk University in accordance with the rules and regulations no. (2) for the year 1991 and its variations issued upon the scientific degrees and certifications granting system at Yarmouk University no. (118) for the Year 2003.

1. The Faculty of Information Technology and Computer Sciences offers a bachelor's degree program in each of the following departments:
   - Computer Science department
   - Computer Information Systems department
   - Management Information Systems department
   - Network and Information Security department
   - Software Engineering department
2. The minimum number of credit hours required to earn a bachelor's degree in one of the faculty's majors are 134 credit hours.
3. Admission requirements for the faculty of IT and computer sciences are restricted to and in accordance with the general admission requirement rules and regulations at YU.
4. Admitting Students in the faculty of IT and computer sciences carried out according to university admission policy each academic year as it is clarified in student admission handbook in the university.
5. Academic Plans consist of the following requirements

University Requirements

University requirements consist of 27 credit hours divided to:

- Mandatory requirements (12 credit hours)

- Elective (Optional) requirements (15 credit hours)

Mandatory University Requirements: consist of 12 Credit Hours as following:

Course Code	Course Name	Credit Hours	Prerequisite
AL101	Arabic Language1	3	N/A
EL101	English Language Skills	3	N/A
PS102	National Education	3	N/A
MILT 100	Military Sciences	3	N/A
EL 099	Conditional- English Language Skills	Conditional	N/A
AL 099	Conditional- Arabic Language	Conditional	N/A
COMP 099	Conditional- Computer Skills	Conditional	N/A

Elective (Optional) University Requirements: consist of 15 Credit Hours the

student is allowed to select it out of his/her faculty in any of the following areas:

Course Code	Humanities Courses	Credit Hours
Hum 101	Media Culture	3
Hum 102	Citizenship and Belonging	3
Hum 103	Islamic Thought and Civilization	3
Hum 104	Art and Behavior	3
Hum 105	Jordan Contributions to Civilizations	3
Hum 106	Introduction to the Study of Human Culture	3
Hum 107	Human Rights	3
HUM 108	Thinking Skills	3
Course Code	**Scientific Courses**	**Credit Hours**
Sci 101	Environment and Public Health	3
Sci 102	Information Technology and Society	3
Sci 103	Fitness For All	3
Sci 104*	Effective Communication Skills	3
Sci 105	Renewed Energy	3
Sci 106	Management and Social Development	3
Sci 107	Scientific Research	3

* Sci 104 is similar to the (MIS 106 Communication Skills for IT) and thus IT students are not allowed to take both.

The Knowledge Area Reference Number in Course Code MIS XXX

Knowledge Area	No.X
Basic Courses	0
Programming Languages	1
Systems Environment	2
Management and Information	3
Operations Research	4
E-Commerce	5
Systems Analysis and Development	6
--	7
Systems Applications	8
Projects and Special Topics	9

Faculty Requirements (22 Mandatory Credit Hours)

Faculty of IT and Computer Sciences requirements consist of the following mandatory courses for a total of 22 credit hours.

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			T*	P*	
CS 110	Programming	3	3	0	--------
CS 110L	Programming Lab	1	0	3	CS 110 or concurrent with it
CS 130	Operating Systems Essentials	3	3	0	CIS 103 & CS 110
CIS 103	Introduction to Information Technology	3	3	0	-------
CIS 260	Database Systems	3	3	0	CS 210
MIS 106**	Communication Skills for Information Technology	3	3	0	--------
MATH 103	Calculus for Management Information Systems	3	3	0	--------
STAT 111	Probabilities Principles 1	3	3	0	--------

*P: Practical Hours. T: Theoretical Hours
**MIS 106 is similar to the (SCI 104 Effective Communication Skills) and thus IT students are not allowed to take both.

Department Requirements

Department requirements consist of (85) credit hours set by the department council, or the department's councils of both the major and the minor programs. The credit hours' distribution over various requirements is as follows:

Management Information Systems Major/without Minor (85 Credit Hours)

Requirements	Mandatory	Elective	Total
University Requirement	12	15	27
Faculty Requirement	22	-	22
Department Requirement	61	24	85
Total			**134**

Management Information Systems Major/with Minor (64 Credit Hours)

Requirements	Mandatory	Elective	Total
University Requirement	12	15	27
Faculty Requirement	22	-	22
Dept. Major	55	9	64
Dept. Minor	According to the Minor's Department plan		21
Total			**134**

First: Management Information Systems Major/without Minor (85 Credit Hours) distributed as the following:
A) Department Mandatory Requirements (61 Credit Hours)

P: Practical Hours. T: Theoretical Hours

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			P*	T*	
MIS 241	Operations Research	3	0	3	MATH 141,MIS 106
MIS 250	E-Commerce	3	0	3	CIS 103,MIS 106
MIS 310	Programming for MIS	3	0	3	CS 110 , CS 110L
MIS 310L	Programming for MIS Lab	1	3	0	MIS 310 or concurrent with it
MIS 330	Business Data Communications	3	0	3	CS 210,MIS 250
MIS 351	Marketing Information Systems	3	0	3	BA 101 , MIS 250, MAK 210
MIS 360	Systems Analysis and Design	3	0	3	MIS 310,CIS 260
MIS 364	Systems and Projects Management	3	0	3	MIS 360 Or SE 201
MIS 364L	Systems and Projects Management Lab	1	3	0	MIS 364 or concurrent with it
MIS 380	Business Databases	3	0	3	CIS 260
MIS 382	Knowledge Management	3	0	3	MIS 250
MIS 421	Legal Issues in Information Management	3	0	3	MIS 106,CIS 103
MIS 480	Decision Support Systems	3	0	3	MIS 241
MIS 480L	Decision Support Systems Lab	1	3	0	MIS 480 or concurrent with it
MIS 483	Business Intelligence	3	0	3	CIS 260
MIS 499	Graduation Project	3	0	3	MIS 360, MIS 364 and Complete 90 credit hours
BA 101	Management Principles 1	3	0	3	---
ACC 101	Accounting Principles 1	3	0	3	---
MKT 210	Marketing Principles	3	0	3	---
CS 210	Object Oriented Programming	3	0	3	CS 110,Concurrent with CS 210L
CS 210L	Object Oriented Programming Lab	1	3	0	CS 210 or concurrent with
CIS 281	Multimedia Systems	3	0	3	CIS 103,CS 210
MATH 141	Applied Math for MIS	3	0	3	MATH 101a
Total		**61**	**12**	**57**	

B) Department Elective Requirements (24 Credit Hours)

- 15 credit hours selected from the following courses (with a minimum 12 credit hours from courses offered by the student's department courses)

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			P*	T*	
MIS 220	Management of Technology Innovation	3	0	3	BA 101, MIS 106
MIS 222	Entrepreneurship in IT	3	0	3	MIS 106
MIS 252	E-Government	3	0	3	MIS 250
MIS 341	Business Systems Simulation	3	0	3	MIS 241
MIS 381	Production Information Systems	3	0	3	MIS 241
MIS 384	Financial Information Systems	3	0	3	MIS 250
MIS 460	Systems Security and Control	3	0	3	MIS 360
MIS 461	Quality Management and Control	3	0	3	MIS 250
MIS 487	Enterprise Systems	3	0	3	MIS 360
MIS 492	Special Topics	3	0	3	MIS 360
CS 250	Data Structure	3	0	3	CS 210
CIS 211	Internet Application Programming	3	0	3	CS 110, CIS 103
CIS 341	Internet Website Design	3	0	3	MIS 360 or SE 201
CIS 431	Internet Services	3	0	3	MIS 330 or NIS 220

*P: Practical Hours. T: Theoretical Hours.

- 9 credit hours selected from the following courses:

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			T*	P*	
BA 102	Management Principles 2	3	3	0	BA 101
BA 350	Human Resource Management	3	3	0	BA 102
MKT 321	Sales Management	3	3	0	---
MKT 329	Financial Marketing	3	3	0	---
ECO101	Macroeconomics Principles	3	3	0	---
ACC 102	Accounting Principles 2	3	3	0	ACCT 101
BF210	Financial Principles 1	3	3	0	ACCT 101, BA 101
BF 316	Banks Management	3	3	0	FIN 210

*P: Practical Hours. T: Theoretical Hours

Second: Management Information Systems Major/with Minor (85 credit hours) as the following:

1- **(64) credit hours for the Major/Minor Management Information Systems) distributed as the following**

a- Department Mandatory Requirements (55 Credit Hours) as per the following table:

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			T*	P*	
MIS 241	Operations Research	3	3	0	MATH 141, MIS 106
MIS 250	E-Commerce	3	3	0	CIS 103, MIS 106
MIS 310	Programming for MIS	3	3	0	CS 110, CS 110م
MIS 310L	Programming for MIS Lab	1	0	3	MIS 310 or concurrent with it
MIS 330	Business Data Communications	3	3	0	CS 210, MIS 250
MIS 360	Systems Analysis and Design	3	3	0	MIS 310, CIS 260
MIS 364	Systems and Projects Management	3	3	0	MIS360 or SE 201
MIS 364L	Systems and Projects Management Lab	1	0	3	MIS 364 or concurrent with it
MIS 380	Business Databases	3	3	0	CIS 260
MIS 382	Knowledge Management	3	3	0	MIS 250
MIS 421	Legal Issues in Information Management	3	3	0	MIS 106, CIS 103
MIS 480	Decision Support Systems	3	3	0	MIS 241
MIS 480L	Decision Support Systems Lab	1	0	3	MIS 480 or concurrent with it
MIS 483	Business Intelligence	3	3	0	CIS 260
MIS 499	Graduation Project	3	3	0	MIS 360, MIS 364 Complete 90 hours
BA 101	Management Principles 1	3	3	0	---
ACC 101	Accounting Principles 1	3	3	0	---
CS 210	Object Oriented Programming	3	3	0	CS 110
CS 210L	Object Oriented Programming Lab	1	0	3	CS 210 or concurrent with it
CIS 281	Multimedia Systems	3	3	0	CIS 103, CS 210
MATH 141	Applied Math for MIS	3	3	0	MATH 101a
Total		**55**	**51**	**12**	

P: Practical Hours. T: Theoretical Hours

b- The department elective requirements consist of 9 credit hours selected from the following courses (with a minimum 6 credit hours from courses offered by the student's department courses)

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			T*	P*	
MIS 220	Management of Technology Innovation	3	3	0	BA 101 , MIS 106
MIS 222	Entrepreneurship in IT	3	3	0	MIS 106
MIS 252	E-Government	3	3	0	MIS 250
MIS 341	Business Systems Simulation	3	3	0	MIS 241
MIS 381	Production Information Systems	3	3	0	MIS 241
MIS 384	Financial Information Systems	3	3	0	MIS 250
MIS 460	Systems Security and Control	3	3	0	MIS 360
MIS 461	Quality Management and Control	3	3	0	MIS 250
MIS 487	Enterprise Systems	3	3	0	MIS 360
MIS 492	Special Topics	3	3	0	MIS 360
CS 250	Data Structure	3	3	0	CS 210
CIS 211	Internet Application Programming	3	3	0	CS 110, CIS 103
CIS 341	Internet Website Design	3	3	0	SE 201 or MIS 360
CIS 431	Internet Services	3	3	0	MIS 330 or NIS 220

*P: Practical Hours. T: Theoretical Hours

2- Minor Course Requirements (21 credit Hours)

A. Minor course requirements are determined by the minor's deparmtent with a minium of 21 credit hours.

B. Permited minor programs departments are in the Faculty of Economics and Management Sciences.

Third: Minor in Management Information Systems Department (21 Credit Hours) as the following:

A) Department Mandetory Requierments (18 Credit Hours)

Course Code	Course Name	Credit Hours	Weekly Hours	
			T*	P*
MIS 250	E-Commerce	3	3	0
MIS 310	Programming for MIS	3	3	0
MIS 310	Programming for MIS Lab	1	0	3
MIS 360	Systems Analysis and Design	3	3	0
MIS 364	Systems and Projects Management	3	3	0
MIS 364L	Systems and Projects Management Lab	1	0	3
MIS 480	Decision Support Systems	3	3	0
MIS 480L	Decision Support Systems Lab	1	0	3

P: Practical Hours. T: Theoretical Hours

B) Department Elective Requierments (3 Credit Hours)

Course Code	Course Name	Credit Hours	Weekly Hours	
			T*	P*
MIS 252	E-Government	3	3	0
MIS 341	Business Systems Simulation	3	3	0
MIS 380	Buisness Database	3	3	0
MIS 381	Production Information Systems	3	3	0
MIS 461	Quality Management and Control	3	3	0

P: Practical Hours. T: Theoretical Hours

Bachelor's Degree List of Courses for the Department of Management Information Systems

Course Code	Course Name	Credit Hours	Weekly Hours		Prerequisite
			T*	P*	
MIS 106	Communication Skills for IT	3	3	0	----
MIS 220	Management of Technology Innovation	3	3	0	BA 101, MIS 106
MIS 222	Entrepreneurship in IT	3	3	0	MIS 106
MIS 241	Operations Research	3	3	0	MATH 141, MIS 106
MIS 250	E-Commerce	3	3	0	CIS 103, MIS 106
MIS 252	E-Government	3	3	0	MIS 250
MIS 310	Programming for MIS	3	3	0	CS 110, CS 110L
MIS 310L	Programming for MIS Lab	1	0	3	MIS 310 or concurrent with it.
MIS 330	Business Data Communications	3	3	0	CS 210, MIS 250
MIS 341	Business Systems Simulation	3	3	0	MIS 241
MIS 351	Marketing Information Systems	3	3	0	BA 101, MIS 250, MKT 210
MIS 360	Systems Analysis and Design	3	3	0	MIS 310, CIS 260
MIS 364	Systems and Projects Management	3	3	0	MIS 360 or SE 201
MIS 364L	Systems and Projects Management Lab	1	0	3	MIS 364 or concurrent with it.
MIS 380	Buisness Database	3	3	0	CIS 260
MIS 381	Production Information Systems	3	3	0	MIS 241
MIS 382	Knowledge Management	3	3	0	MIS 250
MIS 384	Financial Information Systems	3	3	0	MIS 250
MIS 421	Legal Issues in Information Management	3	3	0	MIS 106, CIS 103
MIS 460	Systems Security and Control	3	3	0	MIS 360
MIS 461	Quality Management &Control	3	3	0	MIS 250
MIS 480	Decision Support Systems	3	3	0	MIS 241
MIS 480L	Decision Support Systems Lab	1	0	3	MIS 480 or concurrent with it.
MIS 483	Business Intelligence	3	3	0	CIS 260
MIS 487	Enterprise Systems	3	3	0	MIS 360
MIS 492	Graduation Project	3	3	0	MIS 360
MIS 499	Special Topics	3	3	0	MIS 360, MIS 364 complete 90 credit hours

*P: Practical Hours. T: Theoretical Hours

Courses Descriptions and Learning Outcomes

MIS 106: Communication Skills for IT students   3 Credit Hours   (Prerequisite: N/A)
Course Description
The objective of this course is to provide students with the knowledge needed to improve their oral and written communication skills that are essential in today's business organizations. The course focuses on utilizing technological tools such as smart solutions, video conferencing, and social media to interact, negotiate and communicate with customers to achieve organizational goals.

Learning Outcomes
Upon successful completion of the course students should be able to:
- o Describe the principle and rules of effective interaction and communication in business organizations
- o Describe the principle and rules of effective negotiation in business organizations
- o Communicate effectively with others
- o Negotiate effectively with others to accomplish a specific goal
- o Use specialized applications and tools such as smart solutions, video conferencing, and social media to interact, negotiate and communicate to achieve specific goals.

MIS 220: Management of Technology Innovation   3 Credit Hours   (Prerequisites: MIS 106, BA 101)
Course Description
The objective of this course is to provide comprehensive theoretical framework to understand technological innovation, and provide an overview of its relations with business transactions in order to provide economical value to modern organizations. Topics to be covered include: innovative ideas' discovery and creation, development and dissemination, understand the strategies related to technological innovation application in business operations, different models and styles for technological innovation and application methods in business operations.

Learning Outcomes
Upon successful completion of the course students should be able to:
- o Define innovation, creativity and design, and compare among them.
- o List the different levels of technological innovation.
- o Show the importance of different new product development processes and techniques in developing new products and service in organizations.
- o Recognize the difference among various organizational structures and their appropriateness for each project context.
- o Recognize the roles and characteristics of project leader essential to manage various projects.
- o Explain the benefits and risks of lunching global new products.
- o Explain the mutual relationship between brand and innovation.
- o Discuss the various market research techniques used by innovative organizations.
- o Analyze the technology infrastructure of any business.

MIS 222: Entrepreneurship in ICT   3 Credit Hours   (Prerequisite: MIS 106)

Course Description

The objective of this course is to promote entrepreneurship in creative industries in the ICT sector. The course covers the following topics: entrepreneurship fundamentals, management and planning, developing business models, generating innovative ideas, transforming ideas into products and services with economic value, incubators and accelerators, fund raising, founding and registering a business, operations and marketing, mentorship and establish partnerships.

Learning outcomes

Upon successful completion of the course students should be able to:
   o   Define entrepreneurship and describe an entrepreneur
   o   Define basic concepts in management
   o   Describe various business models
   o   Demonstrate an ability to generate innovative ideas to solve problems
   o   Transform innovative ideas into business models for services and products of economic values.
   o   Describe the various ways and resources to get funds and support
   o   Describe the procedures needed to register a company, operate a business and establish partnerships.

MIS 241: Operations Research   3 Credit Hours   (Prerequisites: MATH 141, MIS 106)

Course Description

The main objective of this course is to introduce the students to the basic concepts of operations research, and evaluating the different operation research models while stressing on the importance, need and role of operations research in improving the competitive position of business organizations. Topics to be covered include: operation research models, operation research methodology in problem solving, the role of quantitative analysis in the decision making process, linear programming. In addition, this course covers sensitivity analysis, transportation and assignment, forecasting models, project scheduling like (PERT, CPM), inventory models, queuing models. Moreover, the students will use the lab to apply some of the concepts covered in the lectures.

Learning Outcomes

Upon successful completion of the course students should be able to:
   o   Demonstrate analytical and critical thinking skills in making effective business decisions.
   o   Utilize mathematics, statistics, and probability in solving managerial problems to improve business decisions quality and organizational performance.
   o   Utilize modern technology and decision support tools to achieve organization goals.
   o   Understand the role of management information systems in improving organizational performance by building mathematical models that help optimize the performance of these systems and enhance the effectiveness of decision support systems.
   o   Practice decision making using spreadsheet tool and apply the course concepts using computer applications such as Microsoft Excel.

MIS 250A: Electronic Commerce   3 Credit Hours   (Prerequisites: MIS 106, CIS103)
Course Description
The main objective of this course is to examine critical information technologies that provide the basis for electronic commerce, and their application in a variety of sectors and industries. Topics to be covered include: business opportunities available in business environments, challenges and electronic commerce strategies, business and technical implications of e-commerce architectures and factors, competitive advantage, current and emerging technologies, distribution channels, pricing and advertising in online environments. Students should use software to apply some of the course practical concepts.

Learning Outcomes:
Upon successful completion of the course students should be able to:
  o Describe of different types of e-commerce and its content and framework.
  o Describe the role of the digital revolution in e-commerce and the impact of the economy on electronic commerce.
  o Discuss e-commerce's contribution in helping organizations to respond to the pressures of the surrounding environment.
  o List the main types of electronic markets and describe their characteristics.
  o Describe of electronic catalog, shopping cart, and search engines.
  o Understand of the impact of electronic markets on the institutions.
  o Define the main business models in electronic retailing.
  o Describe various applications of electronic retailing.
  o Describe various factors that support consumers in electronic retailing like shopping comparisons.
  o List factors that impact consumer's behavior over the web.
  o Understand consumer's online decision process.
  o Know how companies can build relationships with consumers.
  o Know the main threats to the security and confidentiality of networks and risk assessment methods.
  o Know the goals and characteristics of online advertising.

MIS 252: E-Government   3 Credit Hours   (Prerequisite: MIS 250)
Course Description
The objective of this course is to provide foundational knowledge on e-government and related issues. The course covers the following topics: e-government principles and models, e-democracy, e-participation and e-voting. It also covers the steps and procedures followed in executing e-government projects and its benefits for government, citizens and business organizations.

Learning Outcomes
Upon successful completion of the course students should be able to:
  o Describe the role information systems play in improving organizational performance in the public sector
  o Describe the software development life cycle for e-government information systems projects

- o Describe basic e-government concepts and applications
- o Evaluate e-government projects and their execution methods

MIS 310: Programming For Management Information Systems   3 Credit Hours (Prerequisites: CS110, CS110L)

Course Description

The main objective of this course is to enhance students capabilities for writing high quality programs. Students will learn how to write programs and develop interactive business applications programs using visual-based programming environment on the Internet. Topics to be covered include: Program development, working with form properties, adding controls to a form, mutable forms, creating users interface, creating menus, creating executable files, and distributing Windows applications. This course is supplemented by practical components covered in MIS 312).

Learning Outcomes

Upon successful completion of the course students should be able to:

- o Identify and describe the purpose of various components of the VB integrated development environment (IDE).
- o Build and run small application using Visual Basic.Net.
- o Create GUI applications using standard controls.
- o Declare variables and constants using the data types available in VB.Net.
- o Use strings in addition to their built-in functions.
- o Understand the use of sequential file.
- o Write conditional and repetition statements and other control structures.
- o Examine and discuss Sub and Function procedures.
- o Develop database applications to access a database with a data table and change the contents of a database
- o Develop applications with multiple forms
- o Understand the array structure and its usage

MIS 312: Programming For Management Information Systems Lab   3 Credit Hours (Prerequisite: MIS310 or concurrent with it)

Course Description

This course is intended to complement MIS 310 to have students apply the concepts covered in that course by using a high level visual-based programming language, through a set of laboratory experiments which will provide hands-on experience in the related topics.

Learning Outcomes:

Upon successful completion of the course students should be able to:

- o Build and run small application using Visual Basic.Net.
- o Create GUI applications using standard controls.
- o Write conditional and repetition statements and other control structures.
- o Develop database applications to access a database with a data table and change the contents of a database
- o Develop applications with multiple forms

o Design, create, test and debug fully functioning programs using the new Visual Basic.Net language

MIS330: Business Data Communications 3 Credit Hours (Prerequisites:MIS 250, CS 210)
Course Description
This course is about the principles of modern computer networking, data communications, network security, and associated technologies. Design, implementation, administration, and security of computer (wired and wireless) networks and data communications. Network architecture to support network-based applications, such as Web, email, ftp, telnet. Management of enterprise information security, contingency planning (incident response, disaster recovery), security policy programs, and risk management.

Learning Outcomes
Upon successful completion of the course students should be able to:
o Be aware of the applications of data communications networks
o Be familiar with the major components of and types of networks
o Understand the role of network layers
o Be familiar with the role of network standards
o Understand host-based, client-based, client-server, cloud-based, and peer-to-peer application architectures
o Be familiar with the different types of network circuits and media
o Understand the role of the data link layer
o Be aware of the TCP/IP protocols
o Understand the overall process of designing and implementing a network
o Understand the best practice recommendations for LAN design
o Understand the Internetworking devices used in BNs
o Understand Internet-based VPN services and architectures
o Understand the best practice recommendations for WAN design
o Be familiar with the major threats to network security and with how to conduct a risk assessment
o Understand how to ensure business continuity and how to prevent intrusion

MIS 341: Business Systems Simulation   3 Credit Hours   (Prerequisite: MIS241)
Course Description
This course introduces the students to business systems modeling and simulation. It covers a wide range of analytical simulation methods and techniques, in addition to the theoretical and practical foundation for simulating discrete and continuous events. It covers four paths in simulating discrete events: the 3-phase approach, process-based approach, event-based approach, and activity-based approach. It also covers the basics of random and specific systems.

Learning Outcomes
Upon successful completion of the course students should be able to:
o Describe the basics of simulation and modeling of systems using the computer.
o Differentiate between real and simulated systems and determine the methods of reaching optimal results.
o Design discrete events systems using systems activities' chart

- o Differentiate between discrete systems and dynamic systems
- o Simulate discrete events using methods learned in the course

MIS 351: Marketing Information Systems   3 Credit hours (prerequisite: MKT 210,MIS 250, BA 101)

Course Description

The main objective of this course is to study the fundamental concepts of marketing information systems, and examine practices and strategies of the marketing systems and its role in terms of distribution of the products and the services offered to the customers. Topics to be covered include: basic concepts of marketing information systems, analysis and design of marketing information systems, the use of information technology to collect marketing information, designing and developing marketing intelligence systems and marketing communication system, the types and features of the marketing software packages. In this course, students will study real cases of marketing information systems in large organization as a method to apply the concepts covered in the lectures.

Learning Outcomes:

Upon successful completion of the course students should be able to:
- o To practice the skills of critical thinking and analysis to achieve best administrative decisions related to the organization's marketing plan.
- o To demonstrate leadership skills in the business environment, and show the ability to lead business groups to reach better performance and customer services.
- o To utilize the latest technologies and decision support tools in order to accomplish the organization goals using electronic systems, internet, and social networks. In purpose of marketing products and retain and maintain a good relationship with customers.
- o To demonstrate insightful understanding of the business environment, in addition to the different areas in the organization, and its relation with information technology, information systems, electronic marketing methods, customer services, and other activities.

MIS 360: Systems Analysis and Design 3 Credit Hours   (Prerequisites: MIS 310, CIS 260)

Course Description

The main objectives of this course are to provide students with the essentials of systems analysis and design, and to help them understand the systems analyst role in organizations. Topics to be covered include: software development life cycle (planning, analysis, design and implementation), feasibility analyses, prototyping, human interface design principles, alternative systems design strategies, rapid application development and CASE tools, and agile software development methodologies. Projects and various software programs will be used to apply the theoretical concepts learned in the course.

Learning Outcomes

Upon successful completion of the course students should be able to:
- o Describe the role of the system's analyst in organizations
- o Describe the systems development life cycle and the alternative approaches for systems

development such as agile methodologies
- o Compare different software sources in terms of cost, time and technical specifications, and evaluate commercial off-the-shelf software.
- o Conduct economic feasibility study for software projects and describe other types of feasibility studies.
- o Prepare the project baseline plan and the scope statement
- o Use various methods of data collection such as administering questionnaires, conducting interviews, and analyzing existing documents to collect requirements.
- o Prepare the technical and non-technical specifications report for information systems
- o Draw, analyze and balance dataflow diagrams
- o Use decision tables to represent the systems processes logic
- o Draw and analyze the entity relationship diagram for a system
- o Apply good design principles to design human-computer dialogues
- o Apply implementation strategies of information systems in organizations and deicide on deliverables and outcomes of systems operations
- o Use object-oriented analysis diagrams and design techniques on simple projects

MIS 364: Systems And Projects Management 3 Credit Hours Prerequisites (MIS 360 or SE 201)

Course Description
The main objective of this course is to provide students with the principles of managing the development of software projects, from requirements definition to successful delivery. Topics to be covered include: applying information technology resources to the process of information systems development, relevant key generic project management concepts and , techniques, managing and developing systems and projects proposals, projects planning and its tools development, scheduling, resource planning, tracking technological projects and its effective management. This course is supplemented by practical components covered in parallel with MIS 364L.

Learning Outcomes
Upon successful completion of the course students should be able to:
- o Understand what project management means and how it improves the success of information technology projects.
- o Demonstrate knowledge of project management terms and techniques such as:
  - The triple constraints of project management
  - The project management knowledge areas and process groups
  - The project life cycle
  - Tools and techniques of project management such as:
    - Project selection methods
    - Work breakdown structures
    - Network diagrams, critical path analysis, and critical chain scheduling
- o Estimating the time needed to complete a project
- o Earned value management
- o Apply project management concepts by working on a group project as a project manager.

o Use knowledge and skills developed in this class in other settings

MIS 364L: Systems And Projects Management Lab   3 Credit Hours   (Prerequisites: MIS 363 or Concurrent with MIS 364)

Course Description

This course is intended to complement MIS 364 by providing students with hands-on experience in the related topics. Students will gain practical experience with tools used in project management such as Microsoft Project, COCOMO, and Monte Carlo Simulate, while working as part of a project team.

Learning Outcomes

Upon successful completion of the course students should be able to:

- o Develop and schedule tasks and modifying them. As well as, estimating durations as discrete numbers or using PERT analysis.
- o Know how to work with tasks constraints and deadlines, set various dependencies between tasks and working with network diagrams
- o Identify resource pool(s) for projects, and know how to distinguish between types of resources, know how to assign resources to tasks and the effect of assigning them on task's duration.
- o Know how to set baselines for selected tasks or for the whole project and how to set an interim plan for the project.
- o Know how to update tasks duration, actual start or finish date, percentage of completion, Actual cost, and Actual work.
- o Know how to apply EVM technique.
- o Know how to create visual or tabular reports using Ms Project 2007
- o Manage and filter needed information in the reports.
- o Construct software cost estimates using COCOMO II, Know the main software scale drivers, Line of code counting rules and function points.

MIS 380: Business Databases   3 Credit Hours   (Prerequisite: CIS 260)

Course Description

The main objective of this course is to provide students with necessary skills by applying practical issues of database theory concepts in business enterprises environment and presenting variety of cases of business databases. Topics to be covered include: the need and role of databases in organizations, database administration and tools, Internet technology and databases, concurrency, recovery, and database security. For the practical part of this course, the students will use the lab to apply some of the concepts covered in the lectures using Oracle or SQL.

Learning Outcomes:

Upon successful completion of the course students should be able to:

- o Understand the need for and role of databases in organizations.
- o Discuss the basics of database and modeling techniques.
- o Retrieve data using SQL statements.
- o Understand of database transactions management and concurrency control.
- o Describe the importance of using database recovery techniques.

o Understanding of database administration and security.
o Understand the mechanism linking database with the Internet.

MIS 381: Production Information Systems   3 Credit Hours   (Prerequisites: MIS 241)
Course Description
The main objective of this course is to provide students with an overall understanding of how computers are being applied in production (in both the physical systems of the organization and its conceptual system). Topics to be covered include: production control systems' analysis such as inventory systems, MRP and JIT, monitoring the production function practically by means of networked data collection terminals and how systems like CAD, CAM, CUM, etc. help to optimize the production process.

Learning Outcomes
Upon successful completion of the course students should be able to:
o Demonstrate analytical and critical thinking skills in making effective business decisions in production, inventory and resource management areas.
o Develop a good grasp of the business environment in different areas and link it to information technologies and information systems and understand how information technology helps optimize the organization effectiveness and efficiency.
o Know the role of management information systems and production information systems, such as forecasting, resource management, inventory management, etc., in optimizing organizational performance.
o Understand the basic steps of information systems development life cycle especially in the production area.

MIS 382: Knowledge Management   3 Credit Hours   (Prerequisite: MIS250)
Course Description
This course is about Knowledge: how to capture it, how to network it, and how to manage it for competitive advantage. It covers a logical, process-oriented examination of the topic, striking a balance between the behavioral and the technological aspects of Knowledge Management. Describes the concept of knowledge and the knowledge-centric organization. It also covers how to build knowledge management solutions and the KM cycle. Examines how knowledge is codified and how the resulting knowledge base is implemented. Deals with knowledge management tools, portals, and social intelligence networks.

Learning Outcomes
Upon successful completion of the course students should be able to:
o Describe the theoretical perspectives of knowledge creation, knowledge transfer, knowledge sharing, and knowledge leadership roles and skills;
o Understand how the study of communication relates to knowledge development and knowledge sharing in organizations;
o Understand the relationship between knowledge management and a learning organization;
o Understand the differences between tacit knowledge and explicit knowledge and the way each is treated in the literature and in knowledge management/ knowledge sharing programs;

- Examine case studies of knowledge management/sharing systems and how they are implemented in the workplace;
- Investigate codification methods used to provide access to knowledge products;
- Study models of knowledge management programs and the technology and communication tools used to implement such models such as structured controversy and decision support systems.

MIS 384: Financial Information Systems   3 Credit hours   (prerequisite: MIS 250)

Course Description

The main objective of this course is to study the fundamental principles needed to develop financial information systems, as well to highlight information systems importance and role as a driver of changing the structure of financial institutions. Topics to be covered: basic concepts of financial systems , financial computer application related to accounting data , the contribution of internal and external audit , the role of marketing researches in developing the financial computer systems, long range forecasting role in management information systems, cash flow , financial systems analysis and design.

Learning Outcomes:

Upon successful completion of the course students should be able to:
- To understand the impacts of information technology on banking operations and markets.
- To demonstrate a good knowledge in information technology applications in financial services firms.
- To understand financial automation and effects of telecommunication and information systems in finance and business sectors.
- To apply and use computer based financial analysis techniques and financial forms for problem solving.
- To understand how to use financial decision support program
- To demonstrate a good knowledge in financial systems, such as Electronic Communication Networks (ECNs), multilateral auction systems , business workstation, money transfer systems, and back-end office systems
- To reflect the understanding and gained knowledge in financial services contexts on real world scenarios.

MIS 421: Legal Issues In Information Management   3 Credit Hours   (Prerequisites: MIS 106, CIS 103)

Course Description

The main objective of this course is to familiarize students with the legal concepts, legislation, and laws related to the information systems. Topics to be covered include: interaction between information management and law; rights and responsibilities of those involved or affected, copyright, information security, freedom of speech and information privacy, professional and ethical issues .

Learning Outcomes

Upon successful completion of the course students should be able to:
- Know the risks of new technologies

- o Demonstrate the impact of computer technology on individual's Privacy
- o Understand the implications of censorship laws for the Internet
- o Understand the problems of protecting intellectual property in cyberspace
- o Demonstrate different ways to protect privacy: Education, Technology, Markets, and Regulation
- o Draw the line between Interception of Communications and Cryptography and Its uses
- o Discuss cases where software failures caused problems for computer users
- o Describe how computer models can increase reliability and safety
- o Understand how technology changes the context of freedom of speech in cyberspace
- o Describe solutions to intellectual property problems
- o List different kinds of computer crimes (hacking, online scams, fraud, sabotage) and how to deal with them
- o Demonstrate Ethical Guidelines for Computer Professionals

MIS 460: Control And Security of Systems   3 Credit hours   (Prerequisite: MIS360)
Course Description
The main objective of this course is to study the systems and information security with more focus on fundamentals of security systems and its latest developments. Topics to be covered include: systems protection and security, access control, distributed systems access control, cryptography in information systems, network security, illustration of case studies from real-world systems, cryptographic protocols, privacy and anonymity, analyzing business information systems to detect problems and weaknesses.

Learning Outcomes:
Upon successful completion of the course students should be able to:
- o To demonstrate good skills of critical thinking and analysis to achieve better administrative decisions
- o To utilize and deploy modern technology and decision support tools to accomplish the organization goals
- o To understand the fundamental principles in communication and business networks , and security elements of information systems

MIS461: Quality Management and Control   3 Credit Hours   (Prerequisite: 250)
Course Description
Topics to be covered include: importance of process definition, measurement and continuous improvement, developing thorough statistical process control, Total Quality Management, and the difficulties in implementing quality efforts in organizations.

Learning Outcomes
Upon successful completion of the course students should be able to:
- o Identify concepts of quality management and improvement.
- o Develop an understanding of the role of technology, managers, employees, and customers in developing a quality-based workplace.

- Know business excellence models and be able assess organization's performance making reference to their criteria;
- Know the principles of total quality management and peculiarities of their implementation;
- Be able to use quality management methods analyzing and solving problems of organization;
- Know prerequisites of evolution of total quality management and significance of quality gurus' works to the management of modern organizations.
- Develop abilities to apply tools and techniques of Total Quality Improvement including, statistical process control, control charts, and quality function deployment techniques.
- Identify current trends and benchmark organizations related to Quality Management.

MIS 480: Decision Support Systems   3 Credit Hours   (Prerequisite: MIS241)
Course Description
The main objective of this course is to foster a comprehensive understanding of the decision support system (DSS), while stressing on the important role these systems play in business today. Topics to be covered include: decision making process, modeling analyzing and developing DSS, Artificial Intelligence concepts (including intelligent systems), case-based reasoning, expert systems, rule-based systems, machine learning methods, data mining, and neural networks. This course is supplemented by practical components covered in MIS 485.

Learning Outcomes:
Upon successful completion of the course students should be able to:
- Explain the need for computerized support of managerial decision-making
- List the major tools of computerized decision support in organizations and explain their applications in business.
- Describe Simon's four phases of decision-making and the needed decision support tools and applications for each phase.
- Describe the configuration and the component structure of each DSS component.
- Structure decision-making models and conduct sensitivity analysis, what-if analysis and goal seek analysis.
- Describe the process, methods and applications of data warehousing and explain their roles for decision support.
- Describe the process, methods and applications of data mining explain their roles for decision support.
- Describe the process and applications of text mining, web mining, and data warehousing and explain their roles in decision support.
- Describe the role and capabilities of Visual analytics software for data mining.
- Describe various intelligent systems and their applications in decision support such as artificial neural networks (ANN), rule-based expert system, support vector machine, case-based reasoning, genetic algorithms, fuzzy logic, and intelligent software agents.

MIS 480L: Decision Support Systems Lab   3 Credit Hours   (Prerequisite: MIS 480 or Concurrent with it)

Course Description

This course is intended to complement MIS 480 to have students apply the concepts covered in that course, and provide them with a practical understanding of the key technical and managerial issues in the effective design, development, use, and evaluation of the Decision Support Systems (DSS). Laboratory experiments will cover the decision making process, modeling and analysis of developing DSS.

Learning Outcomes:

Upon successful completion of the course students should be able to:
  - o Use simple and sophisticated techniques for improving intuitive judgment and decision-making under uncertainty
  - o Employ the functionality of Decision Explorer tool for managing qualitative information that surrounds complex or uncertainty decision problems.
  - o Utilize Excel as a tool (through Solver) in solving formulations and providing the base for sensitivity analysis
  - o Conduct Back Solving (Goal Seeking) through spreadsheet packages (e.g., Microsoft Excel) to calculate backward to obtain an input that would result in a given output.
  - o Employ the data mining tools (such as Weka) for analyzing data (preprocessing) and predictive modeling through classification, clustering, association and more.
  - o Use Business Intelligence based products like Cube-it Zero to build OLAP cubes simple.
  - o Utilize the functionality of GDSS like WebEx to experience a web conference that let you to connect with anyone in anywhere in real time.
  - o Build a website (Wiki) that allows users to create and collaboratively edit web pages via a web browser.

MIS 483: Business Intelligence   3 Credit Hours   (Prerequisite: CIS 260)

Course Description

The main objective of this course is to introduce the students to the concepts of business intelligence systems, and stressing on the importance of the role of business intelligence systems and applications in supporting the decision making process in different organizations and fields. Topics to be covered include: business intelligence concepts and components, data warehouse and multidimensional analysis, granularity of the data, data mining and kinds of data which can be mined, business intelligence applications, and the current trends of business intelligence systems. This course also includes examples of successful business intelligence systems such as: OLAP and Microsoft SQL Server Analysis Services, Tableau, and QlikView.

Learning Outcomes

Upon successful completion of the course students should be able to:
  - o Understand the framework of business data analysis.
  - o Articulate the essentials, concepts and the capabilities of business intelligence systems in data analysis.
  - o Describe data warehouse concepts.
  - o Understand the impacts of using business reports, visual analysis, and dashboard.

- Understand the basic concepts of big data analysis techniques.
- Apply business intelligence enabling technologies in big data analysis such as: Geospatial data, social network, Web 2.0, data mining, and cloud computing.
- Discuss the ethical and legal issues related to the use of Business Intelligence technologies in organizations.
- Describe how Business Intelligence practices and technologies can support businesses and individuals in operating consumer applications and creating new opportunities.
- Articulate the research and modern trends of business intelligence tools and practices in business and industry.
- Understand the best Business Intelligence/ Data Analytics (BI/DA) in cloud computing.
- Assess the legal, privacy, and ethical issues related to the use of business intelligence.
- Apply business intelligence tools and technologies in different areas of business applications.

MIS 487: Enterprise Systems   3 Credit Hours   (Prerequisite: MIS 360)

Course Description

This course introduces students to enterprise systems theory, principles, tools, and the modern practices in applying and using it. This course includes: overview of enterprise systems, definitions, the structure and architecture of enterprise systems and the process of consolidating and integrating different enterprise applications in order to achieve organization goals, types of enterprise systems applications such as enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), etc. In addition, the course covers the life cycle of these systems from development and implementation to use and evaluation.

Learning Outcomes

Upon successful completion of the course students should be able to:
- Demonstrate analytical and critical thinking skills in making effective business decisions using electronic systems that support business processes and operations.
- Utilize the modern technologies and decision support tools to achieve organization goals by considering the alignment of different enterprise systems.
- Develop a good grasp of business environment and its relationship with information technologies (ITs) and information systems (ISs) and its relationship with various enterprise systems.
- Identify the role of management information systems play in improving organizational performance.
- Understand organizational systems concepts, types, benefits, limitations and failure factors.

MIS 492: Special Topics   3 Credit hours   (Prerequisite: MIS360)

Course Description

The objective of this course is to provide an in-depth study of contemporary topics in Management Information Systems not covered in any other course, the topics should approved by the department.

Learning Outcomes:

Upon successful completion of the course students should be able to:
- The course covers contemporary topics in management information systems.

MIS 499: Graduation Project   3 Credit Hours (Prerequisites: MIS 360, MIS364 and Complete 90 credit hours)

Course Description

The objective of this course is to enable the student to use the skills/knowledge that he/she gained from studying previous courses in the program to participate as a team member in a practical project in business environments.   Students should evaluate and analyze different alternatives of the proposed system, then design and implement a computerized information system, and clarify its stages and do the necessary documentation based on a given standards.

Learning Outcomes:

Upon successful completion of the course students should be able to:

- o   Show a skill to communicate with other team members.
- o   Demonstrate a skill in analysis and critical thinking to do the best management decisions.
- o   Have the leadership skills in business environments and be able to lead business groups.
- o   Exploit modern technology and decision support tools to achieve the objectives of the organization.
- o   Learn how business information systems contribute in improving organizational performance.
- o   Understand in depth of systems and relational databases and how to use this knowledge in analyze, construct, and implement of information systems for business environments.
- o   Understand the main steps of information systems development life cycle(SDLC).
- o   Demonstrate a skill in programming in order to find solutions to administrative problems and the development of web applications.

Courses Sequences and Relations Figure
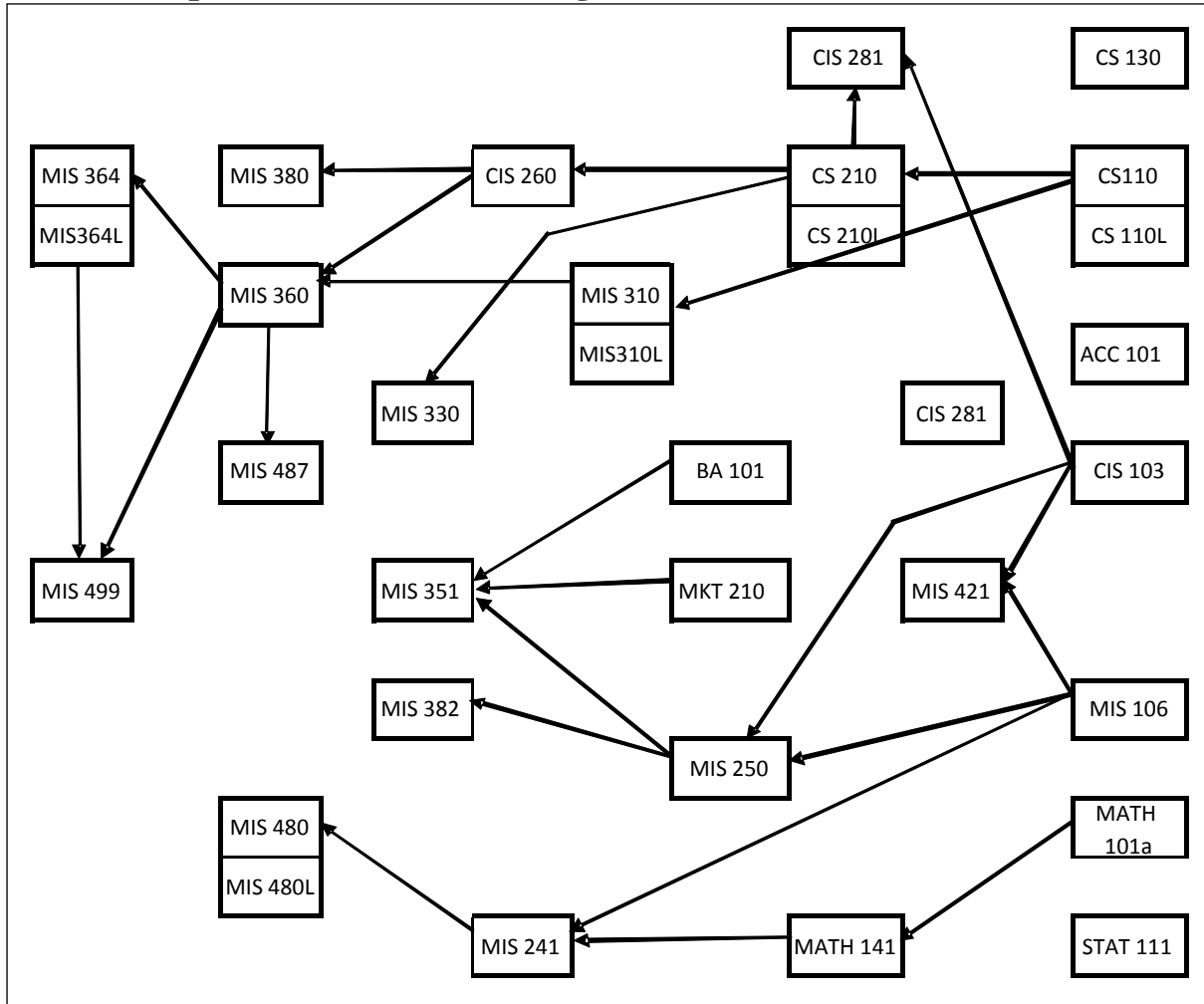
Guidance Study Plan for the Students of MIS Department

First Year

First semester			Second Semester		
Code	**Course**	**Credit Hours**	**Code**	**Course**	**Credit hours**
EL 101	University Mandatory	3	AL 101	University Mandatory	3
CS 110	Faculty Mandatory	3	BA 101	Department Mandatory	3
CIS 103	Faculty Mandatory	3	PS 102	University Mandatory	3
MATH 103	Faculty Mandatory	3	MIS 106	Faculty Mandatory	3
CS 110L	Faculty Mandatory	1	STAT 111	Faculty Mandatory	3
-------	University Elective	3	----	University Elective	3
Total		**16 Credits**	**Total**		**18 Credits**

Second Year

First Semester			Second Semester		
Code	**Course**	**Credit Hours**	**Code**	**Course**	**Credit hours**
CS 130	Faculty Mandatory	3	CIS 260	Faculty Mandatory	3
CS 210	Department Mandatory	3	MKT 210	Department Mandatory	3
CS 210L	Department Mandatory	1	ACC 101	Department Mandatory	3
MIS 250	Department Mandatory	3	-----	University Elective	3
MATH 141	Department Mandatory	3	MILT 100	University Elective	3
-------	University Elective	3	-----	Department Elective	3
Total		**16 Credits**	**Total**		**18 Credits**

Third Year

<table>
<tr><th colspan="3">First Semester</th><th colspan="3">Second Semester</th></tr>
<tr><th>Code</th><th>Course</th><th>Credit Hours</th><th>Code</th><th>Course</th><th>Credit hours</th></tr>
<tr><td>MIS 330</td><td>Department Mandatory</td><td>3</td><td>CIS 281</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>MIS 241</td><td>Department Mandatory</td><td>3</td><td>MIS 360</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>MIS 310</td><td>Department Mandatory</td><td>3</td><td>MIS 351</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>MIS 310L</td><td>Department Mandatory</td><td>1</td><td>MIS 380</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>--------</td><td>Department Elective</td><td>3</td><td>-----</td><td>University Elective</td><td>3</td></tr>
<tr><td>-------</td><td>Department Elective</td><td>3</td><td>-----</td><td>Department Elective</td><td>3</td></tr>
<tr><td colspan="2">Total</td><td>16 Credits</td><td colspan="2">Total</td><td>18 Credits</td></tr>
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Fourth Year

<table>
<tr><th colspan="3">First Semester</th><th colspan="3">Second Semester</th></tr>
<tr><th>Code</th><th>Course</th><th>Credit Hours</th><th>Code</th><th>Course</th><th>Credit hours</th></tr>
<tr><td>MIS 382</td><td>Department Mandatory</td><td>3</td><td>MIS 480</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>MIS 364</td><td>Department Mandatory</td><td>3</td><td>MIS 480L</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>MIS 364L</td><td>Department Mandatory</td><td>3</td><td>MIS 487</td><td>Department Mandatory</td><td>3</td></tr>
<tr><td>MIS 421</td><td>Department Mandatory</td><td>1</td><td>MIS 499</td><td>Department Mandatory</td><td>3</td></tr>
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<tr><td colspan="2">Total</td><td>16 Credits</td><td colspan="2">Total</td><td>16 Credits</td></tr>
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Mapping Matrix between courses and learning outcomes

Mandatory University Requirement

Course Code	Course Name	1	2	3	4	5	6	7	8	9	10	11
AL 101*	English Language Skills	X										
AL 101	Arabic Language	X										
MILT 100	Military Sciences											
PS 102	National Education											

Mandatory Faculty Requirements

Course Code	Course Name	1	2	3	4	5	6	7	8	9	10	11
CS 110	Programming		X		X					X		
CS 110L	Programming LAB		X							X		
MATH 101a	Calculus (1) for MIS students		X									
CIS 103	Introduction in Information Technology				X	X	X					
CIS 260	Database Systems		X		X	X	X	X	X	X		
STAT 111	Probabilities Principles 1		X									
MIS 106	Communication Skills for IT student	X										
CS 130	Operating Systems Essentials											

Mandatory Department requirement

Course |Code	Course Name	1	2	3	4	5	6	7	8	9	10	11
MIS 241	Operation Research		X		X		X					
MIS 250	E-commerce				X	X						X
MIS 310	Programming for MIS		X							X		
MIS 310L	Programming for MIS Lab		X							X		
MIS 330	Business Data Communications				X	X					X	
MIS 351	Marketing Information Systems		X	X	X	X						
MIS 360	Systems Analysis and Design	X	X	X	X	X	X	X	X	X		X
MIS 364	Systems and Projects Management				X				X			
MIS 364L	Systems and Projects Management Lab				X				X			
MIS 380	Business Databases		X		X	X	X	X	X	X		
MIS 382	Knowledge Management		X	X		X	X					
MIS 421	Legal Issues in Information Management	X	X	X		X	X					
MIS 480	Decision Support Systems	X	X	X	X	X	X					
MIS 480L	Decision Support Systems Lab	X	X	X		X	X					
MIS 487	Enterprise Systems		X		X	X	X					X
MIS 499	Graduation Project	X	X	X	X		X	X	X	X		
CS 210	Object Oriented Programming		X		X	X						
CS 210 L	Object Oriented Programming		X		X	X						

	Lab											
MATH 141	Applied Math for MIS		X		X							
BA 101	Management Principles 1		X	X	X	X						
MKT 220	Marketing Principles 1		X	X	X	X						
ACC 101	Accounting Principles 1		X	X	X	X						
CIS 281	Multimedia Systems								X	X	X		

Elective department requirement (First Category)

Course Code	Course Name	1	2	3	4	5	6	7	8	9	10	11
MIS 220	Management of Technology Innovation				X	X						
MIS 222	Entrepreneurship in IT			X	X	X						
MIS 252	E-Government						X		X			
MIS 341	Business Systems Simulation		X		X	X	X		X			
MIS 381	Production Information Systems		X			X	X		X			
MIS 384	Financial Information Systems				X	X	X					
MIS 460	Systems Security and Control		X		X						X	
MIS 461	Quality Management and Control		X	X	X							X
MIS 483	Business Intelligence		X	X	X	X	X			X		
MIS 492	Special Topics (Based on the selected Topic)											
CS 250	Data Structure									X		
CIS 211	Internet Application Programming						X	X		X		
CIS 341	Internet Website Design					X	X		X	X		
CIS 431	Internet Services	X				X				X		

Elective department requirement (Second Category)

Course Code	Course Name	1	2	3	4	5	6	7	8	9	10	11
BA 102	Management Principles 2	X		X								X
BA 350	Human Resource Management	X		X		X	X					
MKT 321	Sales Management			X		X	X					
MKT 339	Financial Marketing	X				X	X					
ECO 101	Macroeconomics Principles		X									
ACC 102	Accounting Principles 2		X			X	X					
BF 210	Financial Principles 1		X			X	X					
BF 316	Banks Management			X		X	X					

Mapping Matrix between Mandatory courses (Department and Faculty) and accreditation criteria

Course Code	Course name	A	B	C	D	E	Credit Hours	Weekly Hours Theory	Weekly Hours Practical
CS 110	Programming	3					3	3	0
CS 110 L	Programming LAB	1					1	0	2
CS 130	Operating Systems Essentials	3					3	3	0
CIS 103	Introduction to Information Technology	3					3	3	0
CIS 260	Database Systems		3				3	3	0
MIS 106	Communication Skills for IT students	3					3	3	0
MATH 101a	Calculus for MIS students					3	3	3	0
STAT 111	Probabilities Principles 1					3	3	3	0
MIS 241	Operation Research				3		3	3	0
MIS 250	e-commerce			3			3	3	0
MIS 310	Programming for MIS	3					3	3	0
MIS 310L	Programming for MIS Lab	1					1	0	3
MIS 330	Business Data Communications			3			3	3	0
MIS 360	Systems Analysis and Design		3				3	3	0
MIS 364	Systems and Projects Management		3				3	3	0
MIS 364L	Systems and Projects Management Lab		1				1	0	3
MIS 380	Buisness Database		3				3	3	0
MIS 351	Marketing Information Systems			3			3	3	0
MIS 382	Knowledge Management				3		3	3	0
MIS 421	Legal Issues in Information Management					3	3	3	0
MIS 480	Decision Support Systems				3		3	3	0
MIS 480L	Decision Support Systems Lab				1		1	0	3
MIS 487	Enterprise Systems				3		3	3	0
MIS 499	Graduation Project						3	3	0
BA 101	Management Principles 1	3					3	3	0
ACCT 101	Accounting Principles 1	3					3	3	0
MARK 220	Marketing Principles	3					3	3	0
CS 210	Object Oriented Programming	3					3	3	0
CS 210L	Object Oriented Programming Lab	1					1	0	3
CIS 281	Multimedia Systems			3			3	3	0
MATH 141	Applied Math for MIS					3	3	3	0
TOTAL		30	13	12	13	12	83	78	14

Symbol	Criteria
A	**Fundamental of Management Information Systems and its application, in addition to programming languages and its applications in Management domain**
B	**Databases and system analysis and design**
C	**Multimedia systems ,e-commerce, and communication and network systems**
D	**Knowledge base systems: Decision support systems, expert systems, knowledge management , …etc**
E	**Mathematics , statistics , commercial laws**

Table of the equivalent courses in the MIS Dept.

Courses of the new plan		*Courses of the old plan*	
Course Code	**Course Name**	**Course Code**	**Course Name**
MIS 106	Communication Skills for Information Technology		*NA*
MIS 220	Management of Technology Innovation	ن أ 220	إدارة الابداع التكنولوجي
MIS 222	Entrepreneurship in IT		*NA*
MIS 241	Operations Research	ن أ 241	بحوث عمليات
MIS 250	E-Commerce	ن أ 250أ	التجارة الالكترونية
MIS 252	E-Government		*NA*
MIS 310	Programming for MIS	ن أ 310	برمجة تطوير النظم الادارية
MIS 310L	Programming for MIS Lab	ن أ 312	مختبربرمجة تطوير النظم الادارية
MIS 330	Business Data Communications	ع ح 334	تراسل البيانات والشبكات
MIS 341	Business Systems Simulation		*NA*
MIS 351	Marketing Information Systems	ن أ 482	نظم المعلومات التسويقية
MIS 360	Systems Analysis and Design	ن أ 360	تحليل وتصميم النظم
MIS 364	Systems and Projects Management	ن أ 361	ادارة المشاريع البرمجية
MIS 364L	Systems and Projects Management Lab	ن أ 362	مختبر ادارة المشاريع البرمجية
MIS 380	Business databases	ن أ 380	قواعد البيانات الادارية
MIS 381	Production Information Systems	ن أ 381	نظم معلومات الانتاج
MIS 382	Knowledge Management		*NA*
MIS 384	Financial Information Systems	ن أ 481	نظم المعلومات المالية
MIS 421	Legal Issues in Information Management	ن أ 421	الجوانب القانونية في ادارة المعلومات
MIS 460	Systems Security and Control	ن أ 460	ضبط وسرية النظم
MIS 461	Quality Management and Control	ن أ 461	ادارة وضبط الجودة
MIS 480	Decision Support Systems	ن أ 480	النظم المساندة لاتخاذ القرارات
MIS 480L	Decision Support Systems Lab	ن أ 485	مختبر النظم المساندة لاتخاذ القرارات
MIS 483	Business Intelligence		*NA*
MIS 487	Enterprise Systems		*NA*
MIS 492	Special Topics	ن أ 492	موضوعات خاصة
MIS 499	Graduation Project	ن أ 499	مشروع تخرج