

# Courses Description

## **1502260 Computer Information Systems 1501110**

Introduction to information systems, information management, construction of information systems, database management systems, decision support systems, knowledge based systems, user interface systems, geographic information systems, case studies.

## **1502261 Computer Assisted Learning 1501112**

Introduction to using computers in education, authoring tools, human-computer interaction, programming and material requirements, tasks analysis and design, multimedia utilization, using the internet in education, e-learning, studying through the internet, questions and responses design, student-computer interaction, rigid and dynamic interaction, electronic exams, default teaching, case study.

## **1502323 Operations Research 1501221**

Decision making, linear programming and modeling, graphical solution, algebraic solution, simplex method, two-phase simplex method, duality and sensitivity analysis, transportation and assignment models, network problems.

## **1502351 Database Systems 1501221**

Introduction to database systems, entity-relationship data model, relational model, the relational algebra, entity-relationship mapping, formal query languages, SQL, relational database design theory, functional dependencies and normalization process, commercial database systems, deductive databases, object-oriented database, case studies..

## **1502352 Distributed Database 1502351**

This course will introduce principles and foundations of distributed databases, including architecture, design issues, integrity control, query processing and optimization, transactions, and concurrency control.

**1502360 Research Methodology and Ethics**

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This course covers the basics of scientific research: the importance of scientific research, its goals, methods, elements, preparation of data, dealing with references and reporting. Moreover, this course covers the definition of the ethics of computers, computer hacking, the ethics of internet, the moral rules to work on network, copy rights software intellectual property, and presentation skills.

**1502361 Networks and Information Security****1501340**

Current issues of security and privacy problems, security models, ways to minimize risks and losses, information system security within an organization, cryptology, security controls, security packages, trusted and secured systems, user identification and authentication, case studies.

**1502363 Computer Simulation****1501221**

Basic concepts, mathematical and computer models, parameter estimation, simulation techniques, simulation applications, introduction to game theory case studies.

**1502365 Digital Image Processing****1501221**

Image processing pineapples, Image captaincy Digitization, sampling, quantization, representation (frequency, spatial) filtering, image segmentation pattern recognition, and compression.

**1502366 GIS: Geographical Information Systems****1501221**

Basic concepts, images, audio, video, authoring tools and systems, multimedia and the web, multimedia tools and applications.

**1502367 Multimedia Fundamentals****1501221**

Basic concepts, images, audio, video, authoring tools and systems, multimedia and the web, multimedia tools and applications.

**1502372 Systems Analysis****1502351**

An introduction to the systems process, system analysis and modeling, systems design systems implementation and management and practical lab courses.

**1502390 Project (1)****1502360**

The student will register this course after finishing (90) credit hours of his plan successful. In this course the first part of the gradation project will be finished, which is, the selection of the graduation in one of the areas of information technology, selection of project team, develop a plan, development of analysis and design, and selection of software.

**1502391 Internship for CIS**

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Through this course, the student trains in any company or government establishment, relying on what he learned in the department after he passes (90) credit hours of his plan successfully, where the student at the end of his training provides a detailed report on his training, which was eight consecutive weeks.

**1502425 Decision Supports Systems****1502351**

Decision-support systems (DSS) support management decision-making in a business environment focus's to provide viable alternatives for managers and targeted to students who want more expertise in developing and managing such systems. The broadest definition states that Decision Support Systems are interactive computer based systems and subsystems that help decision makers utilize data, models and/or communications to solve problems and make decisions. This course covers the following topics: Introduction to decision support systems; DSS components; Decision making and DSS; DSS software and hardware; developing DSS; DSS models; types of DSS; group DSS; executive information systems; data mining; artificial intelligence and expert systems.

**1502391 Field Training System****Department  
Approval**

Through this course, students are trained in any company or government entity based on what he learned in the section after the student passes (90) credit hours of his plan

successfully, where the student provides at the end of training report on the training period, which are eight consecutive weeks.

**1502452 Data Mining and Warehousing**

**1502351**

Knowledge discovery fundamentals, data mining concepts and functions, data pre-processing, data reduction, mining association rules in large databases, classification and prediction techniques, clustering analysis algorithms, data visualization, mining complex types of data (text mining, multimedia mining, Web mining ... etc), data mining languages, data mining applications and new trends.

**1502453 Database Administration**

**1502351**

This course will cover the core principles and techniques of transactions and concurrency control methods. The potential topics covered in class include transactions properties, serializability, recovery concepts and techniques and database security issues..

**1502454 Database Languages and Tools**

**1502351**

Database environment, DBMS architecture, advanced topics in modeling tools, extended entity relationship model, object modeling technique, development tools, CASE tools, testing tools, management tools, case studies.

**1502461 Information Retrieval**

**1502351**

This course will cover traditional material, as well as recent advances in Information Retrieval (IR), the study of indexing, processing, and querying textual data. Basic retrieval models, algorithms, and IR system implementations will be covered.

**1502476 Advanced Systems Analysis**

**1502372**

System development methodologies, team management, testing, maintenance, types of information systems, CASE tools, rapid application development, advanced topics in conceptual data modeling, object-oriented analysis and design, case studies.

**1502490 Project (2)**

**1502390**

Through this course the student will develop the graduation project, which was initiated in project (1) course, and test the project. The student must follow the standards in process of analysis, design and implementation of the project. Students are required to document various stages of project development and write the final project report.

**1502491 Special Topics in Information System.**

**Department  
Approval**

This course aims to put selected advanced topics in computer information system. Such as modern research areas and used in the field of computer information system, and it is determined to change the content and topics of this course with approval of the department council.