Course Specifications

Faculty: Computers and Informatics

Department: Information Systems

Course Specifications

Program(s) on which the course is given   : Bachelor in Computer and Information Sciences

Major or Minor element of programs   : **Minor**

Department offering the program   : Information Systems

Department offering the course   : Computer Science

Academic year / Level   : **3**rd Year/BSc

Date of specification approval   :

A. Basic Information

Title: System Analysis   **Code:** INF381

Lecture: 3hrs/week   **Practical: ---**   **Tutorial:**3hrs/week

Total: 6 hrs/week

B. Professional Information

1. **Overall Aims of Course:**

- give the student an introduction to system analysis and design concepts.
- Understanding the software development life cycle (SDLC), specification, analysis, design, implementation and testing
- Build of Modular top-down analysis, design and testing, CASE tools for system analysis and design .
- Understanding the requirements of I/O design, input validation and user interface design (GUI).

2. Intended Learning Outcomes of Course (ILOs):

a- Knowledge and understanding:

a1	Students will know the essential core content of the discipline of Information technology, and demonstrate the ability to apply content-knowledge in the specification, analysis, design, implementation and testing of a software solution.
a2	Students will demonstrate the ability to effectively analyze Information technology concepts both orally and in writing or as members of a creative thinking team.

a3	The student will understand and differentiate methods of data analysis, parameters estimation, and testing.
a4	Students will specify the fields of computer networks, security basic, virtual reality, Multimedia, and computer processing.
a5	Students will state the operation theory of electronic peripherals used in the IT technology.

b- Intellectual skills

b8	Understanding Artificial Intelligence concepts,intelligent network and applications

c- Professional and practical skills

c1	Students will demonstrate the ability to effectively manage Information technology problems and solutions and apply content-knowledge in the specification, analysis, design, implementation and testing of a

	software solution.
c8	Programming Intelligence Searching techniques, Design and building Intelligent Agent applications, Analysis Neural, fuzzy and Genetic systems as a new intelligent paradigms.

d- General and transferable skills

d5	Review the qualities of the software and software documentation.
d7	Describe and explain the digital network structure and services.
d8	Describe and explain how parameters of statistical data are calculated and tested, the methods of statistical data analysis, solving problems associated with statistical data.
d9	Group working to discuss data mining techniques for simple and complex problems.

e. Attitude:

e1. A knowledge and respect of ethics and

   ethical standards in relation to a major area of study.

e2. Relationship Emphasis a successful with other students.

e3. Learn how to make relation with other, and the limit of this relation.

3. Contents:

Topic	No. of hours	Lecture	Tutorial/Practical
Introduction to Systems Analysis and Design	6	3	3
Information Systems Building Blocks	6	3	3
Information System Development (System Development Life Cycle) (SDLC)	12	6	6
System Analysis, structured analysis, prototyping, JAD, and OOA	12	6	6
Introduction to CASE tools	6	3	3
Rapid Application Development (RAD) Tools (Visual Basic Programming)	6	3	3

Data Modeling (Entity Relationship Modeling)	6	**3**	**3**
Process Modeling, Data Flow Diagrams, functional decomposition, Object Modeling	6	**3**	**3**
Database Design (Data Analysis, intro to normalization)	6	**3**	**3**
Introduction to MS-ACCESS	6	**4**	**2**
Input and Output Design	6	**3**	**3**
User interface Design	6	**3**	**3**
Introduction to Systems Analysis and Design	6	**3**	**3**
Total sum	84	**43**	**41**