



هيئة اعتماد مؤسسات التعليم العالي

Higher Education Accreditation Commission

الكفايات الأساسية لعائلة

علوم الحاسوب وتكنولوجيا المعلومات

المركز الوطني للاختبارات

National Testing Center

الفصل الثاني

2014-2013

الكفايات الأساسية لعائلة علوم الحاسوب وتكنولوجيا المعلومات

The Competences required in information Technology Majors:

1. Introduction to Computers and Information Technology:

- 1.1 Describe the history of computers and computing.
- 1.2 Apply fundamental principles and methods of information technology to a wide range of problems.
- 1.3 Acquire, analyze, and use information about various trends in information technology and its related fields.

2. Fundamentals of Computing and Software Systems:

- 2.1 Design, correctly implement and document solutions to significant computational problems.
- 2.2 Demonstrate the ability to develop algorithms to solve problems in computing.
- 2.3 Debug a program using appropriate debugging strategies and distinguish between error types.
- 2.4 Students will demonstrate the ability to produce a technical document.
- 2.5 Understand design and performance requirements of software systems.

3. Principles to Computers Organization, and Networks:

- 3.1 Understand the principles of logical design and computer organization.
- 3.2 Understand the principles of operating systems.
- 3.3 Understand the principles and components of networks.

4. Fundamentals of Computer Mathematics:

- 4.1 Understand basic principles of mathematics.
- 4.2 Use mathematical ideas to solve problems in Information Technology.
- 4.3 Use mathematical thinking, charts, figures, and equations, to express ideas and concepts.
- 4.4 Students will demonstrate interpretive skills, including the ability to analyze data statistically and interpret results of experiments.

5. Professional and Communication Skills:

- 5.1** Students will demonstrate the ability to search the relevant literature of the discipline to find information that addresses a specific problem.
- 5.2** Students will demonstrate the ability to give an effective presentation using visual aids and/or software demonstrations.
- 5.3** Think critically and creatively, both independently and with others.
- 5.4** Work effectively in teams to design and implement solutions to computational problems.
- 5.5** Communicate effectively, both orally and in writing.
- 5.6** Recognize the need for and an ability to engage in continuing professional development.
- 5.7** Students will learn and demonstrate standards of professional behavior, including rules of ethics and etiquette.