هيئة اعتماد مؤسسات التعليم العالي

Higher Education Accreditation Commission

الكفايـات الأساسية لعائلة

علوم الحاسوب وتكنولوجيا المعلومات

المركـز الوطني للاختبـارات

National Testing Center

الفصل الثاني

2014-2013

الكفايـات 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.