

## مواصفات خريج برنامج علوم الحاسب طبقاً للمعايير الأكاديمية القومية

### **The graduates of Computer Science program should be able to:**

1. Apply the fundamental theories and principles of computing and information applications.
2. Integrate and evaluate the computing tools and facilities.
3. Apply knowledge of mathematics and science.
4. Design a computing system, component and process to meet the required needs within realistic constraints.
5. Exploit the techniques, skills and up-to-date computing tools, necessary for computing and information practice.
6. Display professional responsibilities and ethical, societal and cultural concerns
7. Use, compare and evaluate a range of formal and informal techniques, theories and methods to develop computing and information applications.
8. Consider and deal with the individual, social, environmental, organizational and economic implications of the application of computing and information.
9. Carry out a work plan with minimal supervision.
10. Communicate effectively.
11. Hold knowledge and skills required by the computing and information industry.
12. Engage in self and life-long learning and research in computing and information.
13. Fulfill requirements of potential employers.
14. Demonstrate knowledge and competence in fundamental areas of computer science such as: algorithms, design and analysis, computational theory, computer architecture and software based systems.
15. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design, implementation, evaluation and evolution of computer-based systems.
16. Apply knowledge of mathematics and science to real world problems; as well as to analyze and interpret data.

17. Demonstrate the analytic skills necessary to effectively evaluate the relative merits of software and computer systems, and algorithmic approaches.
18. Understand and apply a wide range of principles and tools of software engineering, such as design methodologies, choice of algorithm, language, software libraries and user interface technique.
19. Understand and apply a wide range of principles and tools of natural language processing and data mining.
20. Have a solid understanding of the used concepts in computer science to be able to pursue further learning, whether as graduate students or on their own.
21. Demonstrate an understanding of algorithms and data structures, computer organization and architecture, programming language concepts, compilers, networks, artificial intelligence, graphics, human computer interfaces, and databases, and identify and define the computing requirements for its solution.
22. Design, implement, and evaluate a computer-based systems, process, component or program.
23. Use knowledge and understanding in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoff involved in design choices.

عميد الكلية

د. هالة حلمي

منسق المعيار