

## البرامج العلمية طبقاً للمعايير الأكاديمية القومية

# The common computing and information subprograms are listed in the following:

### **1. Computer Engineering:**

Typically involves software and hardware and the development of systems that involve software, hardware, and communications.

#### 2. Computer Science

Tends to be relatively broad and with an emphasis on the underlying science aspects.

#### 3. Information Systems

Essentially, this is computing and information in an organizational context, typically in businesses.

### 4. Information Technology

Focuses on computing infrastructure and needs of individual users; tends to involve a study of systems (perhaps just software systems, but perhaps also systems in support of learning, of information dissemination, etc.).

### 5. Software Engineering

Focuses on large-scale software systems; employs certain ideas from the world of engineering in building reliable software systems.

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العنوان: طريق بنها المنصورة الزراعي بجوارالشركة القابضة لمياة الشرب والصرف الصحي بنهــــا – محافظة القليوبية – جمهورية مصر العربية تليفون ٣١٨٨٢٦٦ (١٣٠) – فاكس: ٣١٨٢٢٦ (١٣٠)



#### 6. Mixed Disciplinary Majors

Because computing and information is such an important and dynamic field, many interdisciplinary majors, some are very recent developments, exist at some faculties. Here are just a few examples of these opportunities.

#### a. Scientific Computing

Combines simulation, visualization, mathematical modeling, programming, data structures, networking, database design, symbolic computation, and high performance computing with various scientific programs.

#### b. Operation Research and Decision Support.

Emphasize optimizing organizational and system performance using advanced analytical methods to help make better decisions.

#### c. Bioinformatics

Combines elements from at least biology, biochemistry, and computer science, and prepares students for careers in the biotechnology and pharmaceutical industries, or for graduate school in informatics.

### d. Computational Science (or Scientific Computing)

Means science done computationally, and serves as a bridge between computing technology and basic sciences. It blends several fields including computer science, applied mathematics, and one or more application sciences (such as physics, chemistry, biology, engineering, earth sciences, business and others).

#### e. Computer Science and Mathematics

combines computer science with mathematics of course.

### f. Gaming and Animation.

Creating computer games and computer animations have various flavors and may combine either or both of computer science and information technology work with either or both of art and (digital) media studies.

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#### g. Medical (or health) Informatics

Coursework may be drawn from any or all of computer science, information systems, or information technology in combination with biology, chemistry, and courses unique to this interdisciplinary field.

#### h. Computer Systems.

Computer systems program is concerned with the design and construction of computers and computer-based systems. It involves the study of hardware, software, communications, and the interaction among them.

#### i. Network Technology

Networks technology is the knowledge of the technologies involved in network management and operating, network & information security, embedded networks systems, and internet and web technology.

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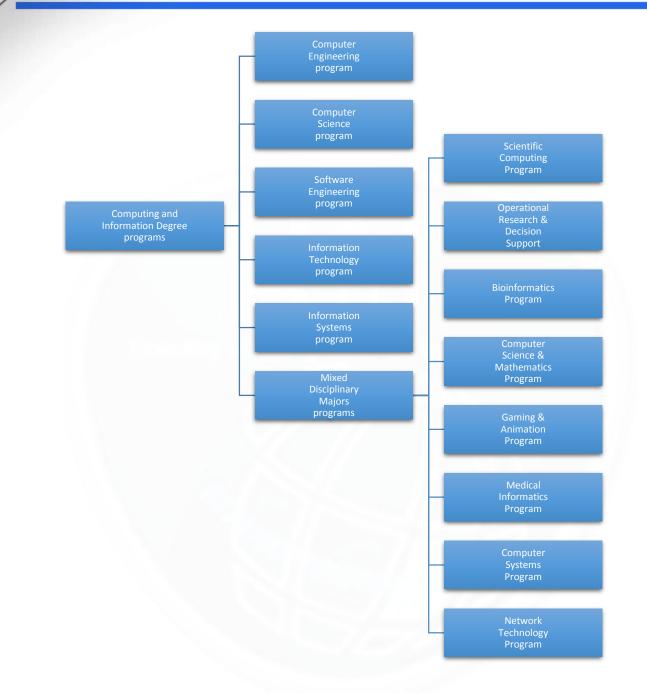
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