MSA University. Faculty of Computer Science

Introduction

The Faculty of Computer Science provides a unique learning opportunity for students wanting to specialize in a wide variety of areas of the computer science and information technology fields.

Computer Science Programmes

A 4-year programme leading to a Bachelor of Science degree in computer science is available for students to choose from:

- Computer Science Pathway,
- Internet Computing Pathway,
- Software Engineering Pathway.

In this programme, students build a solid background in areas such as programming and software development, database design and applications, system analysis and design methodologies.

The CS programme covers the following general subjects:

English Language: 3 courses, 9 credit hrs.

Mathematics: 4 courses, 12 credit hrs.

Physics: 1 course, 3 credit hrs.

Humanities: 3 courses, 9 credit hrs.

Computer Science: 35 courses, 107 credit

hrs.

Students must complete a total of 140 credit hours to receive one of the above degrees.

Objective

The objective of the Faculty of Computer Science at MSA is to provide state-of-the-art high quality education to its students. We strive to prepare our graduates for a promising career in local, regional or international markets.

The programme provides the background required for research and academic careers for students planning to go for postgraduate studies especially in international academic institutions. We offer a unique undergraduate programme to distinguish our students in the increasingly crowded and competitive job market. We continuously upgrade our programme with an eye on the latest technological advances in information technology (IT).

A key objective of the Faculty of Computer Science at MSA is to build the communications and presentation skills of students. We also aim at building the individual personality of our graduates. The programme enhances students' independent learning capabilities, and MSA University provides an active student life.

Accreditation and Validation

All programmes offered by MSA are:

 Accredited by the Supreme Council of Egyptian Universities

- Validated by University of Greenwich. Students receive a BSc in Computer Science jointly from both Greenwich University in the U.K. and MSA University.
- Accredited by Ministries of Higher Education in all Gulf countries.

The programme is modelled after recommendations of major regulating bodies such as: The British Higher Education Quality Assurance Agency (QAA)

The American IEEE/ACM 2013 curriculum guidelines

Computer Science curriculum

The Computer Science curriculum is designed with the students' future career in mind. It should guarantee our graduates an immediate and promising career in the regional job market. The curriculum is designed to offer:

Breadth

The curriculum covers all subjects of the computing body of knowledge such as:

- Programming Fundamentals
- Computer Organization
- Networking & Security
- Operating Systems
- Internet-based Computing
- Cloud Computing
- Computer Language
- Information Management
- Intelligent Systems
- Big Data
- Software Engineering
- Human Computer Interaction
- Social and Professional Issues

Depth

The core courses include one or more courses in each of the above subjects to provide students with enough depth in the relevant topics in todays' information technology fields.

The freedom to choose

Students will enhance their area of specialization by choosing from offered elective courses and also through summer industrial training and the graduation project.

We Adapt to Regional Business Requirements

At MSA we understand the unique requirements of the regional market and its specific demands for IT professionals. Our programme prepares students to excel in the fields most required in the Middle East/Arab market:

- E-business in general and e-Government,
- Application development for the regional market,
- Developing Internet centric applications,
- Leading the change for sophisticated IT implementation in large organizations,
- Managing large IT projects.

Graduate's Abilities

- Master up-to-date development tools.
- Build software applications using state-of-the-art development methodologies.
- Master background IT knowledge and technologies.
- Master all standard productivity software.
- Ability to life/self-learning to cope with the rapid evolution of IT technologies.

Methods of Learning

In addition to the traditional learning methods of regular lectures, homework assignments, and tutorials, the faculty employs many modern and interactive learning techniques such as:

Laboratory Work

Almost all courses include laboratory work. For all courses students attend hardware or computer laboratory, and will be expected to carry out a progressive set of assignments to:

- Build a hardware system.
- Develop computer software.
- Use modeling and simulation programmes.
- Use CASE tools to analyze and design practical business applications.
- Use modern database development.

Projects

Two levels of projects are employed during students' course of study. For most courses students implement a complete project covering the practical applications of course materials. In their senior year students undertake a Graduation Project. Students work in small groups simulating an industrial development team and carry out a project involving the analysis, design and development of a practical computer-based system or a software application.

Seminar Presentations

Students practice preparing presentations to complement their project work. In other courses they do in-depth investigation of course subjects and present their findings in open discussions.

Facilities

The faculty is fully equipped to fulfill its mission of providing a state-of-the-art computing education. Our facilities include the following:

Computing & Internet facilities

- 25 internet friendly computer labs with full capacity of 850 IBM PCs
- 15 high performance servers
- Currently 30 networked printers
- WIFI coverage in buildings and open areas.

Book Store

The bookstore is responsible for distributing original copies of textbooks to students at the commencement of each semester

Academic Website for Students

The academic website provides the students with a wide range of services such as: current semester calendar schedules, midterm and final results. It is also used to collect student class evaluation at the end of each semester.

Currently online registration is applied.

The MOODLE system is applied for students to access their module information, lecture notes, assignments and any additional supplementary material for every module.

MSA Library

MSA library keeps books and periodicals ordered by University faculties. It also offers online educational and research recourses, namely the EBSCOHOST digital library. In addition, Video, cassette tapes, and CD ROMs are provided for all subjects. Computer labs are annexed providing access to the Internet. All students and staff have their user name and password for accessing all online recourses on campus or at bus/home.

Other Facilities

Other facilities include: Language Labs, Physics Lab, Digital Logic Design Lab, Computer Architecture and Microprocessor Lab.

The academic staff of the Faculty of Computer Science at MSA is well selected to fulfill its role as a top class higher education institution. We maintain a maximum staff to student ratio of 1:10.

Career Prospects

MSA graduates are always in demand and are keenly sought by many types of organizations because of their acquired great range of transferable skills, enabling them to enter a wide choice of careers with reputable multinational companies and local private sector organizations.

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MSA Hotline: 16672

Computer Science Secretary office :

Room # D217

Ext: 4217- 4216

Email: cs@msa.eun.eg

Dean's Office: D219

Ext: 4219

Computer Science Tuition Fees (2015-2016)

New Students (Fees per semester)

| Egyptian | Non Egyptian |
|----------|--------------|
| 15,400 | \$ 3,190 |

<u>British Degree (in Pound Sterling) Fees per year:</u>

| 1st | 2 nd |
|-----|-----------------|
| 310 | 315 |
| 3rd | 4th |
| 320 | 325 |

المواد المؤهله

أولاً: الثانويه العامه و العربيه

| القسم العلمى العام (ثانويه عربيه) | |
|------------------------------------|--|
| قسم علمی ریاضه (ثانویه عامه مصریه) | |

ثانياً: الثانويه الأجنبيه

| عدد 4 مواد أساسيه | الثانويه الإنجليزيه |
|----------------------------------|-----------------------|
| تتضمن: | عدد 8 مواد من المستوى |
| اللغه الإنجليزيه | العادى |
| الكيمياء | الدبلومه الأمريكيه |
| الفيزياء | عدد 8 مواد دراسي |
| الرياضيات | النجاح في SAT |
| عدد 4 مواد اخرى + | الدبلومه الكنديه |
| الرياضيات على المسنوى المتقدم | عدد 8 مواد دراسیه |