

### **Bachelor's Degree Program Objectives:**

1. Providing access to basic knowledge in the main fields of Computer Science and extensive knowledge in Information Technology.
2. Applying scientific methods for the analysis and design of applications, and the development of computer systems.
3. Preparing graduates for the work in the field of scientific research and higher education.

### **Program Outputs:**

1. Extensive knowledge of the theoretical foundations in the main fields of Computer Science and extensive knowledge in the application of Information Technology.
2. Knowledge in the basic fields of Computer Science, which include programming languages, operating systems, databases, computer architecture, software engineering and information security.
3. Ability to diagnose problems with the computer with the possibility of using the best solution, which requires the provision of specialists to meet the needs of the community.
4. Proficiency in researching new topics and identifying problems that need more research.
5. Ability to apply skills using mathematics and Computer Science together in solving the new problems.
6. Skills in the analysis, design, and application of specifications that are identified within a specific field of Computer Science.



### **Teaching:**

The bachelor program provides graduates with high qualifications through high proficiency in Computer Science. The department has an excellent organizational structure that includes teaching staff, technical and administrative staff. It is based on the best and latest curricula, the most advanced laboratories and the presence of a positive environment that helps in supporting the teaching process using technical capabilities with high quality software application for Computer Science. The teaching of various topics, including practical duties implemented throughout the semester, contributes greatly to support innovation and improve performance by studying and developing the work of the IT sector.

### **Computer Science:**

The University of Philadelphia is one of the leading universities that established the Department of Computer Science in 1991 as a result of the developments in the labor market and the tendency to employ information technology graduated in the service of different sectors, and to meet the growing needs to prepare specialists to achieve integration between the theoretical and practical aspects and to expand the capabilities of different institutions through the production of competitive software systems at the local and global levels. The department offers bachelor and master degrees in computer science. The department strategy complies with the rapid requirements and the global development in the field of information technology and the needs of the global labor market. The Department of Computer Science welcomes students who wish to work in the field of information technology and have a good ability to solve problems and have the ability to work together to solve complex problems.

#### **Vision:**

To be one of the most highly recognized departments of Computer Science in teaching, learning, scientific research, and community service according to international standards to achieve the desired growth and development.

#### **Mission:**

The BSc in "Computer Science/Computer Science" program at the Computer Science department strives to: Prepare graduates in the field of Computer Science/Computer Science with sufficient values, theoretical knowledge, and practical skills in building systems programming. They should have a local, regional and international presence and who are highly motivated to lifelong learning and capable of fulfilling contemporary requirements. Prepare qualified graduates in scientific research who are able to continue their higher studies in computer science and support innovation plans according to international standards. Build a productive partnership with the community through the projects of students.

#### **Goals:**

The department reaches a prominent position locally, regionally and internationally and the research activities are supportive of the growing technological development.

#### **Values:**

- Fairness: Dealing fairly with all and respecting individual's value, dignity and legitimate freedom.
- Transparency: Dealing clearly in all Faculty procedures with students, academic and administrative staff.
- Integrity: Full compliance with professional morals and ethics.
- Belongingness: Having a sense of responsibility toward the University, local community and nation.
- Co-operation: Group work among all Faculty staff and students in all Faculty procedures.
- Innovation: Accommodating innovative ideas and solutions in teaching and learning as well as academic research fields focusing on the area of Information Technology and communications.
- Professionalism: The ability to demonstrate knowledge, skills and capability in the area of Information Technology and communications.

# **Philadelphia University Faculty of Information Technology Computer Science/Computer Science Department Bachelor Program**



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### **Research Project:**

The research projects of the department are oriented towards the objectives of the department through the application of cognitive, mental and applied skills in areas of specialization such as the use of appropriate tools for building software, applying advanced databases or multimedia, mobile computing applications and information security.

### **Evaluation:**

The department follows several assessment methods of student that are announced to students at the beginning of the semester by describing the module syllabus. The method of evaluation of the subjects stems from the level of the material and its specifications, so the evaluation types take the following forms:

1. The traditional exam (written).
2. Class work of the module.
3. Oral tests.
4. Quick tests.

The department modules include the preparation of reports by the students. The group assessment is represented by the research project by working as a team for more than one student in order to achieve an integrated project.

### **Job Titles for Computer Science Graduate:**

Students who have graduated from the Department occupy various positions in public and private sector institutions that deal with the development of Information Technology within and outside the Kingdom. Among the job titles for graduates of the department are the following:

- Software developer.
- Systems Programmer.
- Systems consultant.
- Network administrator.
- Database Analyzer.
- Scientific researcher.
- Network security specialist.
- Information Security Manager.
- Data security analyzer.
- Information Security Designer / Networks.
- Information Technology teacher.

### **Academic Advising:**

All student affairs can be managed by referencing to the student's guide, as well as by the student's academic advisor or the head of the department for additional details regarding the teaching of the programs, and e-mails can be used to send any requested queries.

### **Research:**

The Department of Computer Science encourages scientific research. The theoretical and applied research are the focus of scientific research in the department through the following fields: artificial intelligence, computer networks, information security, programming languages and other topics in the field of Information Technology. The Interest in scientific research greatly helps to support learning outcomes.

The department assists researchers in obtaining financial support for publishing and allows faculty members to participate in and attend local and international conferences and seminars. The University's annual budget is allocated to support researchers; that covers travel expenses, publishing, references and other requirements and setting up exhibitions for student projects.

### **Bachelor of Science in Computer Science**

The student in the Department of Computer Science is subject to the laws and regulations adopted by the higher education and private universities. Students who receive a minimum of 60% are eligible to be accepted in the program for all branches of the Tawjihi exam except the literacy branch.

The study system in the Department of Computer Science depends on the credit hours system as each academic year consists of two semesters and a minimum of three years. The module covers the practical and theoretical aspects through theoretical and practical lectures. The program qualifies the student to start the practical training in the third year and the research project in the final year.

### **First year:**

The first academic year covers introductory modules that do not require prior knowledge or experience in computers. The scientific material is given in the form of lectures and exercises.

### **Second Year:**

In the second year, students learn different programming languages and the use of different software applications. The first and second years of study are considered as a preliminary stage for the study of computer science.

### **Third Year:**

The student's specialization in the third year expands to include specialized training materials in the field of study, which is considered an intermediate stage of specialization in the study program.

### **Fourth Year:**

In the fourth year, the student selects courses that will enable him to determine his practical future in addition to the compulsory subjects. It should also expand the student's perception and skills to enable him to establish a distinguished presence in the work environment.

### **Staff members and Students:**

There are nine faculty members in different disciplines as well as administrators and technicians. Teaching is the primary concern of faculty members. The faculty staff members have the solid foundations of supporting students during study and after graduation. Most of the faculty members have their degrees from prestigious universities. The Department of Computer Science encourages the recruitment of faculty members from distinguished universities. This contributes effectively to increasing the intellectual and social awareness in the department through the exchange of knowledge between staff members and students. The department allows for the initiation of research partnerships and exchange of students with European universities through Erasmus+ program. The department aims at creating a lively social atmosphere that includes students and faculty members and creates an active environment for teaching learning through conducting various seminars and field visits to scientific centers in the Kingdom.

### **Practical Training:**

In addition to the most of the modules containing practical aspects in the third and fourth year of study, The Department of Computer Science provides its graduates with practical training in the market.

After the student obtains the basic skills and concepts required for computer science and different fields, he is directed to the specialized labor market for the purpose of training and to view the requirements and mechanism of working and to benefit from the practical experience available in the labor market.

The department has established extensive relationships with companies with an interest in Information Technology in the labor market, where students are urged to make the most of the period of practical training through part-time work in the institutions concerned. The practical training material qualifies the student to choose the research project in the fourth year in accordance with his skills and requirements of the labor market.

