

## Faculty of Information Technology Web Engineering Department Bachelor Program



### Web Engineering Department

The Web Engineering Department was founded in the 2017/2018 school year to keep up with the rapid developments in the methodologies, approaches and tools used to build Web systems and applications. The Faculty of Information Technology at Philadelphia University has been a leader in the development of specialized and pioneering academic programs suited to the needs of the local and regional markets. The University was the first at the public or private university in Jordan to introduce the Software Engineering degree in the academic year 2001/2000. It is keeping abreast of recent developments and is introducing a bachelor's degree in Web Engineering.

The Bachelor's Program in Web Engineering has been developed according to the latest recommendations of international organizations such as ACM/IEEE in the design and construction of IT program curricula and after extensive study of the needs of the market. The program aims to provide students with the necessary skills to enable them to develop Web systems and applications by following the engineering approach to studying, analyzing, modeling, designing and testing Web systems requirements to ensure a highly efficient product that ensures that the requirements of system users are effectively met to ensure the confidentiality of their transactions and information.

The Web Engineering Department welcomes students who wish to work in the design and development of Web systems, applications and services in all fields, and have good analytical, design and development capabilities and have the ability to work together in specialized teams in Web systems and applications.

### Vision of Web Engineering Department

To be one of the most highly recognized department well-known educational conglomerates in Jordan in the spheres of teaching and learning, research, and community services according to international standards.

### Mission of Web Engineering Department

The Web Engineering department strives to:

- Prepare graduates in the field of Web Engineering who are well-equipped with knowledge, skills and values and who are highly motivated to lifelong learning and capable of fulfilling contemporary requirements.
- Foster academic research and graduate studies and support innovation plans in the field of Web Engineering.
- Establish a productive partnership with local community.

### Goals

The department reaches a prestigious position locally, regionally and internationally and the research activities should be 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 department 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 department staff and students in all department procedures.
- Innovation: Accommodating innovative ideas and solutions in teaching and learning as well as academic research fields in Web Engineering.
- Professionalism: The ability to demonstrate knowledge, skills and capability in the field of Web Engineering.



### Program Aims

1. Enabling students to understand the general knowledge in Information Technology and the basic aspects of the components of Web systems, applications and services.
2. Providing students with the necessary skills to enable them to develop Web systems and applications by following the engineering approach in studying, analyzing, modeling, designing and testing Web system requirements to ensure a highly efficient product that ensures that the requirements of system users are met in an efficient manner to ensure confidentiality of transactions and information.
3. Providing students with practical applied knowledge of the tools and techniques needed to design and develop Web systems.
4. Enabling students to build government applications, e-commerce, e-business and e-learning.
5. Enabling students to manage Web projects, lead teams, organize time and provide resources for those projects.

6. Preparing students to a successful and productive profession as a Web Engineer to meet the need of public and private institutions in an efficient and professional manner.

### Job Opportunities

In addition to the traditional IT job titles, the B.Sc. program in Web Engineering prepares graduates for many job titles including, but not limited to, the following Designer and Developer of Web Systems and Applications, Web Systems Engineer/Manager, Mobile Systems Developer, Developer of Client and Server Technologies, Web Services Developer, Developer of E-Commerce and E-Government Systems, and Designer of Cloud Computing Applications.

### Teaching

The department provides graduates with high qualifications through high proficiency in designing and developing Web systems and applications using the latest technologies and software tools available. The department has an excellent organizational structure that includes faculty, technical and administrative staff and is based on the best and most advanced curricula and more advanced laboratories such as programming labs, multimedia, internet labs etc., in addition to a positive environment to contribute effectively in supporting the teaching process and implementing practical duties using high technical capabilities to achieve learning outcomes. Reflected on the level and capabilities of department graduates.

### Why Web Engineering Department?

The Web is one of the most important applications for the Internet, which is used in various means of technology from personal computers, smart phones and tablets to smart watches and for various purposes. Searching for information, e-commerce, completing government transactions, paying bills, conducting bank transactions and conducting telecommuting with various means of modern social communication, monitoring news, sports and many others are just examples of Web applications for all uses.

In light of these inputs, the Web Engineering program develops the professional aspect of the student and establishes solid foundations for the creation of graduates capable of employing and using various tools and technologies such as server and client technologies, cloud computing, databases, data retrieval, Web services and Semantic Web in building applications for government, e-commerce and e-business e-learning, and banking transactions.



### **Staff and Students**

The department has qualified faculty members and specialists in Web Engineering as well as administrators, technicians and laboratory supervisors.

Teaching is the primary concern of faculty members. These instructors have the solid foundations of supporting students during study and in the job market after graduation, and most faculty members have degrees from prestigious universities. The Web Engineering Department encourages the recruitment of faculty members visiting from other universities and this contributes effectively to increasing the intellectual and social awareness in the department through the exchange of knowledge between renewable experiences.

The department strives to create a vibrant family and social atmosphere that includes students and faculty members and fosters and supports an active teaching and learning environment.

### **Practical Training**

As part of the applied departments that aims to design and develop Web systems and applications, the Web Engineering Department pays great attention to practical training. In addition to most of the subjects containing practical or applied part, in

the third year of the program and after the student has acquired the basic skills and concepts required for Web Engineering, the student is directed to the specialized labor market for the purpose of training and to view the requirements of the labor market and the mechanisms of work therein and to benefit from the practical and applied experience available in the labor market. The Department looks forward to establishing extensive partnerships and relations with the labor market from official and private institutions with a particular interest in information technology in general and Web systems and applications in particular, where students are urged to make the most of the practical training period through part-time work in the concerned institutions. The training course also qualifies the student to better decide the research project in the following year in accordance with his skills and the requirements of the labor market.

### **Scientific Research**

Based on Philadelphia University's mission to advance scientific research, the Web Engineering Department promotes outstanding scientific research. The theoretical and applied features of research are characteristic of scientific research in the department through the following areas: cloud computing, data and information retrieval, Web security, Search engines, Web services and Web applications, databases, computer networks, and other topics in information technology. The attention to scientific research greatly helps to support learning outcomes.

The Web Engineering Department assists researchers in obtaining financial support for publishing and allows faculty members to participate in or attend local and international conferences and seminars as 5% of the annual budget is allocated to support researchers by

spending travel, publishing, references and other requirements. And exhibitions of student projects.

### **Bachelor's Degree Program**

Students wishing to enroll in the Web Engineering program are subject to the laws and regulations approved by the higher education regarding private universities. Students who receive a minimum of 60% in all streams except literary is accepted.

### **Bachelor's Degree Program System**

The program of the Web Engineering Department is based on credit hours. Each academic year consists of two semesters and a minimum of three years. Each course covers both 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 year of study covers introductory courses that do not require prior knowledge or experience in Web Engineering, as these materials are an input and basis for this program. The scientific material is given in the form of lectures, exercises and research discussions in the form of groups or individual.

#### **Second Year**

In the second year, students learn different programming languages and use some useful software. The first and second years of study can be considered as a preliminary stage for the study of Web Engineering.

#### **Third Year**

The student's specialization in the third year expands to include specialized training materials in Web Engineering. This year is considered an intermediate stage in the study of specialization.

#### **Fourth Year**

In the fourth year, the student selects subjects that qualify him to determine his practical future in addition to the compulsory subjects. It should also expand students' perceptions and skills to enable them to establish a distinct presence in the workplace.

### **Research Project**

The research projects of the department are oriented towards the objectives of the department by applying theoretical, analytical and applied knowledge skills in the fields of specialization to study the requirements of Web systems, and to analyze, model, design and test Web systems to ensure delivery of highly efficient products in the fields of e-government, e-commerce, e-business, e-learning and banking transactions.

### **Assessment**

The department follows several methods of student performance assessment that are announced to students at the beginning of the semester by course study plan. The method of assessment of course stems from the level of the material and its specifications, so the types of evaluation take the following forms

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

The courses in the department include the reports required from the students and the collective evaluation of the research project by working as a team for more than one student in order to complete the project.



### **Contacting the Department**

All student affairs can be managed by accessing the department's page through the university's website. You can also refer to the student's guide and the student's academic advisor or head of department for additional details regarding teaching the programs. The following email address can be used to send any requested queries.

[we@philadelphia.edu.jo](mailto:we@philadelphia.edu.jo)

You can also visit the department web site at the following address.

<http://www.philadelphia.edu.jo/arabic/faculties/2013-09-15-06-26-21/2017-06-14-08-52-38>