QFO–AP–FI–002	Course Syllabus :اسم النموذج	جامعة فيلادلفيا Philadelphia University
رقم الاصدار :2 Revision 2	الجهة المصدرة: كلية تكنولوجيا المعلومات	
التاريخ :2018/11/10	الجهة المدققة: عمادة التطوير والجودة	
عدد صفحات النموذج: 5		

Course Syllabus

Course Title: **Web Documents**	**Course code: 0780230**
Course Level: 2	**Course prerequisite (s) and/or corequisite (s):** **0780111**
Lecture Time: 10.10-11.00	**Credit hours: 3**

Academic Staff Specifics

Name	Rank	Office Number and Location	Office Hours	E-mail Address
Dr Maouche Mourad	**Associate Professor**	**Room 602** **IT Building**	STT: 11.10-12.00 MW: 11.15 -12.30	mmaouch@philadelphia.edu.jo

Course/ module description

The course covers in depth modern and popular web document markup languages (SGML, XML), languages for defining web document types (XML schema, DTD), DOM, web document transformation languages (XSLT/XPath), web document querying languages (XQuery). The course includes also a comparison study between XML and Jason technologies.

Course/ module objectives

This course aims to:

- To develop a solid knowledge on web document technologies focusing on document markup languages focusing on XML technologies.
- To apply the web document technologies in the context of web applications.

Course/ module components

- **Books (author (s), title , publisher, year of publication)**

1. XML: A deeper Understanding, John Shirell, Online Book: http://www.xmlbook.info/, 2012
2. Web Technologies, Uttam K. Roy, Oxford University Press/India, 2010

- **Support material (s):** Slides
- **Study guide (s) (if applicable)**
- **Homework and laboratory guide (s) if (applicable)**

Teaching methods

Duration: 16 weeks, 48 hours in total. Lectures: 31 hours; Tutorial: 9 hours; Laboratories: 5 hours. The last week (3 hours) is reserved to practical works examination.

Learning outcomes

A student completing this module unit should be able to:

Knowledge and Understanding

1. Define and explain the concept of web documents (A2)
2. Discuss the role and categorize the available popular web documents technologies. (A2)
3. Describe and explain the web documents markup languages (A2)
4. Describe and explain the role of XML and its related technologies
5. Describe and explain the role of the Document Type Definitions (DTDs) and XML Schema languages (XSD) (A2)
6. Describe and explain the concepts of XML documents (A2)
7. Describe and explain the XQuery language and technology (A2)
8. Discuss and compare XML technology and JSON technology to support application data interchange. (A2)
9. Discuss and compare the DTD and XML Schema languages. (A2)

Cognitive skills (thinking and analysis)

1. Evaluate and select appropriate web document markup languages when creating a web document (B6)
2. Evaluate and select appropriate web document technology when creating a web document type (B6)
3. Evaluate and select appropriate web document technology when transforming web documents. (B6)
4. Develop well-formed and valid XML documents for publishing on the Web (B6)

   DTD to validate a XML document (B6)
5. Transform XML documents using XSLT (B6)
6. Analyze and create XML Schema (B6)
7. Construct simple and complex queries over XML documents using XPath and XQuery. (B6)
8. Develop dynamic web pages using XSL (B6)

Practical Skills

1. Employ the XML and its related technologies and tools to create and process web documents (C1, C2)
2. Employ DTD language with C# or java (C1, C2)
3. Employ JSON language with C# or Java (C1, C2)
4. Employ XQuery (C1, C2)

Transferable skills

1. Create innovative solutions. (D1)
2. Plan, organize, and perform time/resource-constrained tasks to achieve goals. (D2)
3. Prepare and perform good oral presentations. (D5)
4. Define personal professional goals that support lifelong learning, productivity, and satisfaction. (D7)
5. Demonstrate effective Team working skills. (D8)

Learning outcomes achievement

Development:

A2 is developed through Lectures and Tutorials.

B6, D1, D2, D5, D7, and D8 are developed through Assignments and Projects.

C1, and C2 are developed through practical laboratory sessions.

Assessment:

A2, B6, D1, D2, D5, D7, and D6 are assessed through Quizzes, Class-works written exams, and Projects

C1, and C2 are assessed through practical assignment examinations.

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Assessment instruments

- **Class works**: 10 (quizzes)
- **Project:** 10
- **Final examination:** 40
- **Short Examinations:** 2 x 20

Allocation of Marks	
Assessment Instruments	**Mark**
First examination	**20**
Second examination	**20**
Final examination: 40 marks	**40**
Quizzes, Project	**20**
Total	**100**

Documentation and academic honesty

- Documentation style (with illustrative examples)
  - Practical works reports must be presented according to the style specified in the homework and practical work guide
- Protection by copyright
- Avoiding plagiarism
  - Any stated plagiarism leads to an academic penalty

Course/module academic calendar

Week	Basic and support material to be covered	Practical Work (PW) and Examinations
(1)	Notion of Web Documents/ Web resources Web Document languages: Markup Languages; Web Document Type Definition languages; Web Document Transformation languages; Web Document/Data interchange notations; Web Document/data querying languages	
(2)	SGML Markup Language Tutorial 1	
(3)	XML Markup Language (1) Tutorial 2	**Quiz**
(4)	XML Markup Language (2) Tutorial 3	
(5)	XML Lab DTD language (1)	**Quiz**
(6)	DTD language Tutorial 4 XML Schema (1)	**First examination**
(7)	XML Schema (2) Tutorial 5 Document Object Model (1)	**Quiz**
(8)	Document Object Model (2) Tutorial 6 XLS language	
(9)	XLST language (1)	**Quiz**
(10)	XLST language (2) XSL and XSLT Lab	
(11)	XPath Tutorial 7	**Second examination**
(12)	XQuery (1) Tutorial 8	
(13)	XQuery (2) XQuery Lab	
(14)	JSON Data Interchange Notation Tutorial 9	
(15)	JSON Lab Data Interchange Language: JSON Versus XML	**Project Submission**
(16)	Projects examination	**Final Examination**

Expected workload

On average students need to spend 2 hours of study and preparation for each 50-minute lecture/tutorial.

Attendance policy

Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty hall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Module references

Books

1. XSLT, Doug Tidwell, Sebastopol:O'Reilly, 2008
2. XML in a Nutshell, Elliote Rusty Harold, Beijing: o'Reilly, 2004
3. XML Web Documents from Scratch, Liberty Jesse, Kralyy Mike, 2000