جامعة فيلادلفيا  Philadelphia University	اسم النموذج: خطة تدريس مادة دراسية Course Syllabus	QFO-AP-FI-002
	الجهة المصدرة: كلية تكنولوجيا المعلومات	رقم الاصدار: 2 Revision 2
	الجهة المدققة: عمادة ضمان الجودة	التاريخ: 2018/11/10
		عدد صفحات النموذج: 6

Department of Web Engineering
First Semester, 2019/2020

Course Syllabus	
Course: Web Server Side Technologies	**Course code: 0780340**
Course Level: 3	**Course prerequisite(s) and/or co-requisite(s): 0780341**
Lecture Time: 9:10 – 10:00	**Credit hours: 3**

Academic Staff Specifics				
Name	**Rank**	**Office Location**	**Office Hours**	**E-mail Address**
Raneem Qaddoura	Lecturer	IT 333	SST 11:00-12:00 MW 12:30-14:00	rqaddoura@philadelphia.edu.jo

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Course module description:

This course is intended to give the student advanced topics in server-side computing. At the course completion, students will understand the server-side programming techniques and tools currently used in web programming today. They will have the know-how of implementing server-side web-based applications. This course will discuss in detail Node.js, PHP and ASP.Net Core. It also introduces current server-side frameworks. Using multiple server-side languages at the same application will also be discussed in this course.

Course module objectives:

The course provides deep knowledge about current web server-side technologies. It provides advanced skills for developing server-side applications using Node.js, advanced topics in PHP, PHP frameworks, and ASP.Net Core technologies.

Course/ module components

- Textbooks:

[1] Herron, D. (2018). Node. js web development: server-side development with Node 10 made easy. Packt Publishing Ltd.
[2] Martin MG (2019). PHP: The Complete Guide for Beginners, Intermediate and Advanced Detailed Approach to Master PHP Programming
[3] Esposito, D. (2018). Programming ASP. NET Core, Programming ASP. NET Core. Microsoft Press.
[4] Nixon, R. (2018). Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5. O'Reilly Media, Inc.

- Support material (s)

The world's largest web development site: www.w3schools.com

Teaching methods:

Duration: 16 weeks, 52 hours in total
Lectures: 48 hours, 3 per week + three exams (Four hours)

Learning outcomes

A- Knowledge and understanding

- Recognize general Server-Side Web Concepts (A2)
- Explain the logic, syntax, and format of server-side programming (A2)
- Describe advanced programming functionalities (A2, A4)
- Outline and recognize different PHP frameworks (A3)
- Recognize how different server-side languages can be integrated at the same web application (A6)
- Compare between different server-side frameworks (A3)

***B-** Intellectual Skills*

- Apply Node.js and PHP advanced components to develop web applications and describe how it is working along with client-side programming (B4)
- Analyze different cases which are requested by the user of the website (B2)
- Apply ASP.NET core framework to develop web applications (B4)
- Analyze how to connect server-side scripts with database and make transactions on it (B3, B4)
- Relate several server-side scripts and connect between them (B3)

***C-** Practical skills.*

- Implement Node.js, PHP, or ASP.NET Core code and embed them in client-side interfaces (C2)
- Construct several server-side frameworks (C2)
- Evaluate programming problems and its corresponding problem-solving techniques (C3)
- Implement database queries from server-side scripts (C4)

***D-** Transferable Skills.*

- Work in a group to design and implements a full server-side scripts (D2, D3)
- Present different code snippets for combining different languages (D5, D6)
- Define and support lifelong learning, productivity, and satisfaction through learning to apply server-side frameworks to develop web applications (D7)

Learning outcomes achievement

- Development:
  - A2, A3, A4, A6, B3, B4, C2, C4, D5, and D6 are developed through the lectures, tutorials, and practical works.
  - B2, B3, B4, C2, C3, C4, D2, D3, and D7 are developed through Projects.
  - D5 and D6 are developed through presentations.
- Assessment:
  - A2, A3, A4, A6, B3, B4, C2, C4, D5 and D6 are assessed through written exams and practical works exams.
  - B2, B3, B4, C2, C3, C4, D2, D3, and D7 are assessed through projects.
  - D5 and D6 are assessed through presentations.

Assessment instruments

- Website implementation project.
- Practical works
- Final examination: 40 marks

Allocation of Marks	
Assessment Instruments	**Marks**
First examination	**20**
Second examination	**20**
Final examination	**40**
Project	**20**
Total	**100**

** Make-up exams will be offered for valid reasons only with consent of the Dean. Make-up exams may be different from regular exams in content and format.*

Practical Submissions

The assignments/project that have work to be assessed will be given to the students in separate documents including the due date and appropriate reading material

Documentation and academic honesty

Submit your homework covered with a sheet containing your name, number, course title and number, and type and number of the home work (e.g. tutorial, assignment, and project).
Any completed homework must be sent to my mail box on the due date. After the deadline "zero" will be awarded. You must keep a duplicate copy of your work because it may be needed while the original is being marked.

You should hand in with your assignments:

1- A printed listing of your test programs (if any).
2- A brief report to explain your findings.
3- Your solution of questions.

For the research report, you are required to write a report similar to a research paper. It should include:

- **Abstract**: It describes the main synopsis of your paper.
- **Introduction**: It provides background information necessary to understand the research and getting readers interested in your subject. The introduction is where you put your problem in context and is likely where the bulk of your sources will appear.
- **Methods (Algorithms and Implementation)**: Describe your methods here. Summarize the algorithms generally, highlight features relevant to your project, and refer readers to your references for further details.
- **Results and Discussion (Benchmarking and Analysis)**: This section is the most important part of your paper. It is here that you demonstrate the work you have accomplished on this project and explain its significance. The quality of your analysis will impact your final grade more than any other component on the paper. You should therefore plan to spend the bulk of your project time not just gathering data, but determining what it ultimately means and deciding how best to showcase these findings.
- **Conclusion**: The conclusion should give your reader the points to "take home" from your paper. It should state clearly what your results demonstrate about the problem you were tackling in the paper. It should also generalize your findings, putting them into a useful context that can be built upon. All generalizations should be supported by your data, however; the discussion should prove these points, so that when the reader gets to the conclusion, the statements are logical and seem self-evident.
- **Bibliography:** Refer to any reference that you used in your assignment. Citations in the body of the paper should refer to a bibliography at the end of the paper.

- **Protection by Copyright**
  1. Coursework, laboratory exercises, reports, and essays submitted for assessment must be your own work, unless in the case of group projects a joint effort is expected and is indicated as such.
  2. Use of quotations or data from the work of others is entirely acceptable, and is often very valuable provided that the source of the quotation or data is given. Failure to provide a source or put quotation marks around material that is taken from elsewhere gives the appearance that the comments are ostensibly your own. When quoting word-for-word from the work of another person quotation marks or indenting (setting the quotation in from the margin) must be used and the source of the quoted material must be acknowledged.
  3. Sources of quotations used should be listed in full in a bibliography at the end of your piece of work.

- **Avoiding Plagiarism**.
  1. Unacknowledged direct copying from the work of another person, or the close paraphrasing of somebody else's work, is called plagiarism and is a serious offence, equated with cheating in examinations. This applies to copying both from other students' work and from published sources such as books, reports or journal articles.
  2. Paraphrasing, when the original statement is still identifiable and has no acknowledgement, is plagiarism. A close paraphrase of another person's work must have an acknowledgement to the source. It is not acceptable for you to put together unacknowledged passages from the same or from different sources linking these together with a few words or sentences of your own and changing a few words from the original text: this is regarded as over-dependence on other sources, which is a form of plagiarism.
  3. Direct quotations from an earlier piece of your own work, if not attributed, suggest that your work is original, when in fact it is not. The direct copying of one's own

writings qualifies as plagiarism if the fact that the work has been or is to be presented elsewhere is not acknowledged.

4. Plagiarism is a serious offence and will always result in imposition of a penalty. In deciding upon the penalty the Department will take into account factors such as the year of study, the extent and proportion of the work that has been plagiarized, and the apparent intent of the student. The penalties that can be imposed range from a minimum of a zero mark for the work (without allowing resubmission) through caution to disciplinary measures (such as suspension or expulsion).

Course/module academic calendar

Week	Topic
1	• Server-side programming • CGI and its alternatives • Node.js Introduction
2	• Node.js NPM • Node.js Modules • Node.js Http module
3	• Node.js Express module
4	• Node.js MongoDB (1)
5	• Node.js MongoDB (2)
6 **First Exam**	• PHP review • Using IDE • PHP Arrays • PHP cookies, sessions, and authentication
7 **Project First Submission** **Project Discussions**	• PHP file handling • PHP Exceptions
8	• PHP OOP
9	• Advanced PHP and Database
10 **Second Exam**	• PHP frameworks
11	• Intro to ASP.NET Core
12	• ASP.NET Core MVC
13	• ASP.NET Core Models
14 **Project Final Submission** **Project Discussions**	• ASP.NET Core Controllers
15	• ASP.NET Core Views
16 **Final Exam**	• Server-side scripts and AJAX • Review

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 shall 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

Students will be expected to give the same attention to these references as given to the module textbooks.

1. Roy, U. K. (2015). Web Technologies. Oxford University Press
2. Forbes, A. (2015). The Joy of PHP: A Beginner's Guide to Programming Interactive Web Sites.
3. Freeman, A. (2017). Pro ASP. NET Core MVC 2. Apress.
4. Lock, A. (2017). ASP .NET Core in action. Shelter Island: Manning.

Websites

1. https://www.w3schools.com/nodejs/
2. https://www.tutorialspoint.com/nodejs/
3. https://www.w3schools.com/php/default.asp
4. https://codeigniter.com/user_guide/general/welcome.html
5. https://www.tutorialspoint.com/asp.net_core/index.htm