



**Philadelphia University**  
**Faculty of Engineering**  
**Department of Architecture**  
**First semester, academic year (2018-2019)**

**Course Syllabus**

<b>Course Title: Advanced Computer skills in Architecture</b>	<b>Course code: 0660467</b>
<b>Course Level: fourth</b>	<b>Course prerequisite (s) and/or co requisite (s): 0660265</b>
<b>Lecture Time: 12.45-14.15(Mon,Wed)</b> <b>Lecture Time: 11:10-12:00(Sun,Tue,Thu)</b>	<b>Credit hours: 3</b>

**Academic Staff Specifics**

<b>Name</b>	<b>Rank</b>	<b>Office Number and Location</b>	<b>Office Hours</b>	<b>E-mail Address</b>
Rawan Jafar	lecturer	Hall 403	As shown on board	Rawan.jafar6@gmail.com

**Course Module Description:**

The course introduces BIM concepts through providing training for student in operating Revit program, to enable the students to simulate their design projects through the computer using Revit

**Course Module Objectives:**

- To introduce students to use BIM software such as Revit.
- To upgrade students abilities to distinguish between Design and Revit
- To introduce students to model and present their projects using computer skills.

**Course Learning Objectives:**

- Appreciate the advantages of Revit over CAD.
- Take advantage of the increased accuracy and time saving available in Revit.
- Understand and be able to use the main Revit commands related to:
  - Creation of various types of projects.
  - Editing entities
  - Controlling the dynamic drawings.
  - Preparing 3D shots and 2D drawings for design projects

**Teaching Activities:**

Lecture, tutorial studios, assignments, presentations and discussions.

**Learning outcomes:**

1. Identify BIM concepts.
2. Navigation and view management.
3. Maintaining dynamic drawings.
4. Maintaining materials library.
5. Maintaining design options.
6. Visualize the whole project design and site solutions.
7. Create parametric "families".
8. Deal with professional annotation applications.
9. Create building/wall sections and details.
10. Create 3D shots.
11. Create conceptual massings.
12. Maintain tables and schedules.
13. Prepare working drawings to be print

**Assessment instruments**

- Exams (First, Second Exam).
- Project reviews and evaluation.
- Short reports and/ or presentations, and/ or Short research projects.
- Homework assignments.

	Assessment	Description	Week No.	Weight	
A	Exams	First Exam	6	20%	80%
		Second Exam	10	20%	
		Final Exam	15	40%	
B	Assignments	Assignments & Reports	1-13	20%	20%
TOTAL					100%

**Course/ Module academic calendar**

<b>Week No.</b>	<b>Date</b>	<b>Topic</b>
Week # 1	<b>Date</b>	Introduction to Revit
	14-15/10/2018	Introduction to Revit
Week # 2	16-17/10/2018	Introduction to BIM
	21-22/10/2018	Levels, Grids, and Columns
Week # 3	23-24/10/2018	Walls
	28-29/10/2018	Walls
Week # 4	30-31/10/2018	Floors
	4-5/11/2018	Doors and Window
Week # 5	6-7/11/2018	Stairs
	11-12/11/2018	Stairs and Railing
Week # 6	13-14/11/2018	Adding Furniture and working with Families
	18-19/11/2018	<b>First Exam</b>
Week # 7	20-21/11/2018	Site
	<b>25-26/11/2018</b>	Roofs
Week # 8	27-28/11/2018	Model in Place
	2-3/12/2018	Reflected Ceiling
Week # 9	4-5/12/2018	Rooms
	9-10/12/2018	Graphic display options and apply template
Week # 10	11-12/12/2018	Annotation and Detailing
	16-17/12/2018	<b>Second Exam</b>
Week # 11	18-19/12/2018	Render
	23-24/12/2018	Conceptual Mass
Week # 12	25-26/12/2018	Curtain Walls
	30-31/12/2018	Curtain Walls
Week # 13	1-2/1/2019	Section and exploded model
	<b>6-7/1/2019</b>	Schedules, material and sheets
Week # 14	8-9/1/2019	Final Project
	<b>13-14/1/2019</b>	Final Project
Week # 15	15-16/1/2019	<b>Final Exam</b>

**Expected workload:**

On average students need to spend 5 hours of study and preparation for each 3 hours 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.

**Course/ resources:**

Since the projects usually vary from one semester to another, given below are some general references that may always be useful.

1. Main References:

2. Wing, Eric (2014). Autodesk Revit architecture 2014: No experience required. John Willey and sons & Inc., Indianapolis, Indiana
3. Duell, Ryan, Hathorn Tobias and Hathorn, Tessa (2014). Autodesk Revit architecture 2015. John Wiley & Sons, Inc., Indianapolis, Indiana

**Other Suggested References:**

Revit online reference.

**Supplemental:**

Basically, the student is responsible for taking his/her own notes during the lectures given by the instructor, in addition to making use of the available resources

The student is advised to make use of the various books and references available at the University library and its databases, in addition to the relevant material available on the internet.

- Ching, F.D.K., "Architecture: form, space and order", John Wiley and sons, Canada.
- Laseau, P., (1989), "Graphic thinking for Architects and Designers", New York Van Nostrand Reinhold.
- Wong, W., (1993), "Principles of form and design", New York.