

Course challenge exercise – Grading rubric

Convert 2D plans to a 3D information model

Criteria: Convert 2D plans to a 3D model of the house. Link the floor plan drawing onto the base floor plan level. Manually or automatically create the walls. Then add the doors and windows before adding and exporting asset information.

Complete the required activities:

- **Task 1:** Create a 3D Revit project model using a 2D AutoCAD drawing as reference. Convert the 2D lines to walls before adding windows and doors to the 3D model.
- **Task 2:** Add asset information from an AIR to a Revit project model.
- **Task 3:** Export information from a 3D Revit project information model and share with stakeholders adhering to project naming conventions.

What to Submit:

- Direct your students to submit their design in a format that works well for you to review and critique. Here are some suggestions:
 - Share the design with your instructor through ACC.
 - Save the RVT file to a school submission dropbox.
 - Save the COBie XLSX file to ACC or upload to a school submission dropbox.

Grading rubric:

Use the provided schedules in the Revit model to grade the accuracy.

Criteria	100%	50%	25%	0%
	Advanced	Proficient	Basic	Emerging
Exterior Walls 20 pts	Length of Exterior wall between 58600 - 58650	Length of Exterior wall between 58400 - 58850	Length of Exterior wall between 58200 - 59050	Outside of this range
Interior Walls 20 pts	Length of Interior wall between 59000 - 59100	Length of Interior wall between 58500 - 59500	Length of Interior wall between 58000 - 60000	Outside of this range
Doors 10 pts	Total cost 2272 exactly	Total cost between 2250 - 2290	Total cost between 2200 - 2340	Outside of this range
Information in the Revit model Select an exterior wall and click Edit Type: 10 pts	Must have Ss_25_20_70	Ss_25_20_*	Ss_25_*	Any Uniclass2015 codes
Information in the Revit model Select an interior wall and click Edit Type: 10 pts	Ss_25_10_32_45	Ss_25_20_*	Ss_25_*	Any Uniclass2015 codes
Information in the Revit model Select a door and click Edit Type: 10 pts	Ss_25_30 and Pr_30_59_24_97	Ss_25_30 or Pr_30_59_24_97	Ss_25_* or Pr_30_*	Any Uniclass2015 codes
RVT file exists 3 pts	RVT format	RTE format	Any other format	-
COBie schema exists	XLXS format	Any other format	-	-

3 pts				
Revit project file name 7 pts	All 7 fields in name correct	remove 1 point for each incorrect field.	-	-
<p>Revit file should be named: PRJ001-ARC-ZZ-00-M3-A-0001 remove 1 point for each incorrect field.</p> <p><i>Note, will accept -ZZ- for spatial breakdown field for full point as this project contains a single level, so could be argued it is “all” levels (PRJ001-ARC-ZZ-ZZ-M3-A-0001).</i></p>				
COBie schema file name 7 pts	All 7 fields in name correct	remove 1 point for each incorrect field.	-	-
<p>COBie schema should be named PRJ001-ARC-ZZ-00-IE-A-0001 remove 1 point for each incorrect field.</p> <p><i>Note, will accept -ZZ- for spatial breakdown field for full point as this project contains a single level, so could be argued it is ‘all’ levels (PRJ001-ARC-ZZ-ZZ-IE-A-0001).</i></p>				

Total score: / 100