

<b>Number of units</b> 3	<b>T</b> 4	<b>Pr</b> 4	<b>Th</b> -	Number of weekly hours	Annual System 30 weeks	<b>Al-Esra'a University College</b> <b>Department: Engineering of Refrigeration and Air Conditioning Technologies</b>
				<b>Refrigeration &amp; Air conditioning system drawing</b>	Third stage	
<b><u>Course Objective</u></b>						
To study the drawing of different refrigeration and Air conditioning systems.						

Week	Topic	Lab. Experiment Assignments	Notes
1	Architecture drawing (double line) with air out let distribution		
2	Architecture drawing (double line) with air duct network (single line)		
3-5	Shop drawing of the air duct network		
6	Shop drawing of the air out lets (grill, diffuser, ...)		
7	Architecture drawing (double line) with air duct network (double line)		
8-9	Architecture drawing (double line) with air duct network (double line) and air out lets with all details'		
10-11	Shop drawings of piping systems and fittings with expansion tank		
12-13	Machine room drawing with distribution of all equipment and connecting all pipes and fittings		
14-15	Air conditioning systems drawings (All air, Air-water, All water, Dx) systems		

#### Half-year Break

Half-year Break			
16-17	Detail drawing of (window type, split unit, ...)		
18-19	Detail drawing of (packaged unit, fan coil unit, induction unit, ..)		
20	Detail drawing of (exhaust fan, centrifugal fan, ..)		
21-23	Detail drawing of water pumps used in air conditioning system		
24	Detail drawing of water chillers		
25	Detail drawing of cooling tower		
26	Detail drawing of air handling units		
27-30	Complete project contains all of the above subjects		