

Department : Mechanical & Refring Tech

Program : Air Conditioning and Refrigeration Technolog

**Major Core Courses (42 Credits)**

Code	No.	Course Name	Cr.	Hrs.	Theo.	Lab.	Field	Pre-req.
63	122	Fundamentals of Air conditioning	2	3	1	2	0	
63	123	Computerized HVAC&R Drafting	1	3	0	3	0	
63	126	HVAC & Air Distribution Systems	3	4	2	2	0	63/122
63	130	Fundamentals of Refrigeration	3	4	2	2	0	56/113
63	141	Electricity for HVAC&R Systems	3	4	2	2	0	30/102
63	149	Basic Skills Workshop 1	1	3	0	3	0	63/130
63	160	Fundamentals of Thermofluids	3	4	2	2	0	76/105
63	224	Chilled Water A/C Systems	3	3	3	0	0	63/126
63	228	Thermal Load Estimation	2	2	2	0	0	63/160
63	230	Industrial and Commercial Refrigeration Systems	3	4	2	2	0	63/130
63	243	Fundamentals of HVAC&R Control	2	3	1	2	0	63/141
63	247	HVAC&R Control Systems	3	4	2	2	0	63/243
63	249	Basic Skills Workshop 2	1	3	0	3	0	63/149
63	254	Operation and Maintenance of HVAC&R Systems	2	3	1	2	0	63/149
63	264	Installation and Commissioning of HVAC&R Systems	2	3	1	2	0	63/224
63	320	Computer Applications of HVAC&R	2	4	0	4	0	63/228
63	356	Troubleshooting & Repair of HVAC&R Systems	2	4	1	3	0	63/243
63	399	Field Training	4	16	0	0	16	30/162
			42	74	22	36	16	

**General Core Courses (18 Credits):**

Code	No.	Course Name	Cr.	Hrs.	Theo.	Lab.	Field	Pre-req.
30	99	English (treatment)	0	5	5	0	0	
30	102	Technical English	3	3	3	0	0	30/99
76	105	Mathematics (1)	3	3	3	0	0	
76	106	Mathematics (2)	3	3	3	0	0	76/105
56	113	Basic Physics	3	4	2	2	0	
30	162	Technical Reports Writing	3	3	3	0	0	30/102
30	171	Comminucation Skills	3	3	3	0	0	30/102
			18	19	17	2	0	

**Major Elective Courses (6 Credits)**

Code	No.	Course Name	Cr.	Hrs.	Theo.	Lab.	Field	Pre-req.
63	226	District Cooling	2	2	2	0	0	63/224
63	227	Special HVAC Systems	2	3	1	2	0	63/122
63	229	Advanced Computerized HVAC&R Drafting	2	4	0	4	0	63/123
63	231	Advanced Refrigeration Systems	2	3	1	2	0	63/230
63	244	Buildings Energy Management	2	3	1	2	0	63/243
63	257	HVAC&R Testing, Adjusting and Balancing	2	3	1	2	0	63/224
63	265	HVAC&R Sustainable Environment	2	3	1	2	0	63/122
63	266	Renewable Energy for HVAC&R Applications	2	3	1	2	0	63/122
63	350	HVAC&R Project	2	3	1	2	0	63/149

**General Elective Courses (3 Credits)**

Code	No.	Course Name	Cr.	Hrs.	Theo.	Lab.	Field	Pre-req.
15	114	Industrial Psychology	2	2	2	0	0	
66	135	Energy and Water Conservation	3	3	3	0	0	
8	110	Physical Education	1	2	2	0	0	
7	141	Art Education (1)	1	2	2	0	0	
7	142	Art Education (2)	1	2	2	0	0	07/141
13	151	Music Education	1	2	2	0	0	
21	164	Accounting	2	2	2	0	0	
27	166	Industrial Economics	2	2	2	0	0	
22	104	Small Projects Managment	2	2	2	0	0	
3	112	Work Ethics and Loyalty	3	3	3	0	0	

**General Compulsory Courses (6 Credits)**

Code	No.	Course Name	Cr.	Hrs.	Theo.	Lab.	Field	Pre-req.
1	101	Islamic Culture	2	2	2	0	0	
63	110	Supervision of HVAC&R Contract projects	2	2	2	0	0	63/123
66	125	Occupational Safety	2	2	2	0	0	
			6	6	6			

Total			Cr.	Hrs.
			75	108