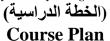


# **Ministry Of Higher Education and Scientific Research**

AL-Mustansiriyah University / Faculty of Engineering / Mechanical. Eng. Dept





Course No.: 506-04-3-06 Course Name: Refrigeration Equipment Design I

**Academic Year:** 2018-2019 **Time Division:** 3hr. Theoretical.

**Course Description** 

(3credit hours)

This course will be cover the:

Study the fundamentals of air conditioning, refrigeration and the analysis of duct design and refrigeration systems and its parts.

### **Course Intended Outcomes:**

# At the end of the course, students are provided with a basic knowledge of: Study the student the principles of air conditioning, refrigeration systems design,

☐ Duct design

☐ Water systems design

 $\Box$  Fan design

#### **Course Outline:**

First semester:

week	Date	Topics Covered	Notes
1		Introduction.	
2		Duct Design , Fans and Air Distribution.	
3		Duct Design , Fans and Air Distribution.	
4		Air Handling Units.	
5		Air Handling Units.	
6		Heat Exchanger Design, Noise.	
7		Heat Exchanger Design, Noise.	
8		Heat Exchanger Design, Noise.	
9		Types of Filtrations.	
10		Piping system design.	
11		Piping system design.	

لجة ضمان الجودة لجودة لحودة لجودة لجودة لجودة لجودة لجودة لجودة لجودة لجودة لجودة لحودة لجودة لجودة لجودة لحودة لجودة لجودة لحودة لحودة لجودة لحودة ل

12	Valves and Fitting.	
13	Type of piping system.	
14	Water pumps.	
15	Application.	

### **Textbooks:**

1- "ASHRAE fundamentals Handbook for air conditioning and Refrigeration", SI, 2013.

#### **Suggested references:**

- 1- "ASHRAE fundamentals Handbook for air conditioning and Refrigeration", SI, 2013.
- 2- Wilbert F., Stoecker and Lekold W. Jones, "Refrigeration and Air conditioning", McGraw-Hill, 1982.
- 3- Dr. Abdul Hadi N. Khalifa, Refrigeration and Air conditioning Engineering Dept. Engineering Technical College 3rd year refrigeration and Air conditioning Course, 2015.
- 4- Dr. Mushtaq I., Thiqar University, refrigeration and Air conditioning Course, 2015.

## **Marking**

First Semester				Second Semester				
1 st exam	Three Quiz	Practical	Activity	2nd exam	Three Quiz	Practical	Activity	Final Exam
15	2.5	-	5	15	2.5	-	5	60

#### Regulations

- There will be three term exams given during this semester. The best two out of three will be considered for the First & Second exam. This means there will NO makeup exams. Missing one of the two left exams means a ZERO grade will be given for that exam.
- 2. There is no markup for quizzes.
- 3. Attendance is mandatory and University regulations will be enforced.
- 4. All Cheating incidents will be reported to the chair. The following activities are considered cheating:
  - a. Turning in assignment that includes pats of someone else work.
  - b. Turning in someone else assignment as your own.
  - c. Giving assignment to someone else to turn in as their own.
  - d. Copying answers in a test or quiz.
  - e. Taking a test or quiz for someone else.
  - f. Having someone else take a test or quiz for you.
- 5. See student handbook for other regulations.

#### **Assignments and/or Projects**

لجة طنمان الجودة form:LBMNL03

Assignment/Project	Description	<b>Due Date</b>	Marking
H.W. 1	Report	Deadline 6 <sup>th</sup> Mar	2 Marks
H.W. 2	Report	Deadline 8 <sup>th</sup> Apr	2 Marks
Quizzes	Two or more quizzes	During the course	6 Marks

# **Instructor information:**

<u>Lecture Room</u>: [R:07] <u>Time</u>: Mon. :08:30-11:30

**Instructor's Name:** 

Dr. Maathe A. Theeb Office No.: 14 **E-Mail:** maathe@uomustansiriyah.edu.iq , maathe@yahoo.com

 $\underline{NOTES}$ :  $\Box$  Office Hours: Other office hours are available by appointment.

**Lecturer Signature** 

**Chairman Signature** 

 $<sup>\</sup>Box$  The content of this syllabus not be changed during the current semester.