

Course Title	Refrigeration, Heating and Air-conditioning				
Course Code	MME416				
Course Type	Technical Elective Course				
Level	Undergraduate				
Year / Semester	4 th year /				
Teacher's Name	Special Scientist				
ECTS	6	Lectures / week	3+1	Laboratories / week	
Course Purpose and Objectives	Introduction to the theory of ventilation, cooling and heating in buildings. An analysis of the comfort features in buildings and on the basic ventilation and air conditioning systems.				
Learning Outcomes	The student will be able at the end of the course to calculate the needs of air conditioning (cooling - heating) and ventilation based on components of buildings and users living requirements.				
Prerequisites	MME 217, MME315		Required		
Course Content	<ul style="list-style-type: none"> • Analysis and design of Air-conditioning Systems for maintaining comfort conditions in spaces of small and large buildings. • Analysis of Refrigeration Systems for industrial and other applications. • Climatological Data and comfort conditions; Psychrometry; Solar Loads; Air-conditioning loads; Loads of Walls, Glass Windows, Lighting, Human Heat, Devices; • Refrigerants; Basic Refrigeration Cycles; Air Conditioning System: fan-coil units, air (variable flow or temperature), water/air, heat pump; • Legislation 				
Teaching Methodology	Presentation - Power Point Communicative, Collaborative During the first week of the semester, the Syllabus of the course is given by the teacher, which includes information on the course content, expected learning outcomes, assessment and office hours				
Bibliography	Αναλυτική Προσέγγιση Κεντρικών Θερμάνσεων, Μ. Βραχόπουλος Αρχές Κλιματισμού, 5η Έκδοση - αναθεωρημένη, V. Paul Lang				
Assessment	Written exams and exercises				
Language	Greek				