

Content:

1. Thermal comfort, humidified air and heat transfer fundamentals
2. Building loads
3. Heat transfer and distribution systems
4. Heat generation systems: boilers and heat pumps
5. Water and domestic hot water systems

Learning objectives:

Students are able

- ...to calculate heating and domestic hot water loads for residential and commercial buildings
- ... to apply mass and energy conservation laws for a first sizing of energy system components like boilers, tanks, water pumps, pipes, radiators
- ... to choose operation mode and to specify a combined-heat-and-power-unit for a given application
- ... to specify and verify the application of technical standards on thermal comfort, hygiene and efficiency
- ... to improve their English proficiency

Assessment of this course is based on an exam.