

APPLIED THERMODYNAMICS SYLLABUS

MT 1209, Applied Thermodynamics

Textbook:

Name of Course: Applied Thermodynamics

Description:

In this course the student shall develop an understanding for thermodynamics and its engineering applications, train the ability to perform technical engineering calculations and clarify the subjects central role when explaining and solving environmental issues.

Credits ECTS: 7.5

Level: BSc Mechanical Engineering

Learning Outcomes: Students will be able to:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Brief Outline of Course Content:

1. Thermal Equilibrium
2. Temperature
3. Heat and Work
4. Ideal Gases
5. Energy Balance
6. Heat Capacity
7. Compression of the Gases
8. Principles of Heat Engines
9. Principles of Refrigerators
10. Entropy
11. Reversible and Irreversible Processes
12. Real Heat Engines
13. Phase Transitions
14. Chemical Potential
15. Fuel
16. Batteries
17. Heat Transport