**COE-C2007 – Course Requirements & Evaluation**

**Instructors:** Martti Larmi (Responsible teacher), Cheng Qiang (Jonny), Khosravi Ali.

**Status of the Course:** Bachelor Course (level), Energy Technology, fundamental course.

**Student Workload:**

|  |  |  |
| --- | --- | --- |
| **Learning activity** | **Workload (hours)** | **Remarks** |
| Activated lectures | 12\*2=24 |  |
| Additional reading materials | 4 | Preparing for the lectures. |
| Learning Exercises | 12+6 | 12 hours learning exercises and 6 consultation sessions (5 for thermodynamics and 1 for heat transfer). |
| Learning Exercises deliverables | 6 | student submissions |
| Project work (contact teaching) | 10 | Includes advisor consultation sessions + presentations. |
| Project work | 24 | Student group work |
| Self-studying and reflection | 49 |  |
| **In total** | **135** | 5 cr (27 each) |

**Grade Assessment:** The grade for this course will be based on the amount of achieved points. You can achieve a maximum of 100 points and the points will be distributed as follows:

**Period IV**

1. **Presence in lectures:** There are 12 lectures scheduled. No points for presence but highly recommended.
2. **Learning exercise:** There are 6 learning exercises scheduled which are compulsory to attend; five for Thermodynamics and one for Heat Transfer. You will have one week after each exercise to submit **a solution via MyCourses, the six submissions** will contribute **50% to your grade**. An additional consultation session with the instructors is scheduled in the same week the specific learning exercise is given.

**Period V**

Each student will need to join a group of 3-5 members and learn how to use thermodynamics and heat transfer principles to solve the practical problems. More instructions on the project tasks will be shared before the end of period IV. The project work grade accounts for **50% of the grade.**

**Textbook**

**1.** Thermodynamics: an engineering approach (9th Edition) / Yunus A. Çengel.

2. Introduction to Thermodynamics and Heat Transfer, 2nd Edition, Çengel.

3. Fundamentals of Engineering Thermodynamics (8th Edition), Michael J. Moran, Howard N. Shapiro, Daisie D. Boettner, Margaret B. Bailey