# Fundamentals of Engineering Thermodynamics

## Subject Information

<table>
<thead>
<tr>
<th><strong>Code</strong></th>
<th>UE3 S2</th>
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<tbody>
<tr>
<td><strong>Credits (ECTS)</strong></td>
<td>4</td>
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<tr>
<td><strong>Semester</strong></td>
<td>1 (mid-September – mid-January)</td>
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<tr>
<td><strong>Time Allocation</strong></td>
<td>20 h / 30 h / 0 / 0</td>
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<tr>
<td><strong>Lecturer</strong></td>
<td>Pr. Jean-Pierre BEDECARRATS, Dr. Didier HAILLOT.</td>
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<td><strong>Pre-requisites</strong></td>
<td>General Thermodynamics</td>
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<td><strong>Assessment</strong></td>
<td>2 hours final written examination</td>
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- **Lec. : Lectures**
- **Prac. : Practical works (“small classes”)**
- **Lab.: Laboratories**

## Subject Description

**Introduction**

- to present a thorough treatment of engineering thermodynamics from the classical viewpoint;
- to prepare students to use thermodynamics in engineering practice.

This part deals with usually encountered processes in energetic systems.

**Learning outcomes**

After this course the students should be able to correctly size and analyse energetic systems.

**Content**

1. Energy and the First Law of Thermodynamics
2. Evaluating Properties
3. Control Volume Analysis Using Energy
5. Exergy analysis
6. Vapour power systems
7. Gas power systems
8. Refrigeration and heat pump systems

**Literature**