



UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH

Stokes
Research Institute

Thermodynamics Overview

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Thermodynamics is a funny subject. The first time you go through it, you don't understand it at all. The second time you think you understand it, except for one or two points. The third time, you know you don't understand it, but by that time you are so used to it, it doesn't bother you anymore

- 100% Exam
- Tutorial sessions commence week 3
- Marking Scheme (Department M&AE)
- Books
 - Applied Thermodynamics – *Eastop & McConkey*
 - Thermodynamics – *Holman*
 - Engineering Thermodynamics, Work and Heat Transfer – *Rodgers and Mayhew*
 - Thermodynamics – *Incropera and DeWitt*
- Temperature and the Zeroth Law of Thermodynamics
- First Law of Thermodynamics
- Enthalpy and the Ideal Gas
- Reversible Thermodynamic Processes
- First Law as applied to open (flow) processes
- Second Law of Thermodynamics
- Corollaries of the Second Law
- Entropy (changes in reversible processes)
- The Carnot Cycle
- The Rankine Cycle
- Gas Turbine Power Cycles
- Improvements on Simple Systems
- Reciprocating Thermal Combustion Engines