

MECH2310 THERMODYNAMICS

(Fall of 2022)

Instructor: Prof. Simen Yanguang Zhou (Office 2577A, Email: maeygzhou@ust.hk)

Teaching Assistants: Dr. Simon Hak Nang LI (simonli@ust.hk)
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Course Description:

Fundamental Concepts; Pure substance; Work and heat; Control volume; Ideal and real gases; First and second laws of thermodynamics; Entropy; Elementary power and refrigeration cycles.

Textbook:

Y.A. Cengel and M.A. Boles, *Thermodynamics – An Engineering Approach*, 8th Edition in SI Units, McGraw Hill, 2015.

(Presentation Materials can be downloaded from the Learning Management and Evaluation System web site: <https://canvas.ust.hk>)

Classrooms and Time Slots:

Lecture: Monday – 16:30 - 17:50 (Rm 2304)
Friday – 12:00 - 13:20 (Rm 2304)
Tutorial: Thursday – 18:00 - 18:50 (Rm 2302)
Wednesday – 18:00 - 18:50 (Rm 2406)

Course Grading:

Final Exam:	40%
Mid Term:	30%
Site visit:	5%
Homework:	25%

Schedule: (Times are subject to change)

Week 1:	Introduction - Some basic concepts
Week 2:	Introduction - Energy Analysis
Week 3:	Introduction - Energy Analysis
Week 4:	Properties of Pure Substance
Week 5:	Properties of Pure Substance
Week 6:	Work and heat
Week 7:	First law of thermodynamics
Week 8:	First law of thermodynamics and Mid Term Exam
Week 9:	Second law of thermodynamics and Site visit
Week 10:	Second law of thermodynamics
Week 11:	Entropy
Week 12:	Entropy and more on Irreversibility
Week 13:	Review