MECH2040 L1 – Solid Mechanics
Spring 2022/23

Course Description:

stress and strain, analysis of structure members subject to axially loading, torsion and bending, transformation of stress and strain, buckling and energy method.

Textbook: Beer, Johnson, DeWolf and Mazurek, *Mechanics of Materials*, 8th Edition, McGraw Hill.

Instructor: Prof. Wenjing Ye, Location: Room 2560, Phone 2358 7194, Email: mewye@ust.hk; Office Hours: Open (make appointment via email)

TAs:

Li, Chunmin, Email: cmliad@connect.ust.hk; Office hour: TBD

Ma, Ho Yeung, Email: hymaaf@connect.ust.hk; Office hour: TBD

Lecture Time and Place: Wednesday and Friday 15:00 – 16:20; Room: 2302 (Lift17-18)

Tutorial Time and Place: Wednesday 18:00- 19:00, Room LTE

Course Homepage: http://canvas.ust.hk

Assignments and Grading Policy:

Homework	20%
Midterm Exam	35%
Final Exam	45%

Late Homework Policy: Late homework will be accepted only if it is handed in ***within a week after the due day***. For each day, you lose 10% of the total score.

Make-up Examinations: There will be **NO** make-up examinations. If you must miss an exam for a documentable non-academic reason, please let me know **IN ADVANCE** of the time of the exam.

Honor Code: http://www.ust.hk/vpaao/integrity/student-1.htmlLinks to an external site.. Code will be **strictly** followed

Lecture Contents:

Chapter 1 Concept of stress (~1.5 weeks)

Chapter 2 Stress and strain --- axial loading (~1.5 weeks)

Chapter 3 Torsion (~1 week)

Chapter 4 Pure bending (~1 week)

Chapter 5 Transverse loading (~1 week)

---------- Mid-term exam (TBA)

Chapter 6 Transformation of stress (~1 week)

Chapter 7 Design of beams for strength (~1 week)

Chapter 8 Deflection of beams (~1.5 week)

Chapter 9 Columns (~1 week)

Chapter 10 Energy methods (~1 week)