



## Mechanical Properties of Materials

### 材料機械性質

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Tuesday & Thursday 10-12am.  
工科 ESS 302



### About instructor....

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## Something you need to know before class...

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- **Prerequisites:** Physical Metallurgy
- **Textbook:**  
Deformation and Fracture Mechanics of Engineering Materials, 4<sup>th</sup> ed.,  
-----R. W Hertberg, John Wiley& Sons, 1996



## Way to A grade

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- **Exam:** there will be quizzes every class, one midterm exam and one comprehensive final exam.
- **Homework:** there will be 6 problem sets due by 12am during class
- **Final grade:**
  - Homework (15%)
  - Quiz : every class(15%)
  - Midterm: 11/11 (30%)
  - Final: 1/11 (40%)



## Course outline

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- Tensile response of Materials
- Elements of Dislocation Theory
- Slip and Twinning in Crystalline Solids
- Strengthening Mechanisms in Metals
- Fracture
- Elements of Fracture Mechanics



## Class rule

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- Be in time to the class.
- The cellular phone should be turned off or in the vibration mode in class.
- No food is allowed in class
- Turn in homework on time. No late homework can be accepted.
- Welcome to stop by my office with questions or comments to the courses