

## 九十六學年度第一學期課程內容大綱

課程名稱：材料力學

學分：3

授課老師：陳兆勛

翁宗賢

陳國慶

課號：543 U5870

開授年級：化學工程學系

上課時間/教室：Tue (3,4), Fri (2); 應109

Mon (7,8), Wed (5); 應233

Tue (3,4), Fri (2); 應113

### ◎ COURSE OUTLINE:

1. Introduction and Review of Statics
2. Analysis of **Stress**: Concepts and Definitions
3. Analysis of **Strain**: Concepts and Definitions
4. Material Properties and Stress-Strain Relationships
5. Axial Loading Applications and Pressure Vessels
6. Torsional Loading of Shafts
7. Flexural Loading: Stresses in Beams
8. Flexural Loading: Beam Deflections

### ◎ Textbook:

W. F. Riley, L. D. Sturges, and D. H. Morris, *Mechanics of Materials*, 6th Ed., John Wiley & Sons, 2006.

### Reference:

J.M. Gere (and S. T. Timoshenko), *Mechanics of Materials*, 6th Ed., Thomson Brooks/Cole, 2004.

### ◎ Grading:

Homework: 20%

Midterm examination: 40%

Final examination: 40%

### ◎ Contact Telephone Number:

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