Course Instructor:

助理教授 詹魁元
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Office Hour: 10:00am - noon, Wednesdays, or by appointments

Course Information:

Days and Hours: 9:10-11:00am, Mondays; 9:10-10:00 am, Wednesdays
Classroom: Room #203, ME Building
Webpage: http://moodle.ncku.edu.tw
Textbook: (the final choice of textbook will be announced in the first class)
or

Credit: 3
Grades (100%):
Homework¹ 12% (3% each)
Attendance and Participation 10%
Team Project 28% (1%, 5%, 3%, 5%, 2%, 12%)
Midterm Exam #1 15%
Midterm Exam #2 15%
Final Exam 20%

Homework and Project:

Five homework sets will be assigned prior to midterm and final exams. These homework sets are based on course materials and discussions from class. In addition, teams of three people are formed to complete a design project. Detail description of the project will be provided in class. All members in the team are required to work on their specific part and then putting components together. Upon the completion of the project, randomly selected team will be asked to present their concepts at the end of the semester.

Course Mission:

Provide concepts, procedures, and decision analyses that are essential in designing mechanical components. Students are expected to analyze individual element as well as the interfaces between elements as they work together to form a system.

Course Objectives:

- Introduce the concept of mechanical design and provide examples (Chap. 1)
- Review force and impact analysis (Chap. 2)
- Describe mechanical properties of various materials (Chap. 2)
- Demonstrate various surface failure mechanisms (Chap. 3)
- Perform stress-strain analysis and provide case studies (Chap. 3 and 4)
- Introduce failure theory and reliability (Chap. 5)
- Explain various fatigue-failure models (Chap. 6)
- Class review and case study presentations

Honor Code:

我在考試時絕不會給予別人協助，也不會接受他人的幫忙，所有作業及考試的答案均為本人努力的結果，若有違背誓言，一切依校規處置。

¹ Homework Policy：各章節作業於公布後之隔週三抽考作業內容，抽考成績即為當次作業成績。