

機械振動學

選修年級: 3,4

學分: 3

上課時間: 週二 7,8 週五 8

上課地點: 91302

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先修科目:

<http://klab.me.ncku.edu.tw>

預定進度:

週別	日期	內容	備註
1	2/14 Tu	✧ Course Introduction ✧ Ch.1 Fundamental of Vibration	
1	2/17 F	✧ Ch.1 Fundamental of Vibration	
2	2/21 Tu	✧ Ch.2 Free Vibration of SDOF Systems	
2	2/24 F	✧ Ch.2 Free Vibration of SDOF Systems	
3	2/28 Tu	✧	2/28 放假
3	3/03 F	✧ Ch.2 Free Vibration of SDOF Systems	
4	3/07 Tu	✧ Ch.2 Free Vibration of SDOF Systems	
4	3/10 F	✧ Ch.3 Harmonically Excited Vibration	
5	3/14 Tu	✧ Ch.3 Harmonically Excited Vibration	
5	3/17 F	✧ Ch.3 Harmonically Excited Vibration	
6	3/21 Tu	✧ Ch.3 Harmonically Excited Vibration	
6	3/24 F	✧ Ch.4 Vibration under General Conditions	
7	3/28 Tu	✧ Ch.4 Vibration under General Conditions	Quiz 1 (To Ch.3)
7	3/31 F	✧ Ch.4 Vibration under General Conditions	
8	4/04 Tu	✧	民族掃墓節放假
8	4/07 F	✧ Ch.5 Two-degree of Freedom Systems	
9	4/11 Tu	✧ Ch.5 Two-degree of Freedom Systems	
9	4/14 F	✧ Ch.5 Two-degree of Freedom Systems	
10	4/18 Tu	✧ Ch.6 Multi-degree of Freedom Systems	
10	4/21 F	✧ Ch.6 Multi-degree of Freedom Systems	
11	4/25 Tu	✧ Ch.6 Multi-degree of Freedom Systems	
11	4/28 F	✧ Ch.6 Multi-degree of Freedom Systems	

		✧ Introduction to Lagrange's Equations	
12	5/02 Tu	✧ Introduction to Lagrange's Equations	
12	5/05 F	✧ Introduction to Lagrange's Equations	
13	5/09 Tu	✧ Ch.8 Continuous Systems	Quiz 2 (4,5,6)
13	5/12 F	✧ Ch.8 Continuous Systems	
14	5/16 Tu	✧ Ch.8 Continuous Systems	
14	5/19 F	✧ Ch.8 Continuous Systems	
15	5/23 Tu	✧ Ch.8 Continuous Systems	
15	5/26 F	✧ Ch. 7 Approximation Methods	
16	5/30 Tu	✧ Ch. 7 Approximation Methods ✧ Experimental Vibration Overview	
16	6/02 F	✧ Experimental Vibration Overview	
17	6/06 Tu	✧ Ch. 9 Vibration Control ✧ Ch.10 Vibration Measurement	
17	6/09 F	✧ Ch.10 Vibration Measurement	
18	6/13 Tu	✧ Final Quiz	Final Quiz (7,8,9,10) Exp vibration
18	6/16	✧	

Textbook:

S. Rao, Mechanical Vibrations 6th or 5th Ed. Pearson (高立)

Major reference:

1. S. Graham Kelly, Fundamental of Mechanical Vibrations, McGraw-Hill, 2000.
2. W.T. Thomson and M. D. Dahleh, Theory of Vibration with Applications, 5th ed. Prentice-Hall, 1998.
- 3.

初步成績計算構想:

作業: ~ 25 points (約 8 次)

Term project: ~ 10 Points

Quiz : total 75 points (approximately 25 points each) Total 110 Points