

Hong Kong Community College/ School of Professional Education and Executive Development

SEHS2345 Fundamental Engineering Mechanics Semester One, 2023/24

Tentative Teaching Plan

Subject Leader

Dr Chandler ZHOU (Office: HHB-1603, Tel: 6721 3846, Email: chandler.zhou@cpce-polyu.edu.hk)

Subject Lecturer/ Lecturers

Mr Rex Cham (Office: HHB-1545, Tel.: 9450 9623, email: rexcham@cpce-polyu.edu.hk)

Objectives

This subject aims to provide students the fundamental concepts of mechanics of motion and system equilibrium.

Subject Intended Learning Outcomes

Upon completion of this subject, students will be able to:

- a. Apply the fundamental knowledge of mechanics to solve for forces and moments on simple systems.
- b. Distinguish the basic differences between diverse engineering systems and select the suitable design in achieving the engineering purposes.
- c. Employ state-of-art technology in solving mechanics problems encounter in assignments and projects.
- d. Collaborate with peers from different disciplines in experiments and projects and present effectively the results of experiment or project.

Respective Scheme/ Programme Intended Learning Outcomes

This is a foundation subject that is not applicable for programme intended learning outcomes.

Teaching and Learning Approach

Lectures are used to deliver the fundamental knowledge in relation to the topics as described in the section subject synopsis (Outcomes a, b and c).

Tutorials are used to illustrate the application of fundamental knowledge to practical situations (Outcomes a, b and c).

Experiments are used to relate the concepts to practical applications and students are exposed to hand-on experience, proper use of equipment and application of analytical skills on interpreting experimental results (Outcomes c and d).

Teaching/Learning Methodology	Learning Outcomes			
	a	b	c	d
Lectures	✓	✓	✓	
Tutorials	✓	✓	✓	
Laboratory Work			✓	✓

Weekly Teaching Pattern

33 hour(s) of lecture

6 hour(s) of tutorial

Tentative Teaching Schedule

Lecture			Tutorial		
No	Content/ Topics	Activities time	No	Content/ Topics	Readings/ Remarks
1	Introduction to Mechanics Basic Vector Analysis	Chapter 1, 07/Sep	1		
2	Static of Particles I	Chapter 2a, 14/Sep	2	Tutorial 1	Release of Assignment 1
3	Static of Particles II	Chapter 2b, 21/Sep	3		
4	Equivalent Systems of Forces	Chapter 3, 28/Sep	4	Tutorial 2	
5	Equilibrium of Rigid Body	Chapter 4, 05/Oct	5		
6	Structural Analysis	Chapter 5, 12/Oct	6	Tutorial 3	Submission of Assignment 1
7	Mid-term Test	19/Oct	7		
8	Centroids and Centre of Gravity	Chapter 6, 26/Oct	8		Release of Assignment 2
9	Moments of Inertia of an Area	Chapter 7, 02/Nov	9	Tutorial 4	
10	Internal Forces and Moments	Chapter 8, 09/Nov	10		
11	Kinematics and Kinetics of Particles 1	Chapter 9a, 16/Nov	11	Tutorial 5	
12	Kinematics and Kinetics of Particles 2	Chapter 9b, 23/Nov	12		Submission of Assignment 2
13	Kinematics and Kinetics of Particles 3	Chapter 9c, 30/Nov	13	Tutorial 6	

Assessment Weighting

Continuous Assessment:	50%
Examination:	<u>50%</u>
	100%

Assessment Methods for Continuous Assessment

<u>Continuous Assessment</u>	<u>Percentage</u>	<u>Brief Description</u>
Test 1	20%	Chapter 1-4
Assignment 1	15% (Individual)	Chapter 1-4
Assignment 2	15% (Individual)	Chapter 5-9
Examination*	<u>50%</u>	
	100%	

Lecture/ Tutorial Notes and Assignments

Students are required to download lecture/ tutorial notes and assignments from the e-Learning platform.

Textbook and References

Recommended Textbook:

1. R.C. Hibbeler, Engineering Mechanics –Statics, Prentice Hall, latest edition.
2. A. Pytel, J. Kiusalaas, Engineering Mechanics –Statics, Stamford, CT: Cengage Learning, latest edition.

Plagiarism

You are strongly advised to pay attention to the rules and guidance notes regarding plagiarism, how sources should be referred to, and bibliography referencing as stipulated in the Student Handbook.

The [College/ School](#) may take disciplinary actions against students when there is evidence of collusion between individuals. The work of others which is included in the assignment must be attributed to its source (a full bibliography and a list of references must be submitted). Failure to observe such requirements may lead to serious consequences for your study in this subject and your registration at the [College/ School](#). Please refer to the Section “Penalties for Offences” in the Student Handbook for details.

You are also strongly advised to review the hot tips about plagiarism and how to avoid it with reference to the following document:
http://www.polyu.edu.hk/ogur/academic_integrity/Plagiarism_Booklet.pdf.