

Ministry of Higher Education and Scientific research



Department of General Science

College of Basic Education

Salahaddin University-Erbil

Subject: Mechanics Laboratory

Course Book – *First Year-*

Semester1

Lecturer: Dr. Wala Gazey Mahmood

Academic Year: 2023/2024

Course Book

1. Course name	Mechanics Laboratory
2. Lecturer in charge	Wala Dizayee
3. Department/ College	General Science/Basic Education
4. Contact	e-mail: mohammed.aziz@su.edu.krd Tel: 0750 462 2954
5. Time (in hours) per week	Theory: Practical: 2 hours/week
6. Office hours	Sunday and Thursday
7. Course code	
8. Teacher's academic Profile	
9. Keywords	
<p>This laboratory deals with the most experiments on Mechanics subjects.</p> <p>The experiments are selected carefully to cover and run in parallel with the theoretical part of the subject of Mechanics and Properties of Matter.</p> <p>The experiments selected consist of 10 experiments in Mechanics and Properties of Matter for first semester.</p>	
<p>11. Course objective:</p> <p>Exp. No. 1: Equation of a straight Line</p> <p>Exp. No. 2: Volume and density of solids.</p> <p>Exp. No. 3: The acceleration of free fall using simple pendulum.</p> <p>Exp. No. 4: The acceleration of gravity using U tube.</p> <p>Exp. No. 5: Refractive index of glass.</p> <p>Exp. No. 6: Refractive index of water.</p> <p>Exp. No. 7: The speed of sound using resonance tube closed at one end.</p> <p>Exp. No. 8 : Variation of length of Cantilever with fixed mass at the end.</p>	

Exp. No.9: Variation of masses with fixed length of the Cantilever.

Exp.No.10: To verify Hooke's Law.

Exp.No.11: The focal length of convex lens by a graphical method.

Exp.No.12: The focal length of concave mirror by a graphical method.

12. Student's obligation

The students shall participate in discussion of the topics and solving practical examples related to the subjects. The exercises will be given to the students as home works. The students will also be asked to prepare reports on selected topics.

13. Forms of teaching

Data Show power point presentation and the white board.

14. Assessment scheme

Breakdown of overall assessment and examination

Semesters examination (two examinations in a year, each 20%).

15. Student learning outcome:

This subject is concerned with the experimental part of the subject Mechanics and properties of matter. It covers 10 experiments which are expected to cover most of the theoretical part during the first semester.

16. Course Reading List and References:

References:

Practical Physics in SI E Armitage. John Murray 1974.London UK.

17. The Topics:

Lecturer's name

<p>18. Practical Topics (If there is any)</p>	
<p>Exp. No. 1: Equation of a straight Line</p> <p>Exp. No. 2: Volume and density of solids.</p> <p>Exp. No. 3: The acceleration of free fall using simple pendulum.</p> <p>Exp. No. 4: The acceleration of gravity using U tube.</p> <p>Exp. No. 5: Refractive index of glass.</p> <p>Exp. No. 6: Refractive index of water.</p> <p>Exp. No. 7: The speed of sound using resonance tube closed at one end.</p> <p>Exp. No. 8 : Variation of length of Cantilever with fixed mass at the end.</p> <p>Exp. No.9: Variation of masses with fixed length of the Cantilever.</p> <p>Exp. No.10: To verify Hooke's Law.</p> <p>Exp.No.11: The focal length of convex lens by a graphical method.</p> <p>Exp.No.12: The focal length of concave mirror by a graphical method.</p> <hr/> <p>19. Examinations:</p> <p>1. Compositional: In this type of exam the questions usually starts with Explain how, What are the reasons for...?, Why...?, How....?</p> <p>With their typical answers Examples should be provided</p>	<p>with Explain how,</p>
<p>Directorate of Quality Assurance and Accreditation</p>	

2. True or false type of exams:

In this type of exam a short sentence about a specific subject will be provided, and then students will comment on the trueness or falseness of this particular sentence. Examples should be provided

3. Multiple choices:

In this type of exam there will be a number of phrases next or below a statement, students will match the correct phrase. Examples should be provided.

20. Extra notes:

Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.

21. Peer review

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section. *(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).*