Department of General Science

College of Basic Education

University of Salahaddin

Subject: Waves and Motion

Course Book – (Year 2) (1st Semester)

Lecturer's name: Dr. Wala Dizayee

Academic Year: 2021/2022

Course Book

1. Course name	Waves and Motion
2. Lecturer in charge	Wala Dizayee
3. Department/ College	General Science /Basic Education
4. Contact	e-mail: wala.dizayee@su.edu.krd Tel: (optional)
5. Time (in hours) per week	For example Theory: 3 Practical: 0
6. Office hours	
7. Course code	
8. Teacher's academic profile	https://academics.su.edu.krd/wala.dizayee
9. Keywords	Waves and Motion, Wave Propagation, Properties of waves, standing waves.

10. **Course overview:**

- This course will introduce students to the foundations of Waves and Motion, therefore the course is intended to cover some of the standard concepts, like; Wave Propagation, Properties of waves, SHM …. etc.

- Learn about the theory and applications of Waves and Motion concepts by using a simple and clear mathematic to explain the physics.

- Help the student to gain experience in reading and scientific writing.

-The course aims to introduce and explain the foundational concepts of Waves and Motion for students, which will help them to take up more advanced topics in later years.

11. Course objective:

- The course will provide an introduction of basic Waves and Motion concepts.

- Consternate on a number of topics like; **Waves and Motion, Wave Propagation, Properties of waves, standing waves, clear and mathematical equations** to explain the physical concepts.

- Clarify the physical concepts through a range of examples and applications.

12. Student's obligation:

- Students should attend in all lectures, either in hall or online.

- Participation in classroom discussions and solving practical examples related to the subjects.

- Home works and quiz.

- The students are required to do two mid-term exams and a final exam.

13. Forms of teaching

- White board.

- Data Show power point presentation.

- Homework and problem solving in the class.

- Group activity & individual activity.

- Group assignments & individual assignments.

14. Assessment scheme

- One mid-term exams and a final exam.

- Daily Activity (Group activity & individual activity).

- Attendance of students.

- Homework (Group assignments & individual assignments).

- Reports.

- Posters.

15. Student learning outcome:

- The student will be familiar with the basic ideas to understand several concepts about waves, for example, SHM, standing waves, properties of waves and,...., etc.

- To gain experience about how to think scientifically and critically in seeking for new knowledge.

16. Course Reading List and References:

- Key references:

A- Useful references:

1- Introduction to physic, 3rd ed ,F.L .Pedrotti, L.S Pedro(2007) .

2- Schaums outline series theory and problems of college phyiscs.7-edition. Frecerick J.Bueche. (1989).

3- Fundamental University Physics", Alonso/Finn.

4- Physical Science", Bill W. Tillery.

5- The Physical Universe", Konrad B. Krauskopf and Arthur Beiser.

17. The Topics:	Lecturer's name
1- Introduction to waves. 2- Waves Types. 3- The properties of waves 4- Wave propagation 5- Waves Velocity and Frequency 6- Vibrations and waves. 7- Energy and information: 7.1- Energy 7.2- Transducers. 7.3- Information	
18. Practical Topics (If there is any)	

19. Examinations:

Total :100%

Final exam: 60%

1st term: 40%

1st term: 40%

Midterm exams: 30%

Activates: 10% (Homework?? %, quizzes:?? % , Participation ?? %, poster?? %, presentation?? %, Group activity & individual activity?? % and ,,,,,,,,)

20. Extra notes:

21. Peer review:

I read this course book it's very good and I signed on it.