| Course Information       |           |                   |   |   |      |                 |                            |               |  |  |
|--------------------------|-----------|-------------------|---|---|------|-----------------|----------------------------|---------------|--|--|
| Course Code              | Т         | P                 | L | C | ECTS | <b>Type</b> C/E | Language<br>TR/ENG<br>etc. | Year/Semester |  |  |
| FİZ1101                  | 4         | 2                 | 0 | 5 | 8    | C               | TR                         | 1/FALL        |  |  |
| Course Name<br>(Turkish) | Genel Fiz | Genel Fizik -I    |   |   |      |                 |                            |               |  |  |
| Course Name<br>(English) | General 1 | General Physics-I |   |   |      |                 |                            |               |  |  |

| -                                    |   |  |                  |      |  |  |  |  |  |
|--------------------------------------|---|--|------------------|------|--|--|--|--|--|
| Unit/Program                         | Physics Undergradu                                      | Physics Undergraduate Program                        |                  |      |  |  |  |  |  |
| Course Prerequisite                  | No  |  |                  |      |  |  |  |  |  |
| Course Objectives                    | Teaching students the                                   | Teaching students the concepts of mechanical physics |                  |      |  |  |  |  |  |
| Course Outline                       | Mechanics Physics                                       |  |                  |      |  |  |  |  |  |
| Textbook/<br>Material /<br>Resources | Physics for Science and Engineering I. (Serway Physics) |  |                  |      |  |  |  |  |  |
| Internship Status                    | No  |  |                  |      |  |  |  |  |  |
|                                      | Course Precedents                                       |  |                  |      |  |  |  |  |  |
| University Name                      | Program Name  | Course Name  | T-P-L-C;<br>ECTS | Туре |  |  |  |  |  |
| Gebze Technical<br>University        | Physics   | Physics I  | 3-0-0-4-6        | С    |  |  |  |  |  |
| Osmangazi<br>University              | Physics   | Physics I  | 4-2-0-5-7        | С    |  |  |  |  |  |
| The instructor who p                 | Signature   |  |                  |      |  |  |  |  |  |
| Instructors who can                  | Signature   |  |                  |      |  |  |  |  |  |
|                                      |   |  |                  |      |  |  |  |  |  |

Academic justification for the opening of the course? (The effect of course outcomes on program outcomes, etc.)

Updating ECTS for FIZ101 course

**Brief explanation of the course** (theoretical lecture, applications, laboratory, studio, off-campus activity, using software, etc.)

It will be taught by the relevant Faculty Member in a face-to-face classroom environment.

External Stakeholder Opinions About the Course (It is expected that the opinions to be obtained from the business world that will employ your graduates or from real or legal persons outside the University who have expertise on the subject of the course will be specified. Proof documents must be attached to this form.)

Stakeholder Name

Opinion (It should be given as a summary, it should not exceed two lines.)

| Weekly Course Content Distribution |  |                        |  |  |  |  |
|------------------------------------|--|------------------------|--|--|--|--|
| Week                               | Theory   | Application/Laboratory |  |  |  |  |
| 1                                  | Unit Systems, Vectors                          |                        |  |  |  |  |
| 2                                  | Movement in One Dimension                      |                        |  |  |  |  |
| 3                                  | Movement in Two Dimensions                     |                        |  |  |  |  |
| 4                                  | Circular Motion                                |                        |  |  |  |  |
| 5                                  | Newton's Laws of Motion                        |                        |  |  |  |  |
| 6                                  | Applications of Newton's Laws of Motion        |                        |  |  |  |  |
| 7                                  | N.H.K Applications of Circular Motion          |                        |  |  |  |  |
| 8                                  | Work, Power & Energy                           |                        |  |  |  |  |
| 9                                  | Midterm Exam                                   |                        |  |  |  |  |
| 10                                 | Conservation of Energy                         |                        |  |  |  |  |
| 11                                 | Impulse and Momentum                           |                        |  |  |  |  |
| 12                                 | Collisions in two dimensions, three dimensions |                        |  |  |  |  |
| 13                                 | Angular Momentum and Rotational Motion         |                        |  |  |  |  |
| 14                                 | Rigid Body and Equilibrium, Center of Gravity  |                        |  |  |  |  |
| 15                                 | Final Exam                                     |                        |  |  |  |  |
| 16                                 |  |                        |  |  |  |  |

| Assessment          |               |        |                                      |  |  |  |  |
|---------------------|---------------|--------|--------------------------------------|--|--|--|--|
|                     | Activity      | Custom | Contribution to<br>Success Grade (%) |  |  |  |  |
|                     | Midterm Exams | 1      | 40                                   |  |  |  |  |
|                     | Quizzes       |        |                                      |  |  |  |  |
|                     | Assignments   |        |                                      |  |  |  |  |
| Evaluation Criteria | Projects      |        |                                      |  |  |  |  |
|                     | Term Paper    |        |                                      |  |  |  |  |
|                     | Laboratory    |        |                                      |  |  |  |  |
|                     | Other         |        |                                      |  |  |  |  |
|                     | Final Exam    | 1      | 60                                   |  |  |  |  |
|                     |               | Sum:   | 100                                  |  |  |  |  |
| Remarks             |               |        |                                      |  |  |  |  |

|                    | Mathematics and Basic<br>Sciences | 50 |
|--------------------|-----------------------------------|----|
|                    | Engineering Sciences              | 50 |
| Content Design and | Social Sciences                   |    |
| Subject Weight (%) | Health Sciences                   |    |
|                    | Educational Sciences              |    |
|                    | Culture and Art Sciences          |    |
|                    | Design Information                |    |

| Workload (ECTS) Calculation                                  |  |       |       |       |      |                        |    |   |    |   |    |    |
|--|--|-------|-------|-------|------|------------------------|----|---|----|---|----|----|
| Events   | <b>Duration (Hours)</b>                                |       |       |       | rs)  | Total workload (Hours) |    |   |    |   |    |    |
| Fieldwork  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Midterm Exam Application                                     | 1  |       | 2     |       |      |                        | 2  |   |    |   |    |    |
| Self-Study (including pre-class and exam                     | 14   |       |       |       |      |                        |    |   |    |   |    |    |
| preparation)   | 14   | 2     |       |       |      | 28                     |    |   |    |   |    |    |
| Make-up Exam   | 1  |       |       | 2     |      |                        | 2  |   |    |   |    |    |
| Experiment and Observation                                   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Class Participation (Theory)                                 | 14   |       |       | 6     |      |                        | 84 |   |    |   |    |    |
| Homework   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Final Exam Practice  | 1  |       |       | 2     |      |                        | 2  |   |    |   |    |    |
| Laboratory   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Article Review   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Writing an Article   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Reading  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Case Study   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Performance  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Problem Solution   | 14   | 2     |       |       |      |                        | 28 |   |    |   |    |    |
| Project Preparation  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Project Submission   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Quiz   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Report Preparation   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Submitting Reports   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Role/Drama Work  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Seminar  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Oral Exam  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Team/Group Work  | 14   | 4     |       |       |      | 56                     |    |   |    |   |    |    |
| Argument   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Application/Practice   |  |       |       |       |      |                        |    |   |    |   |    |    |
| Other  |  |       |       |       |      |                        |    |   |    |   |    |    |
|  | Т  | `ОТА  | ьW    | ORK   | LOA  | D:                     |    |   | 20 | 2 |    |    |
| ECTS CREDITS OF THE COURSE:                                  |  |       |       |       |      |                        |    |   |    |   |    |    |
| (The number obtained as a result of Total                    | Workload,  | /25 i | is ca | lculo | ited | by                     |    |   | 8  | } |    |    |
| ro   | unding to  | the v | vhol  | e nu  | mbe  | r.)                    |    |   |    |   |    |    |
|  |  |       |       |       |      |                        |    |   |    |   |    |    |
| Program Outco  | mes (PO)   | 1     | 2     | 2     | 4    | _                      |    | 7 | 0  | 0 | 10 | 11 |
| Learning Outcomes (LO) (Course Outcomes)                     |  | 1     | 2     | 3     | 4    | 5                      | 6  | 7 | 8  | 9 | 10 | 11 |
| 1 To be able to explain the basic concepts of mechanics.     |  | 5     | 5     | 5     | 3    | 3                      | 1  | 5 | 5  | 5 | 5  | 3  |
| To be able to apply general principles of physics in solving |  | 5     | 5     | 5     | 5    | 2                      | 1  | 5 | 5  | 5 | 4  | 5  |
| To be able to make mathematical solutions w                  | To be able to make mathematical solutions with physics |       |       |       |      |                        |    |   |    |   | _  | 4  |
| concepts, to explain, to interpret, to gain the sl           |  | 5     | 5     | 5     | 4    | 5                      | 1  | 5 | 5  | 5 | 3  | f  |

**Organizer:** Prof. Dr. Fethi DAĞDELEN **Preparation Date:** 20.05.2024