

## Brochure for Physics Freshmen Students

### Important Web Pages

Official rules and regulations:

[METU HOME PAGE](#) → [Academic](#) → [Academic Rules & Regulations](#)

University catalog:

<https://catalog.metu.edu.tr/>

Courses offered and exam dates:

<http://www.physics.metu.edu.tr/Education/Courses>

### Letter Grades

| Letter | Points | Description   |
|--------|--------|---|
| AA     | 4      | Passing grades  |
| BA     | 3.5    |   |
| BB     | 3      |   |
| CB     | 2.5    |   |
| CC     | 2      |   |
| DC     | 1.5    | Minimal passing grades  |
| DD     | 1      |   |
| FD     | 0.5    | Failing grades  |
| FF     | 0      |   |
| NA     | 0      |   |
| S      | —      | Satisfactory (passing)  |
| U      | —      | Unsatisfactory (failing)  |
| I      | —      | Incomplete; there is something that you need to do before getting one of the grades above |
| W      | —      | Withdrawn; you officially withdrew from the course.                                       |
| EX     | —      | Exempt.   |

### Courses and Grades

- **To graduate**, your CGPA should be at least 2.00 and you should not have a failing grade. Normal duration of physics program is 4 years. You should graduate within the maximum duration of 7 years.
- If your CGPA  $\geq 3.00$  at the end of first year, you may apply to a **double-major** program. If CGPA  $\geq 2.50$ , you can apply to a **minor** program. Check the *academic calendar* for the application period for these programs.
- Normal **course load** per semester for physics program is 5 courses with credit. The course load can be increased by 1 or 2 if CGPA exceeds 2.00 and 2.50, respectively. The minimum possible load is 3.
- For some courses, to be able to enter the final exam, you need to complete some requirements (attendance, exams, etc.). If you do not complete these, you get NA (*Not Attendant*) grade.
- **Repeating** courses:
  - All failed courses must be repeated (or replaced).
  - You can repeat a passed course only within the next 3 semesters.
  - There is no time restriction for repeating failed courses.
- If your CGPA  $< 2.0$  for two succeeding semesters, then you will be on **probation** in the following semester. If you are on probation, then you can enroll *only* to courses that you have taken before (excluding those with W grade), until you manage to increase your CGPA above 2.00. Also, you can replace an elective course with another one that you haven't taken before.

### Standing

**GPA** : *Grade Point Average*

Weighted average of letter grade points for one semester.

**CGPA**: *Cumulative Grade Point Average*

Weighted average of letter grade points for all courses you have taken since the first semester.

|                 |   |                                  |                        |
|-----------------|---|----------------------------------|------------------------|
| CGPA $\geq 2.0$ | * | ... and GPA $\geq 3.5$           | <b>High Honor</b>      |
|                 |   | ... and GPA $\geq 3.0$           | <b>Honor</b>           |
|                 |   | ... and GPA $\geq 2.0$           | <b>Satisfactory</b>    |
|                 |   |                                  | ... and GPA $\geq 2.0$ |
| CGPA $< 2.0$    |   | ... or GPA $< 2.0$               | <b>Fail</b>            |
|                 |   | ... for two succeeding semesters | <b>Probation</b>       |

\* If at least 3 courses are taken and all have passing letter grade ...

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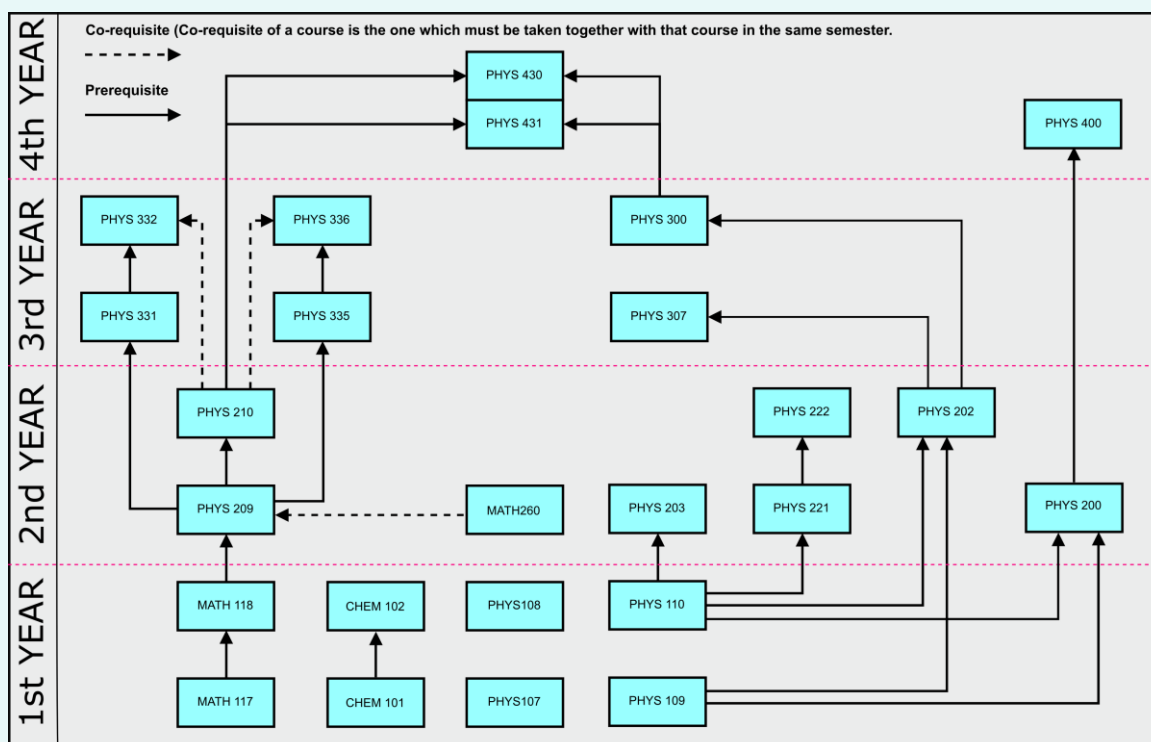
### Curriculum

The requirements for B.S. degree in physics include 29 must courses (111 credits) and 10 elective courses. Four of these elective courses (**restricted electives**) must be taken from special packages called "**concentrations**" which are organized around typical fields of physics. Courses taken from the Physics, Mathematics, Chemistry, Biology, Statistics and all Engineering Departments are counted as **Technical Electives**. **Non-Departmental Electives**: All courses except courses from Physics Department. **Free Electives**: All courses.

|                     |                                   |                     |  |
|---------------------|-----------------------------------|---------------------|--|
| <b>1st semester</b> |                                   | <b>2nd semester</b> |  |
| PHYS 107            | Physics Laboratory I              | (1-2)2              | PHYS 108 Physics Laboratory II (1-2)2                      |
| PHYS 109            | Mechanics                         | (5-0)5              | PHYS 110 Electromagnetism (5-0)5                           |
| CHEM 101            | General Chemistry I               | (4-2)5              | CHEM 102 General Chemistry II (4-2)5                       |
| MATH 117            | Calculus I                        | (4-2)5              | MATH 118 Calculus II (4-2)5                                |
| ENG 101             | English for Academic Purposes I   | (4-1)4              | ENG 102 English for Academic Purposes II (4-1)4            |
| OHS 101             | Occupational Health and Safety I  | NC                  | IS 100 Introduction to Information Technologies and ... NC |
| <b>3rd semester</b> |                                   | <b>4th semester</b> |  |
| PHYS 200            | Basics of Scientific Computation  | (2-2)3              | PHYS 202 Modern Physics (4-0)4                             |
| PHYS 203            | Introductory Electronics          | (3-2)4              | PHYS 210 Mathematical Methods in Phys. II (4-0)4           |
| PHYS 209            | Math. Methods in Phys. I          | (4-0)4              | PHYS 222 Optics and Waves Laboratory (1-4)3                |
| PHYS 221            | Optics and Waves                  | (4-0)4              | ENG 211 Academic Oral Presentation Skills (3-1)3           |
| MATH 260            | Basic Linear Algebra              | (3-0)3              | HIST 2202 Principles of Kemal Atatürk II NC                |
| HIST 2201           | Principles of Kemal Atatürk I     | NC                  | Free Elective  |
| <b>5th semester</b> |                                   | <b>6th semester</b> |  |
| PHYS 307            | Applied Modern Physics            | (1-4)3              | PHYS 300 Quantum Physics (4-0)4                            |
| PHYS 331            | Electromagnetic Theory I          | (4-0)4              | PHYS 332 Electromagnetic Theory II (4-0)4                  |
| PHYS 335            | Classical Mechanics I             | (4-0)4              | PHYS 336 Classical Mechanics II (4-0)4                     |
| TURK 303            | Turkish I                         | NC                  | ENG 311 Advanced Communication Skills (3-1)3               |
| OHS 301             | Occupational Health and Safety II | NC                  | TURK 304 Turkish II NC                                     |
|                     | Non-Departmental Elective         |                     | Restricted Elective  |
| <b>7th semester</b> |                                   | <b>8th semester</b> |  |
| PHYS 400            | Special Problems in Physics       | (2-2)3              | Non-Departmental Elective (2)                              |
| PHYS 430            | Statistical Thermodynamics        | (4-0)4              | Restricted Elective  |
| PHYS 431            | Quantum Mechanics I               | (4-0)4              | Restricted Elective  |
|                     | Restricted Elective               |                     | Free Elective (3)  |
|                     | Technical Elective (1)            |                     | Technical Elective   |

### Prerequisite & Co-requisite for Must Courses

Most courses have prerequisites. To be able to take the course, you should have received a passing grade from all prerequisite courses. For the physics program, the prerequisite chain is shown below. Note that if you fail any courses in the lower parts of a chain, all the courses in the upper parts of the chain are delayed. You can see that the following first year courses are very critical for this reason: MATH 117, MATH 118, PHYS 109 and PHYS 110.



## Brochure for Physics Freshmen Students

### Disability Support Office

Disability Support Office aims to provide students with disabilities at our university equal access to the facilities and services of our university; creating an environment supportive of disabled students' academic, social, personal, and vocational development.

Identifying the needs of students with disabilities in various areas as well as the difficulties they face is the primary goal. Our office aims to provide services and programs that will help meet their identified needs and eliminate the difficulties they face and enhance active inclusion to the campus life. In addition, it aims to develop, present, and evaluate services, which aim to raise staff and student awareness and sensitivity about disability, accessibility and universal design.

Disability Support Office provides services based on academic and social accommodations for all students with disabilities. ●Visual disability, ●Hearing disability, ●Speech and language disorders, ●Mobility and physical impairments, ●Attention deficit and hyperactivity disorder, ●Specific learning disability (Dyslexia, dyscalculia etc.), ●Chronic health problems (Diabetes, asthma, cancer etc.), ●Psychiatric disorders (Bipolar disorder, schizophrenia etc.), ●Autism spectrum disorders, ●Short-term disability conditions (Accidents, post-surgical process etc.)

In case an authorized institution has certified the disability situation and this certification has been approved by the METU Medical Center, Disability Support Office is ready to support students. Since last-minute applications raise legal difficulties, our students are encouraged to keep in contact with the office. It is important to note that, communication between the office and the student is vital to provide the most suitable solutions to students' needs.

There is a team of experienced professionals who specialize in psychology, psychological counseling, special education and adapted physical activity, as well as administrative staff. All members of the team embrace the principle of confidentiality.

If you need support or any special arrangements for your courses and exams, for accessing facilities and other services due to your sight, hearing, motion, or chronic troubles; about any issue regarding your university life; or if you would like to be informed about any of these topics, here is the contact details.

- 📍 METU Library, Solmaz İzdemir Hall
- ☎ (312)210-7196
- ✉ engelsiz@metu.edu.tr
- 🌐 engelsiz.metu.edu.tr

### Center for Advancing Learning and Teaching - ÖGEM

ODTÜ Center for Advancing Learning and Teaching (ODTÜ ÖGEM) aims to support the development of learning and teaching activities at the university. Within this framework, ODTÜ ÖGEM aims to: ● implement programs in order to support academic development of students, ● offer services for faculty members in order to improve and enhance teaching, ● arrange in-service orientation programs for new faculty members, ● offer orientation programs for new research assistants and give seminars or training workshops to improve their teaching skills, ● conduct qualified research to improve the learning environment of the university; publish research results and support the planning and implementation of future improvement in learning and teaching by cooperating with the other units at the university, ● offer consultation services in parallel with the goals of the center.

If you would like to schedule an in-person appointment with ÖGEM, drop an email

- 📍 ÖGEM Merkez Mühendislik Binası, 4. Kat
- ☎ (312)210-7175
- ✉ ogem@metu.edu.tr
- 🌐 ogem.metu.edu.tr

## Brochure for Physics Freshmen Students

### Psychological Counselling and Guidance Center PCGC – PDRM

IPCGC is a student service unit which gives psychological counseling and guidance services and psychiatric-psychological treatment at METU Medical Center.

The center aims to help the students to develop in terms of mental, emotional, social at the highest level. In addition, some preventive workings are conducted about the students' problems that may arise in the process of learning.

**Principles:** ●All psychological meetings are kept as secret in the frame of ethics; ●The information about the patients cannot be shared with any person (including the patients' family) and institutions without the permission of the patients; ●We always have respect for the individual differences; ●The patients always are venerable without looking their individual properties.

**Program & Interviews:** ●Communication and Conflict Resolution, ●Perfectionism, ●Emotional Relationship Models, ●Problem-Solving Skills, ●Time Management and Procrastination, ●Depression Coping Strategies.

**Working Groups:** Over a period of two hours, students and personnel of about 20 people are given the chance of taking information and making application in various topics. Some of working group titles: ●Gumption, ●Self-confidence, ●Organizing the information (and taking notes) methods, ●Coping with feelings of rejection and only stay.

**Individual Interviews:** Each person has a chance to share her/his private problems or developmental problems with the professional psychologists in a safe environment. Together with the applicants, the targets for getting rid of the individual problems are determined and a collaborative study is carried out to reach those targets. If needed, applicants would also have a change to be consulted by other specialists or institutions.

**Group Counseling:** After pre-interview, everybody can be a group member. Then, the applicants can understand their own interior, ways of life, relations with the groups of 8 - 15 people. Applications can also activate their own inner world and the relationships change.

**Psychiatric Help:** ●Psychosis, ●Affective Disorders, ●Neurotic Disorders, ●Psychosomatic Disorders, ●Personality Disorders. The disorders in the above are diagnosed, treated, and followed-up by psychiatrists.

**Psychological Tests:** Various psychological tests are provided to give an opportunity to the patients to take sufficient information about the specialist if it is needed.

☎ (312)210-4968/4969 (patient admission)

✉ srmk@metu.edu.tr

🌐 srm.metu.edu.tr

### Unit for the Prevention of Sexual Harassment and Assault UPSH – CİTÖB

UPSH has been established on May 2016. UPSH collaborates with the colleagues from the Program of Gender and Women's Studies. It aims to contribute to the creation of an environment based on mutual respect and free from any kind of sexual harassment or assault; to foster personal, intellectual and academic development; to establish and run an effective support and empowerment mechanisms to encounter sexual harassment and assault; to carry training activities on prevention and prohibition of sexual harassment and assault as well as awareness raising activities on gender equality and the prohibition of any basic discrimination based on sex, sexual orientation and sexual identity.

Applications to the Unit can be made through e-mails or an official letter within an envelope (without the name of the applicant) to the Office of Documents and Archives.

✉ citob@metu.edu.tr

🌐 citob.metu.edu.tr