



Renewable Energy Systems Lab./ Yenilenebilir Enerji Sistemleri Lab.

LABORATORY APPLICATION RULES DURING DISTANCE EDUCATION PERIOD

1. Laboratory is a compulsory part of the course and constitutes 40% of the in term grade and 20% of the passing grade.
2. Experiments will be conducted in a virtual environment within the framework of distance education (UE).
3. Each student taking the course is obliged to carefully read all relevant files in this laboratory and do what is requested.
4. Each student who takes the laboratory will fill and sign the **Ethical Form** (the file entitled as **Ethical Behavior and Professional Honesty**), which can be downloaded from the department web page (or the web page of the course). This ethical form **must be** attached to each experiment report. Lab reports without the signed ethical form attached will be considered unethical and will get zero (0) marking.
5. **The experiments** to be carried out are divided into 2 categories.
 - a. Video-based experiments
 1. Asynchronous generator experiment
 2. Wind energy systems experiment
 3. FV solar energy systems experiment
 - b. Simulation based experiments
 1. Wind energy systems simulation
 2. PV solar energy systems simulation
 3. Bus voltage amplitude simulation

6. Preparation of test reports.

Each student will prepare their own test report. There will be no laboratory groups and no teamwork during the pandemic process. Everyone will prepare their own personal report, fill in the Laboratory Ethics Form and add it to each report I must sign. Of course, reports should support the signature on the ethical form. Guide report files prepared for experiment-based reports are available and should be downloaded and used together with the experiment description files.

a. Video-based experiments: 60%

There are 3 video-based experiments. The report of these experiments consists of two parts described below.

Answers to preparation questions: 40%

The preparatory questions in the experiment sheet will be answered.

Test results and evaluation: 60%

The test videos will be watched carefully. The values measured in the recorded experiment will be listed in table format and used in the required calculations. The resultant data will be represented in graphical format and will be interpreted.

b. Simulation-based experiments: 40%

Using the simulation software given in the course, the necessary simulations will be made according to the explanations in the experiment sheets, the results will be interpreted and converted into a report. The report format can be similar to guiding report files specified in the experimental section.

Creating and interpreting simulation data in tabular form 40%

Displaying and interpreting the simulation results with graphics 60%

WARNING: The report of each experiment must be delivered within the specified period via the platform (E-mail or Moodle) determined by the course instructor.

7. Test reports that are not delivered on time for any reason will not be compensated.
8. Each test report **must have** a cover page. The sample cover page is available on the course's own page and on the department web page. Reports without the cover sheet will not be evaluated.