INTEGRATED LABORATORY (AERO0-ISA-4013) REGULATIONS.

General common regulations .

1. Integrated laboratory subject consist of four segments : Aerodynamics , Machine Design , Mechanics of Structures and Thermodynamics .

2. Each segment has to be passed independently .

3. The final mark of the subject is calculated as an average of four segments partial marks .

4. All current and unfulfilled tasks and duties have to be completed by the end of semester tutorials . This requirement doesn’t concern the last semester week tutorials .

5. Students work in six person teams established in the beginning of semester and mustn’t migrate among the others .

1. Adresses with preparing materials to the tutorials one can find in the IL schedule .

Detailed rules of grading Aerodynamics part of Integrated Laboratory

1. Attending classes is mandatory.
2. Individual short tests will be organised at the beginning of each classes. They will be evaluated accordingly to the scale 0-3pts. The result greater than 0 allows to perform a given exercise. If the student collects 0pts twice at the entrance test he/she will be crossed out from the list of students in the team.
3. Each team prepares one report for each exercise and provides report at the end of each classes. Reports are evaluated accordingly to the scale 0-2pts.
4. To pass Aerodynamics part of Integrated Laboratory student needs to collect 50% of points from this part.

Detailed rules of grading Mechanics of Structures part of Integrated Laboratory

1. There are 3 tutorials . Students must participate in every tutorial . Generally there is no possibility to make up for a missed tutorial .
2. The teacher examines preparation of students at the beginning of the class.
3. Every student has to write reports at home . These reports are to be done and brought to the next classes . Breaking this rule result in lower grade .
4. There are short tests starting from the second tutorial .
5. The final mark of M. of S. part is a rounded off average of all marks : 3 reports & 2 test , but may be positive only if all partial marks are positive .

Detailed rules of grading Machine Design part of Integrated Laboratory

MACHINE DESIGN

REGULATIONS

The objectives of the Laboratory are to illustrate, complement and widen the knowledge presented in lectures of Machine Design, and to familiarize the students with methods of experimental research.

Laboratory Program

The program of MD Laboratory consists of 3 two-hour experiments performed by six-person student teams. The decision on how to divide the group into teams is taken by the students themselves. The consecutive experiments are performed by the teams according to the timetable settled at the beginning of the semester.

Experiment Conducting Rules

a) The experiments must be carried out in accordance with the description contained in the laboratory manual and instructions given by the supervising staff. Before the instruments are switched on and the measurements start, one must thoroughly familiarize with the experimental setup. The power supply can only be switched on under the approval and strict control of the supervisor.

b) During the course of experiments, the students can work only on the stand assigned to their team. All the team members are rigorously obliged to follow the commands of the supervisor.

c) The students must exercise caution; they are not allowed to manipulate any devices whose use and/or operation principle has not been adequately recognized. Every student must care of his/her own safety and the safety of the colleagues, at the same time protecting the integrity of the instrumentation used in experiments.

d) To record and elaborate the results of measurements, the students should bring a calculator, several sheets of blank paper of A4 size and pen-drive

Qualification Principles

a) The students are obliged to get familiar with all the material contained in the laboratory manual. In particular, they should know the theoretical background and understand physical and technical sense of problems related to the experiment topic.

b) After completing the measurements, the team prepares a common report on the experiment, written in accordance to instructions given in the laboratory manual. To this report, one should attach sheets with measurement and calculation records signed by the supervisor. If the report is not submitted in a week time, the maximum note all team members can receive for the experiment will be three.

c) Every student should precisely know the course of experiment he/she performed, the structure of the experimental setup and its measurement systems, as well as the contents of the commonly-developed report. This knowledge will be assesses in a form of short-test by the supervisor during the next laboratory session or during experiment’s supervisor office hours. On the basis of this test, individual students receive partial notes. If a student fails the test, he/she can retake it during office hours of the supervisor.

Assessment of Experiments

a) The basis for crediting the Laboratory is performing all the experiments scheduled for that semester for each individual team.

b) In the case of excused absence from the classes (seek leave), the student is obliged to appear before the supervisor, as soon as possible, in order to set an additional date of experiment

c) In the case of unexcused absence, the student will not be allowed to take part in the following experiments of the laboratory.

d) The final note is calculated as the arithmetical average of partial notes obtained for the experiments. A student may not fail any experiment during the semester.

Laboratory manual:

Jerzy Bojanowski, Machine design: laboratory, OWPW, Warsaw 2012, ISBN: 978-83-7814-019-1

Diagram

Description automatically generated with medium confidence

Detailed rules of grading Thermodynamics part of Integrated Laboratory

1. Students have to participate in every tutorial . All absences must be make up for until the end of the class series. Opportunity for that must be consulted with the teacher. Two unjustified absences result in deletion from the list of students attending the laboratory classes. Students, who make up for an absence, prepare their own report.
2. The teacher examines students at the beginning of the class. If somebody is unprepared twice, he or she will be deleted from the list of students attending the Laboratory classes.
3. Group makes one report from the exercise and delivers it to the next laboratory class.
4. Student will pass given laboratory exercise if he or she gets more than 50% from entrance test and group report is accepted.
5. The necessary condition for passing Thermodynamics part of IL is to pass all entrance tests and have all reports accepted by the teacher.
6. In case of failing entrance test, students should make up laboratory exercise.
7. The final grade is weighted average from exercise’s marks.