UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Electronics Elements

2021-1-I0301D001-I0301D004M

Aims

The general aims of the course are to provide students with basic knowledge of Elecrtonics, necessary to carry on their profession.

Contents

The aim of the course is to provide students with basic knowledge of Electronics

Detailed program

Electrical quantities. Steady state electrical circuits. Electrical circuits with resistors. Capacitors, steady state and transient electrical circuits. Alternated current electrical circuits and electrical impedance. Ideal transformer. Measurements of electrical quantities. Physics of semiconductors. Principal junction-devices with their principal applications. OP-AMP and applications. Elementary logic circuits.

Electronic measurement chain.

Electronic noise.

Prerequisites

Teaching form

Lectures

Textbook and teaching resource

Teacher will provide educational material

Semester

First semester

Assessment method

Exam modality: Written test

Test typology: The methods and criteria for assessing the student's performance consist of 8 theory tests, with multiple choices (one correct), plus 4 practical exercises.

Results of the evaluations: the score is expressed in thirtieths, minimum score 18/30, highest score 30/30 with honours.

Maximum 16 marks can be achieved with the theory part.

Maximum 16 marks can be achieved with the practical exercises.

No penalties are applied to the final score for wrong answers.

Topics included in the theory tests : all the topics of the program modules can be included in the theory part of the written test.

Topics included in the practical exercises: in the practical part student has to solve problems:

- of simple electronics circuits in direct or alternating current (DC or AC);
- of simple electronics circuits with diode;
- involving fundamental units and physical quantities.

Timetable : the student has 75 minutes to complete the exam test.

General note:

Students must bring their own pens, pencils, rulers, sheets, calculator and any other required equipment.

Students must bring their University ID card and display it on their desk throughout the examination. ID cards will be checked by an invigilator once the examination has started.

The use of mobile telephones or other electronic devices is not permitted. Mobile telephones must be turned off and no items should be touched during the examination.

If a student wishes to speak to an invigilator she/he should raise a hand and stay seated.

Examination question papers, lessons notes, books or part of answer books are not permitted and may be removed from the examination room.

Office hours

By appointment required by mail