

Equipping the lighting and acoustics laboratory is considered one of the most important achievements of the department during the previous academic year.

Lighting Lab:

- This lab helped students to:
- Understand the behavior of light in rooms and other related aspects such as sky condition, openings, lighting fixtures, luminaires and room geometry.
 - Apply prediction methods to assess the functional requirements of buildings, provide optimum lighting through calculations.
 - Understand the amount of the daylight penetrating through windows, skylights, and other openings
 - Understand the amount/illuminance and distribution of artificial light fixtures
 - Understand the potential of simulation softwares in calculating artificial lighting

Lighting Lab- Equipments

Orchard HELIODON

The manual Heliodons are used for lighting and acoustics course and for design studies to learn and practice the principle of daylighting and in particular the sunshade analysis. It has 7LAMPs, 120CM. Sun shading analysis and evaluation at any latitude and at any time of year can be accomplished in lab without depending on outside sky conditions.



Codyrun

Codyrun is a powerful building numerical simulation tool developed by the PIMENT laboratory. The software is developed by Harry BOYER at the PIMENT lab. Elements of algorithm and validation of this software is based on semi-detailed model, which allow to get precise results with low computational costs.



Acoustics Lab:

- This lab helped students to:
- Understand the measurement units and techniques used in acoustics, with different frequency, and the time weightings Fast, Slow, Impulse.
 - Understand the behavior of sound through measuring sound level meter, octave analyzer, FFT analyzer and time signal.
 - Understand the measurement techniques and methods of reverberation time.
 - Understand the measurement techniques used in sound transmission.
 - Understand the behavior of sound through measuring the sound level from sending room, in the receiving room, and the reverberation time of the receiving room.
 - Understand the measurement techniques and methods of sound power through pressure methods and in accordance with the international standards.
 - Ability to connect and compare the experimented data to the measured data and understand the reasons of discrepancies

Acoustics Lab- Equipments

NoisePAD: Hardware

It consists of a portable Notepad with Windows operating system. NoisePAD is a sound level meter complying with IEC 61672. After activation by the user NoisePAD operates using the PCs and measurement software, which is then controlled by the Sinus Driver.

NoisePAD: Software and Applications

SAMURAI Acoustic Bundle
The SAMURAI Acoustic Bundle offers a selection of the most important measurement and analysis methods for acousticians and includes the following SAMURAI options:

What is Samurai?

The SAMURAI software is a standard software for all SINUS analyzers. Comprehensive, standard-compliant SAMURAI options allow use of the software across all application fields of noise and vibration analysis.



NoisePadHardware
The connectors on the top side provide 4 main channels as well as 2 Trigger/Tacho inputs and 1 output channel

