



# PHYSICS ENGINEERING LABORATORIES

Natural Science knowledge is the fundament for the formation of an engineer in SCE. A thorough acquaintance with the natural sciences provides future engineers with the opportunity to actively use modern scientific results in the development and creation of advanced engineering solutions. Hence, physics is one of the core subjects in engineering studies. As part of their learning, SCE students participate in physics laboratory courses. Laboratory work not only helps them assimilate the content taught in theoretical courses, but also is very useful in acquiring skills to experimentally obtain or confirm certain regularities. Students from five departments (Mechanical Engineering, Civil Engineering, Chemical Engineering, Electrical Engineering and Industrial Engineering) are trained in physics laboratories in two main areas: mechanics and electricity and magnetism.

Part of the education in our physics labs takes place in a Project Oriented environment. PO teaching differs from the traditional approach in that it emphasizes the connection between the course being taught and the future profession of the student. In addition, this approach allows deeper understanding of various physical processes and provides tools for solving real-world problems.

Physics teaching in a PO environment uses two approaches. The first approach demands both the design and the performance of the experiment by students. During laboratory work, the students learn the theory of a new subject, design the experimental system, construct it and perform the experiment. The second approach demands only the planning of an experimental system without conducting an experiment. The students should be able to plan processes and experiments and anticipate the results.

## NAMING AND RECOGNITION

Each laboratory will be named for its donor. A plaque with the name and text chosen by the donor will be prominently displayed at the laboratory's entrance. The name will be featured in all SCE communication.

**Naming of a  
physicsengineering  
laboratory: \$200,000**

