ICM2343 WORKSHOP: PRODUCT DESIGN

Credits and contact hours: 10 UC credits/ 10 hours (3 h. Lectures; 1,5 h. Labs; 5,5 h. Independent learning experiences)

Instructor’s name: Julio Vergara

Course coordinator’s name To be defined


Course Catalog Description: This course faces the students to a mechanical engineering design project, providing the opportunity to apply knowledge from previous courses in a practical manner.

Prerequisite Courses: ICM2333 Design Of Machine Elements, ICM2503 Manufacturing Processes

Co-requisite Courses: None

Status in the Curriculum: Required

Course Learning Outcomes:
1. To evaluate the different aspects involved in each step of design projects in mechanical engineering.
2. To integrate knowledge from the different disciplines that takes part in a design project.
3. To develop innovative design project, that achieve impact in research or with industrial applications.

Relation of Course to ABET Criteria:

b. Design and conduct experiments: analyze and interpret data
c. Design a system, component, or process
d. Multidisciplinary teams
e. Identify, formulate, and solve engineering problems
f. Professional and ethical responsibility
g. Effective communication
h. Broad education necessary for global, economic, environmental and societal context
i. Recognition of the need for, and an ability to engage in life-long learning
j. Knowledge of contemporary issues
k. Techniques, skills, and modern tools for engineering practice.

**Topics covered:**

1. Introduction to product design.
2. Design specifications.
3. Conceptual and detailed design.
4. Computer supported design.
5. Prototyping and manufacturing.
7. Cost and feature analysis.