

PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL AND METALLURGICAL ENGINEERING
ABET COURSE SYLLABI

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
Textbook:	Ullman, D. The Mechanical Design Process, Third Edition. McGraw-Hill, Inc., 2003. Ulrich, K. and Eppinger S. Product Design and Development. Irwin McGraw-Hill, Inc., 2000.
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:	<ol style="list-style-type: none">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:	<ol style="list-style-type: none">b. Design and conduct experiments: analyze and interpret datac. Design a system, component, or processd. Multidisciplinary teamse. Identify, formulate, and solve engineering problemsf. Professional and ethical responsibilityg. Effective communicationh. Broad education necessary for global, economic, environmental and societal contexti. Recognition of the need for, and an ability to engage in life-long learningj. 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.
6. Essays and feature validation.
7. Cost and feature analysis.

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