

School of Arts, Design, and Creative Industries

SYLLABUS

TITLE:	Industrial Design Workshop I
CODE:	IND 210
PREREQUISITE:	IND 205: Three-Dimensional Modeling
CREDITS:	3 credits 45 contact hours 1 term

DESCRIPTION

In this course students will apply design methods aimed at researching and exploring the form and function of a product. It introduces concepts of ergonomics, semantics, universal design, environmental issues, and user-centered design. Students will work on typologies of projects such as furniture, tools, household items, and jewelry, among others.

JUSTIFICATION

This is the first course of the group of industrial design workshops that exposes students to communication and product design. Its exercises and class projects provide students with the tools to know and investigate about and with users, their needs and anthropometry.

COMPETENCES

The course develops the following competences in students:

- **Research and exploration**
- **Communication**
- **Ethical sense and social justice**

OBJECTIVES

After completion of the course, students will be able to:

1. Know in an integral way the user and their relationship with their products.
2. Recognize problems, identify needs, and validate them in their design proposals.
3. Propose and prototype with the materials that will be used in their products.

CONTENTS

- I. Design Communication
 - A. 2D drawing
 - B. 3D drawing
- II. Design methodologies
 - A. Universal design
 - B. User-centered design
 - C. Collaborative design
- III. Product Design Considerations
 - A. Research and exploration
 - B. Ergonomics
 - C. Semantics
 - D. Environmental issues
- IV. Prototyping
 - A. Low resolution
 - B. High resolution
 - C. Machines and materials
 - D. Functionality
- V. Design typologies to be worked on in the workshop
 - A. Furniture
 - B. Tools
 - C. Household items
 - D. Functional jewelry and wearables

METHODOLOGY

The following strategies from the active learning methodology are recommended:

- Project Oriented Learning -**POL**
- Research Based Learning - **RBL**
- Collaborative Learning- **CL**
- Visual and didactic Internet resources
- Talks, conferences, exhibitions

EVALUATION

Oral presentations	25%
Partial assignments	40%
Final project	30%
Participation	<u>5%</u>
TOTAL	100%

LEARNING ASSESSMENT

The institutional assessment rubric is applied to the course's core activity.

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Carr, H. (2020). *Carve Your Clay: Techniques to Bring the Ceramics Surface to Life* (Illustrated ed.). Quarry Books.

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- Morrison, J., Fukasawa, N., & Hara, K. (2010). *Muji* (1st ed.). Rizzoli.
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- Nendo, N. (2021). *nendo: 2016–2020*. Phaidon Press.
- Orrom, J. (2018). *Chair Anatomy: Design and Construction* (1st ed.). Thames & Hudson.
- Pollock, N. (2020). *Japanese Design Since 1945: A Complete Sourcebook*. Abrams.
- Product Design & Development*. Advantage Business Media. ISSN 1084-7278.
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Yanagi, S. (2019). *The Beauty of Everyday Things* (Translation ed.). Penguin Classics.

ELECTRONIC RESOURCES

<http://universaldesign.com/products/>

<http://www.ijdesign.org/index.php/IJDesign/article/view/602/327>

<https://universaldesign.ie/What-is-Universal-Design/>

<https://www.claytimes.com/>

<https://www.core77.com/>

<https://www.designboom.com/>

https://www.domusweb.it/en/shop/digital_archive.html

<https://www.ganoksin.com/>

<https://www.yankodesign.com/>

RECOMMENDED RESOURCES

Ashby, M. F., Johnson, K. (2014). *Materials and design: The art and science of material selection in product design*. Elsevier Science & Technology.

<https://www.proquest.com/legacydocview/EBC/5754493?accountid=39118>

Chapman, J. (2021). *Meaningful stuff: Design that lasts*. MIT Press.

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Kepes. ISSN 1794-7111.

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<https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=ers&AN=89250448&lang=es&site=eds-live&scope=site&authtype=shib&custid=s5316525> +

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<https://www.proquest.com/legacydocview/EBC/4843076?accountid=39118>

Rähse, W. (2014). *Industrial product design of solids and liquids: A practical guide*. John Wiley & Sons, Inc.

<https://www.proquest.com/legacydocview/EBC/1666550?accountid=39118>

Regenesis, G. (2016). *Regenerative development and design: A framework for evolving sustainability*. John Wiley & Sons, Inc.

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REASONABLE ACCOMMODATION

For detailed information on the process and required documentation you should visit the corresponding office. To ensure equal conditions, in compliance with the ADA Act (1990) and the Rehabilitation Act (1973), as amended, any student in need of reasonable accommodation or special assistance must complete the process established by the Vice Presidency for Academic Affairs.

ACADEMIC HONESTY, FRAUD, AND PLAGIARISM

Any student who fails to comply with the Honesty, Fraud, and Plagiarism Policy is exposed to the following sanctions: receive a zero in the evaluation and/or repetition of the assignment, an F(*) in the course, suspension, or expulsion as established in the document *Política de Honestidad Académica* (DAEE 205-001) effective in August 2005.

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