INDUSTRIAL DESIGN (IND) - BACHELOR OF ARTS

The Bachelor of Arts in Industrial Design at Western Colorado University equips students with the creative, technical, and problem-solving skills necessary to design innovative products, systems, and experiences. Rooted in a hands-on, interdisciplinary approach, the program emphasizes human-centered design, sustainable practices, and collaboration across fields such as engineering, and the arts. Students gain experience in design thinking, 3D modeling, prototyping, and material exploration while working on real-world projects that address contemporary challenges. The program fosters adaptable designers who can confidently contribute to a wide range of industries and continue developing their practice through emerging technologies and evolving user needs.

Program Student Learning Outcomes:

- Develop strong design skills through hands-on projects focused on research, sketching, modeling, and prototyping.
- Prepare students to become problem-solving students through the design process and critical thinking.
- Prepare students for professional practice through portfolio development, presentations, and internship opportunities.

- Industrial Design Certificate (https://catalog.western.edu/undergraduate/programs/industrial-design/industrial-design-certificate/)
- Industrial Design Comprehensive Major: Industrial Design Emphasis (https://catalog.western.edu/undergraduate/programs/industrial-design/industrial-design-comprehensive-industrial-design-emphasis/)
- Industrial Design Minor (https://catalog.western.edu/undergraduate/programs/industrial-design/industrial-design-minor/)

IND 100. Introduction to Industrial Design. (3 Credits)
An overview of industrial design principles, methods, and practices with emphasis on design thinking and problem solving. Students are introduced to the relationship between form, function, and materials in product development. The course includes basic skills in sketching, modeling, and prototyping.

IND 200. Materials: Materials and Fabrication. (3 Credits)
This course introduces students to the properties, behaviors, and applications of materials commonly used in industrial design, including wood, metal, plastics, and composites. Students learn fabrication techniques, safe tool use, and processes for prototyping and model-making. Emphasis is placed on selecting appropriate materials and methods to realize design concepts effectively.

IND 300. Materials: Design and Application. (3 Credits)
This course explores the advanced use of materials in industrial design, emphasizing their selection, manipulation, and integration into functional and aesthetic products. Students apply fabrication techniques and material knowledge to complex design projects, considering sustainability, ergonomics, and production constraints. The course bridges technical proficiency and creative problem-solving, preparing students for upper-level studio work and professional practice. Prerequisites: IND 100; or Instructor Permission.

IND 310. Industrial Design Studio 1. (3 Credits)
This course introduces students to the industrial design studio environment, emphasizing the development of conceptual thinking, visual communication, and problem-solving skills. Students engage in hands-on projects that integrate research, sketching, modeling, and prototyping to explore design challenges. The course provides foundational studio practice and prepares students for advanced design projects in the Industrial Design BA program. Prerequisites: IND 100; or Instructor Permission.

IND 320. Product Usability and Ergonomics. (3 Credits)
This course examines the principles of human factors, usability, and ergonomics in the design of products and systems. Students learn to analyze user needs, apply ergonomic standards, and evaluate product interactions to enhance functionality, comfort, and safety. The course integrates research, testing, and design iteration to develop solutions that prioritize user experience in industrial design. Prerequisites: IND 100; or Instructor Permission.

IND 397. Special Topics. (1-6 Credits)
Special topics in Industrial Design.

IND 410. Industrial Design Studio 2. (3 Credits)
This advanced-level studio course challenges students to tackle complex design problems through research, concept development, and prototyping. Students refine ideas through critiques and apply material, fabrication, and usability knowledge to develop functional, aesthetic, and user-centered solutions. The course prepares students for senior-level studios and professional practice in the Industrial Design BA program. May be taken up to 3 times for 9 credits. Prerequisites: IND 100 and IND 200; or Instructor Permission.

IND 415. Design Drawing Techniques. (3 Credits)
This course develops advanced drawing skills for industrial design, emphasizing techniques for visualizing ideas, communicating concepts, and exploring form, space, and materials. Students practice sketching, rendering, and digital illustration to support design ideation and professional presentations. The course prepares students to effectively convey design solutions within studio and professional contexts. Prerequisites: ART 119; IND 100 or ENGR 131; or Instructor Permission.

IND 430. Industrial Design Model Making. (3 Credits)
This course introduces advanced techniques in physical model making for industrial design, emphasizing precision, material exploration, and fabrication methods. Students develop prototypes that communicate design concepts, test functionality, and refine form and ergonomics. The course prepares students for professional practice by integrating hands-on model making with design research and studio projects. Prerequisites: IND 100 and IND 200; or Instructor Permission.

IND 492. Independent Study. (1-6 Credits)
Independent Study in Industrial Design.

IND 499. Professional Internship. (1-12 Credits)
This course provides students with practical, supervised work experience in an industrial design setting, allowing them to apply academic knowledge to real-world professional practice. Students gain exposure to industry standards, workflows, and collaborative design processes while developing professional skills and competencies. The internship experience prepares students for career entry and supports the integration of studio learning with workplace expectations. Prerequisites: IND 100 and IND 200; or Instructor Permission.