INDUSTRIAL DESIGN

ID 100 | INTRODUCTION TO INDUSTRIAL DESIGN | 4 quarter hours
(Undergraduate)
This studio course introduces the fundamentals of industrial design through teaching creative and design processes. Students will learn to conduct basic studies on environment and objects, then communicate their designs through sketches. Through projects and lectures, this course will explore developing objects that re-imagine systems, and the components within, at different scales.

ID 101 | EFFICIENCY AND INNOVATION | 4 quarter hours
(Undergraduate)
Hybrid design for small spaces - who has too much space or cash? We will study how smart design practices maximize space and functional efficiency while reducing the carbon footprint and physical space requirements. The perception of your living space changes when every object in your apartment serves three purposes. This course is about innovation - What kind of change can your ideas bring about?.

ID 104 | HAPTICS | 4 quarter hours
(Undergraduate)
This course will develop an understanding of the physics of forces and how they are perceived through the sense of touch. It also covers the recording and manipulation of the sense of touch through physical models, haptic interfaces, and haptic displays that are used in virtual reality systems. As part of this course, students will build and use a one-dimensional haptic device.
MAT 130 or above or equivalent or Mathematics Diagnostic test placement into MAT 140 is the prerequisite for this class.

ID 105 | FOUND OBJECTS / CREATIVE REUSE | 4 quarter hours
(Undergraduate)
A found object is anything that has been discarded or left behind. They can be found out on the street corner, behind a factory, at a garage sale, second-hand store, or flea market, and yes, in the dumpster. You will be surprised at the value of objects that have been discarded. The criteria for selecting objects is that they be strong enough to support their intended purpose while adding to the composition in some aesthetic, functional, or metaphorical way.

ID 210 | PROCESSES AND MATERIALS | 2-2.25 quarter hours
(Undergraduate)
This series of workshops introduces students to materials (woods, metals, plastics, composites) integral to industrial design. Students will explore the physical properties and structures of material; effective processes and techniques for working with and shaping material; and the generative nature of material?the ways in which physical properties of material inform our design and manufacturing processes.

ID 220 | WEARABLES - TOP TO BOTTOM | 4 quarter hours
(Undergraduate)
This course sits at the intersection of fashion and functionality. Headgear to footwear. Diamonds on the soles. Hats for cool cats. Gear for everything in between. Material contradictions. Put things together that shouldn't... Find opportunities... How do industrial designers approach fashion or functional wearables that do more than decorate or conceal? In this class we will look at wearables from a different point of view.

ID 250 | DRAWING TECHNIQUES FOR INDUSTRIAL DESIGN | 4 quarter hours
(Undergraduate)
An introduction to technical drawing as a creative, intellectual, and communicative tool. Students will explore a variety of drawing techniques?including diagrams, multi-views, axonometrics, and 3D models; both analog and digital?in order to understand their role in the design and production process. Emphasis will be placed on drawing? s communicative role in the design process, and students will be encouraged to develop a strategic approach to utilizing each drawing format.
ID 105 and MAT 131 are prerequisites for this class.

ID 260 | DIGITAL SURFACE MODELING I | 4 quarter hours
(Undergraduate)
Surface modeling goes far beyond basic cubes, spheres, cylinders, and typical, predictable shapes. This course establishes good modeling practices and introduces you to important sequential considerations for creating watertight polysurfaces. Through a series of exercises and tutorials, students become familiar with methods for creating progressively more complex forms and objects.
ID 250 or ANI 230 is the prerequisite for this course.

ID 300 | HISTORY OF INDUSTRIAL DESIGN | 4 quarter hours
(Undergraduate)
The goal of this course is to give students a broad understanding of the context and ideas that predicate their profession. Through studying important figures in the history of industrial and product design, as well as artifacts and ideas that emerged through practice, students will gain strong foundational knowledge in where industrial design as a profession emerged from, and begin to establish patterns in where it may be headed.
ID 100 and ID 101 are are prerequisites for this class.

ID 350 | HUMAN FACTORS - HOW USERS AFFECT DESIGN | 4 quarter hours
(Undergraduate)
When a user parks a car the *other* way, how should a designer react? Is there a hierarchical sequence of human factors? How can human factors be mapped and recorded? Should designers work to improve the existing experience, or teach users to interact in new ways?.

ID 360 | ETHICAL IMPLICATIONS FOR INDUSTRIAL DESIGNERS | 4 quarter hours
(Undergraduate)
Responsible design practices, cultural sensitivity, design for social justice, and the role of design in addressing pressing social and environmental challenges. This ID overview spans many crucial issues surrounding products people use and depend on every day. Many of these products are fabricated using unsustainable materials and manufacturing processes, often leading to planet-endangering pollution. A variety of products are assembled from materials sourced from countries mired in poverty, with most profits flowing to importers and manufacturers in wealthy nations. We will look at ways that design can have a positive impact on this dynamic.

ID 391 | INDUSTRIAL DESIGN STUDIO I | 4 quarter hours
(Undergraduate)
This first of two sequential studio courses introduces larger, group-based projects developed in concert with the needs of companies that practice, or work in the space of, industrial and product design. Student groups will collaborate with organizations whose established needs will guide their projects during this series. Students will conduct research, explore possibilities, and ideate through designs.
ID 250 and ID 300 are prerequisites for this class.

ID 392 | INDUSTRIAL DESIGN STUDIO II | 4 quarter hours (Undergraduate)
This follow-up studio course to Industrial Design Studio I introduces concepts behind developing an object, manufacturing it, and inevitably managing it at scale. Student groups will explore the identification of appropriate materials, material costs, material affordances, and the development of schematics and communications required for at-scale manufacturing of their final product.
ID 391 is a prerequisite for this class.

ID 395 | SPECIAL TOPICS IN INDUSTRIAL DESIGN | 4 quarter hours (Undergraduate)
Current topics in industrial design, as determined by the interest of the instructor and students.
ID 300 is a prerequisite for this class.

ID 396 | INDUSTRIAL DESIGN SENIOR CAPSTONE | 4 quarter hours (Undergraduate)
Industrial Design capstone gives students the opportunity to take a self-directed project from ideation to production, using the design process they have developed throughout their coursework. This project will rely on discussion with peers, faculty, and external collaborators; and will connect their design coursework with the experiences and knowledge gained throughout the university.
ID 392 is a prerequisite for this class.