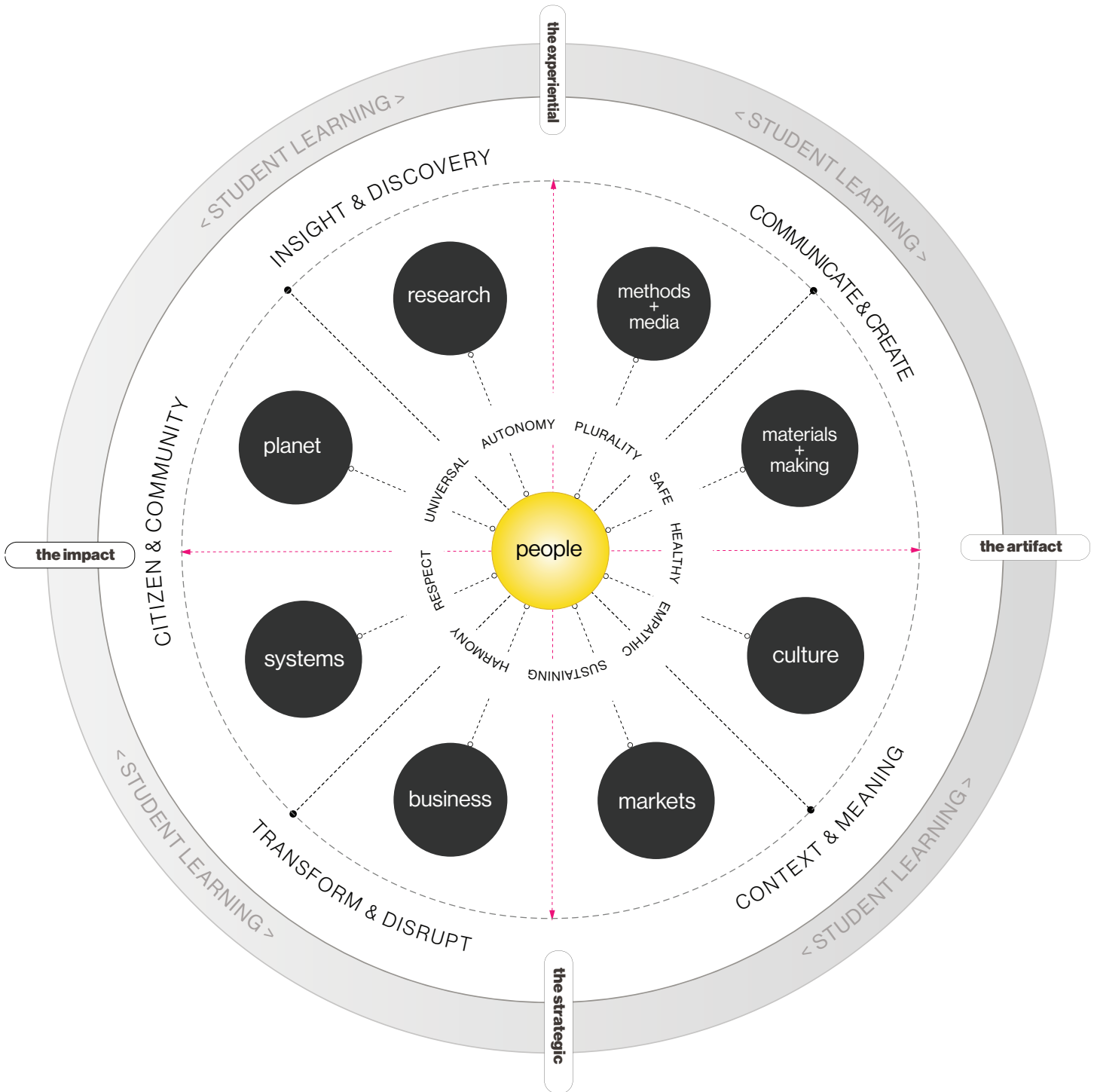


Industrial Design Education: A Compass

Industrial Design is a collaborative profession creating products and experiences that enrich the human condition and empower human potential. The work is done without diminishing our planet and other species, now and in the future.



INSIGHT & DISCOVERY

Designers apply human-centered thinking and research methods to build the discovery and innovation practice. They apply methods of inquiry, empathy, data research, market studies, rapid prototyping, and ethnographic research in the work. The student is immersed in the lives and experiences of others to observe and understand behaviors and experiences that expose the unmet need.

CITIZEN & COMMUNITY

Designers have the unique opportunity to positively impact both local and global communities, contributing to the resiliency of society and the planet. The creative practice transcends boundaries to bring about large scale change, like habitat restoration for endangered species or social justice. At the local level, designers may apply their talent to strengthen communities and neighborhoods, such as building participatory makerspaces or regenerative gardens. The impact of design can be applied to non-profit and traditionally underserved communities to make a meaningful difference in the world.

TRANSFORM & DISRUPT

Design is a critical component that businesses depend on to innovate, adapt, and succeed. The design leader in large-scale enterprises is responsible for shaping the design vision, nurturing talent, fostering innovation, crafting user experiences, building products, and ensuring market relevance. The role involves aligning all these aspects with the company's strategic goals, including revenue growth.

In design consulting offices, the role is similar but the designer is required to meet the ambitions of a range of clients often working in areas that may be unfamiliar at the start of the relationship. For the entrepreneurial designer, building a sustaining business requires knowledge and advisors rooted in subjects frequently absent from industrial design programs. Each career track demands the designer sharpen their antennae to hear the future coming.

COMMUNICATE & CREATE

The student learns how to communicate effectively using both 2D and 3D media and methods. To create compelling stories, they analyze research and data with a high level of digital literacy. The student uses written, oral, and visual arguments to frame problems and identify needs without bias. Through the practice of user interface design, the student becomes familiar with the physical and cognitive domains of the digital product experience. Material and making knowledge is developed through physical sketches, scale models, and full-size prototypes by applying CAD software and shop tools. Lifecycle and material performance are explored through an awareness of modern manufacturing methods, like 3D printing, zero waste, recycled plastics, or 4D weaving. From physical design to interactive and immersive media, students adopt an “infinite beta” mindset to meet 21st century opportunities.

CONTEXT & MEANING

The student absorbs the cultural signs, symbols, artifacts, and history that influence contemporary civilization. The communicative character and meaning (ex., physical, emotive, ritualistic) of artifacts and messages provide the context for rich dialogue. Studies of the macro forces (trend-lines) influencing culture prepare students to advance discursive design and critique. Beyond the traditional lens of western society, the student develops a deeper awareness of civilization in its many global forms.

At the intersection of culture and markets, case studies expose the movements, people, and brands that influence design's forward motion. Market segments, demographics, product portfolios, and service offerings bring real world resonance to the class. Field trips and external advisors add professional exposure to build the student's network.

Industrial Design Education: A Compass Explained

areas of specialization

Consumer Products	Design Research
Industrial Products	Materials Research
Consumer Home	Business & Brand Strategy
Outdoor Gear	Furniture Design
Outdoor wear	Exhibition Design
Footwear	Experience Design
Medical Devices/Equip.	Academic & Research
Healthcare Equip.	Design Activism/Social Impact
Sports & Lifestyle Equip.	Design Ethics
Service Design/CX	
Automotive & Aerospace	

design roles

Intern/Apprentice
Associate Designer
Designer
Senior Designer
Design Director
VP Design, Product Dev.
Chief Design Officer
Entrepreneur/Founder
Consultant/Advisor
Mentor/Coach
Professor/Chair

key business relationships

Industrial Design peers	Sales + Channels
Product Development Engineer	Marketing + Channels
UX/UI Designer	E-commerce + Distributors
Electrical Engineer	Finance (business, corporate)
Mechanical Engineer	Legal (contracts, patents, NDAs)
Product Manager/Strategist	Insurance (business)
CSO/Materials Scientist	Human Resources
Prototype/Model Maker	Mentor/Coach/Advisor
Manufacturing Teams	
Material & Parts Suppliers	
CMO/Marketing/e-commerce	

entry skills

hard skills: rapid visualization (ex., freehand sketching, model-making), fluency in key software, research and data mapping, mechanical aptitude, ergonomics basics, s/cmf (sustainability/color, materials, finishes) trends, manufacturing basics
soft skills: collaborative behavior, empathy for others, comfort with ambiguity, ability to present and defend ideas

Industrial Design Education: A Compass Explained

software

AI, like Midjourney
Rhino
SolidWorks
Fusion360
Autocad
Keyshot / Vray
3D Studio Max
Cinema 4D
Adobe Suite
SketchUp
Procreate

specialty software

CNC Software
3D Printing Software
Arduino
Blender, Z-Brush
Alias
Catia
Maya
Figma, Marvel, InVision
Gravity Sketch, Unreal Engine
Notch, MadMapper
Marvelous Designer

business software

AI, like Chat GPT
MS Office Suite
MS Teams
G Suite
Zoom
Slack, Trello
Miro
Canva
Smartsheet, MS Project
Monday, Asana
AirTable

resources

To learn more about industrial design, check out the following:

1. the professional organization for industrial design: **idsa.org**
2. a community portfolio and job site with articles on design: **coroflot.com**