INDUSTRIAL DESIGN BACHELOR OF SCIENCE

Leading to a Bachelor of Science Degree in Industrial Design

Professional industrial designers (product designers) work at the intersection of art, business, and technology to provide innovative vision for companies, services, and individuals. Using research and experience as catalysts, designers translate our psychological, social desires and aspirations into improved products and systems for better enjoyment of our world.

As a graduate, you will have opportunities to create products for all levels of production. Areas of possibility include consumer electronics, education, toys, sports, medical equipment, footwear, housewares, furniture, and exhibit design. Many graduates begin their careers immediately, designing either as a consultant, or as an in-house designer for some of the nation's leading brands. As they continue to grow professionally, graduates often end up in leadership roles within their respective companies, making top-level decisions as a design director or creative manager.

Much of your educational experience will consist of experiential project-based studios, as well as courses in drawing, model making, manufacturing technologies (such as computer-aided design and rapid prototyping), user research, and design history. Classroom and studio experiences are complemented by two required cooperative work experiences. The co-op experience reinforces curricular goals and accelerates an understanding of professional practice.

Wentworth's Industrial Design program leads to a Bachelor of Science degree in Industrial Design. It is a four-year program, fully accredited by the National Association of Schools of Art and Design (NASAD). NASAD provides published guidelines for evaluating Art and Design programs throughout the country. The NASAD handbook describes the goal of Industrial Design education and the essential competencies students must achieve to be prepared for an entry level design position. The NASAD Handbook describes the following:

Industrial Design

Industrial designers create and develop concepts and specifications that optimize the function, value, and aesthetics of products, environments, systems, and services for the benefit of user, industry, and society. Industrial design involves combinations of the visual arts disciplines, sciences, and technology, and requires problem-solving and communication skills.

The professional undergraduate degree in a design specialization is structured to provide in-depth, formal education that will prepare students for entry into professional practice upon graduation. This is the case whether the degree rubric is Bachelor of Fine Arts with a design specialization or another appropriate title.

Context

The role of the designer is not only to achieve the goodness of fit between form and context, but also to determine how much of the surrounding context will be considered as a specific design problem is addressed and solved. Basic competence in both framing and solving design problems is essential for graduates. In all design specializations, this competence includes knowledge of and ability to address the following:

- *Usefulness.* The value of communication, objects, environments, or services to persons and society.
- *Usability.* The cognitive or physical ease, efficiency, and satisfaction of people as they learn and use communication, objects, products, environments, systems, or services.
- *Desirability.* The perceived emotional, social, or cultural benefits of communication, objects, products, environments, systems, or services.
- *Sustainability.* The consequences of design in interdependent systems, lifespan of designed objects, and use and disposal of resources.
- *Feasibility.* The technological ability to produce and/or disseminate and/or distribute communication, objects, environments, or services.
- *Viability.* The economic potential and consequences, for example, for return on investment, economic sustainability, and growth.

Program Educational Objectives

NASAD Essential Competencies, Experiences, and Opportunities for Industrial Design:

Study Abroad

The School of Architecture and Design has a long tradition of offering semester-long study-abroad programs for undergraduates in international locations. The programs are led by Wentworth faculty members in collaboration with scholars residing in those cities. During their time abroad, students enrich their cultural and professional perspectives through study-travel and working closely with local design professionals. Study-abroad curriculum is aligned with required courses in Boston, allowing normal progress toward graduation.

Cooperative Work Experience

The undergraduate Industrial Design program has a substantial and well-established cooperative education component embedded in the curriculum. BS in Industrial Design students spend two semesters working in a professional setting. The program collaborates with the Institute's Center for Cooperative Education and Career Development to reinforce the learning content of these experiences. Prior to their first cooperative education semester, students take COOP2500 INTRODUCTION TO COOPERATIVE EDUCATION, which prepares students for their co-op search and for on-the-job success.

Total credits for degree: 136

This is a four-year full-time program, which begins in the fall semester of the student's first year and is planned to end after the summer semester of the student's fourth year.

First Year		
Fall Semester		**Credits**
DSGN1000	VISUALIZATION I/DRAWING I	3
DSGN1100	DESIGN MAGIC	2
INDS1000	INDUSTRIAL DESIGN STUDIO 1	4
INDS1750	VISUAL COMMUNICATION	4
English Sequence		4
	Credits	**17**

Spring Semester		
DSGN1200	COLOR & COMPOSITION	4
INDS1500	INDUSTRIAL DESIGN STUDIO 2	4
INDS1850	VISUALIZATION 2: ADVANCED PERSPECTIVE	3
MATH1020	PLANE & SOLID GEOMETRY	4
English Sequence		4
	Credits	**19**
Second Year		
Fall Semester		
INDS2000	INDUSTRIAL DESIGN STUDIO 3	4
INDS2300	3D REALIZATION I	4
INDS2350	VISUALIZATION 3: DRAW & THINK	3
INDS2600	CAD 1: SURFACE MODELING	3
HSS Elective		4
	Credits	**18**
Spring Semester		
INDS2500	INDUSTRIAL DESIGN STUDIO 4	4
INDS2850	VISUALIZATION 4: PRESENTATION & ILLUSTRATION	3
INDS2800	3D REALIZATION 2	4
INDS3100	CAD 2: SOLID MODELING	3
HSS Elective		4
COOP2500	CO-OP INSTITUTE	0
	Credits	**18**
Summer Semester		
COOP3000	PRE CO-OP WORK TERM (OPTIONAL)	0
	Credits	**0**
Third Year		
Fall Semester		
INDS3000	INDUSTRIAL DESIGN STUDIO 5	4
INDS3200	HUMAN FACTORS IN DESIGN	3
INDS3300	INFORMATION ARCHITECTURE 1	3
PHYS1010	CONCEPTUAL PHYSICS	4
General Education Elective		4
	Credits	**18**
Spring Semester		
COOP3500	COOP EDUCATION 1	0
	Credits	**0**
Summer Semester		
INDS3500	INDUSTRIAL DESIGN STUDIO 6	4
INDS3600	MANUFACTURING IN DESIGN	3
HSS Elective		4
Free Elective		3
	Credits	**14**
Fourth Year		
Fall Semester		
COOP4500	COOP EDUCATION 2	0
	Credits	**0**
Spring Semester		
INDS4000	INDUSTRIAL DESIGN STUDIO 7	4
INDS4011	DESIGN PERSPECTIVES: TOPICS IN HISTORY	4
INDS4300	INFORMATION ARCHITECTURE 2	3
HSS Elective		4
INDS5000	RESEARCH: SENIOR STUDIES	3
	Credits	**18**
Summer Semester		
INDS4500	BUSINESS IN DESIGN	3
INDS4750	SENIOR SEMINAR	3
INDS5500	SENIOR STUDIES	4
HSS Elective		4
	Credits	**14**
	Total Credits	**136**

ENGL/HSS Note

Students in the Industrial Design major are required to complete a minimum of 32 credit hours in English, humanities, and social sciences, including:

- Two or three semesters of English, according to placement;
- At least one elective in Design History;
- At least one elective in Art History;
- At least one elective in Psychology or Sociology.

The remaining credit hours may be satisfied with electives in any of these Humanities and Social Science fields: COMM, CSAS, ECON, ENVM, HSSI, HIST, HUMN, LITR, PHIL, POLS, PSYC, SOCL.

Studio Grade Requirement

The School of Architecture and Design has a studio grade requirement that applies to all undergraduate design studio courses from the sophomore year onward. Students in the Bachelor of Science programs are responsible for demonstrating improvement and growth each semester and are held to the following standard in their design studios:

A final grade below C is considered a sub-standard grade, indicating that the student is not meeting expectations. Students who earn a final grade of C-, D+, or D for two consecutive semesters are not permitted to continue in the studio sequence until they successfully repeat the second studio for which they received a sub-standard grade.

BIND Sophomore Grade Policy

BIND students must maintain a minimum program GPA of 2.5 for all DSGN and INDS courses (52 credits) by the end of the sophomore year (spring semester) in order to advance into the junior year. Students who do not meet this requirement must repeat selected courses from the BIND program sophomore year or transfer to a different degree program.