

# Industrial Design (Bachelor)

To see more about what you will learn in this program, visit the Learning Outcomes website (<https://apps.oirp.ncsu.edu/pgas/>)!

The Department of Graphic and Industrial Design offers a four-year bachelor degree and two-year or more master's degrees. Industrial Design is concerned with all human aspects of products/systems and their relationship to people. The industrial designer is responsible for product safety, aesthetics, maintenance, and cost. Industrial designers deal with consumer and industrial products. In order to achieve these ends, designers must be involved in four major design and research areas: human behavior, human-machine relationships, the environment, and the product itself. In addition, the designer's responsibility extends into sustainability product liability and cross-cultural issues.

Areas of study in the Bachelor of Industrial Design include:

- furniture
- textiles, house wares
- appliances
- transportation
- tools
- farm equipment
- medical instruments
- electronics
- human-computer interfaces
- recreational support equipment

The goal of the Industrial Design curriculum is to teach the design and development of products or product systems and their relationship to human beings and the environment.

Graduates of the Bachelor of Industrial Design program have career opportunities in three general types of practice: corporate design offices in manufacturing companies, independent consulting offices, and governmental agencies.

## Plan Requirements

Code	Title	Hours	Counts towards
<b>Writing</b>			
ENG 101	Academic Writing and Research <sup>1</sup>	4	
<b>Core Requirements</b>			
ID 110	Introduction to Digital Techniques <sup>1</sup>	3	
ID 210	Intermediate Digital Techniques <sup>1</sup>	3	
ID 310	Advanced Digital Techniques <sup>1</sup>	3	
ID 216	Visualization I <sup>1</sup>	3	
ID 316	Visualization II <sup>1</sup>	3	

ID 255	Contemporary Manufacturing Processes I <sup>1</sup>	3
ID 244	History of Industrial Design <sup>1</sup>	3
ID 240	Human-Centered Design <sup>1</sup>	3
ID 340	Research Methods in Industrial Design <sup>1</sup>	3
ID 440	Experience Design for ID <sup>1</sup>	3
Design Electives (p. 2) <sup>1</sup>		6
<b>Studios</b>		
D 104	First Year Studio I	
ID 102	Basic Industrial Design Studio <sup>1</sup>	6
ID 201	Industrial Design Studio I <sup>1</sup>	6
ID 202	Industrial Design Studio II <sup>1</sup>	6
ID 301	Industrial Design Studio III <sup>1</sup>	6
ID 302	Industrial Design Studio IV <sup>1</sup>	6
ID 401	Advanced Industrial Design Studio I <sup>1</sup>	6
ID 402	Advanced Industrial Design Studio II <sup>1</sup>	6
<b>International Experience</b>		
International Experience (S Allowed, Verify requirement) <sup>2</sup>		0
<b>General Education Program (GEP) Courses</b>		
GEP Humanities ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/</a> )		3
GEP Social Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/</a> )		6
GEP Mathematical Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/</a> )		6
GEP Natural Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/</a> )		7

GEP Health and Exercise Studies ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/</a> )	2
GEP Additional Breadth ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/</a> ) (Mathematical Sciences/Natural Sciences/Engineering)	3
GEP U.S. Diversity ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-us-diversity/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-us-diversity/</a> ) (verify requirement)	
GEP Global Knowledge ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-global-knowledge/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-global-knowledge/</a> ) (verify requirement)	
Foreign Language Proficiency ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/foreign-language-proficiency/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/foreign-language-proficiency/</a> ) (verify requirement)	
<b>Free Electives</b>	
Free Electives (12 Hr S/U Lmt) <sup>3</sup>	5
<b>Total Hours</b>	<b>114</b>

<sup>1</sup> A grade of C- or higher is required.

<sup>2</sup> Students should consult their academic advisors to determine how to complete this requirement.

<sup>3</sup> Students should consult their academic advisors to determine which courses fill this requirement.

## Design Electives

Code	Title	Hours	Counts towards
ADN 212	Photography I	3	
ADN 219	Digital Imaging I	3	
ADN 272	Introduction to Printing and Surface Design	3	
ADN 273	Fibers Materials and Processes	3	
ADN 281	Drawing I	3	
ADN 312	Photography II	3	
ADN 319	Animation I	3	
ADN 384	Painting I	3	
ADN 386	Sculpture I	3	
ADN 414	Color and Light	3	
ADN 419	Creative Technology Studio I	3	
ADN 472	Advanced Surface Design	3	
ADN 481	Drawing II	3	
ADN 486	Sculpture II	3	

ARC 162	An Introduction to Architecture	3
GD 492	Special Topics in Graphic Design	3
GD 494	Internship in Graphic Design	3
GD 495	Independent Study in Graphic Design	1-3
GD 510	Imaging for Graphic Design IV	3
GD 517	Type IV	3
ID 256	Contemporary Manufacturing Processes II	3
ID 262	Professional Practice in Industrial Design	3
ID 494	Internship in Industrial Design	1-6
ID 495	Independent Study in Industrial Design	1-3

## Notes

- Students who major in Industrial Design may elect one (1) six-credit-hour studio outside the major to fulfill one (1) 200 or 300 level studio requirement.
- Declaration of intent to enroll in studios other than Industrial Design during any semester must be made during the pre-registration period prior to enrollment. No more than one (1) six credit studio may be taken in any given semester.

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## Semester Sequence

This is a sample.

### First Year

Fall Semester	Hours
ID 110 Introduction to Digital Techniques	3
D 104 First Year Studio I	6
ID 244 History of Industrial Design	3
GEP Health and Exercise Studies ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/</a> )	1
<b>Hours</b>	<b>13</b>

### Spring Semester

ID 102 Basic Industrial Design Studio	6
ID 210 Intermediate Digital Techniques	3
ID 216 Visualization I	3
ENG 101 Academic Writing and Research	4
<b>Hours</b>	<b>16</b>

**Second Year****Fall Semester**

ID 201	Industrial Design Studio I	6
ID 310	Advanced Digital Techniques	3
ID 316	Visualization II	3
GEP Social Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/</a> )		3
<b>Hours</b>		<b>15</b>

**Spring Semester**

ID 202	Industrial Design Studio II	6
ID 240	Human-Centered Design	3
GEP Mathematical Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/</a> )		3
ID 255	Contemporary Manufacturing Processes I	3
<b>Hours</b>		<b>15</b>

**Third Year****Fall Semester**

ID 301	Industrial Design Studio III	6
ID 340	Research Methods in Industrial Design	3
ID 256	Contemporary Manufacturing Processes II	3
GEP Humanities ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/</a> )		3
<b>Hours</b>		<b>15</b>

**Spring Semester**

ID 302	Industrial Design Studio IV	6
ID 440	Experience Design for ID	3
GEP Natural Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/</a> )		3
GEP Mathematical Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/</a> )		3
<b>Hours</b>		<b>15</b>

**Fourth Year****Fall Semester**

ID 401	Advanced Industrial Design Studio I	6
Design Elective (p. 2)		2
Free Elective		3
GEP Natural Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-natural-sciences/</a> )		4
<b>Hours</b>		<b>15</b>

**Spring Semester**

ID 402	Advanced Industrial Design Studio II	6
Free Elective		3
GEP Social Sciences ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-social-sciences/</a> )		3
GEP Additional Breadth ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/</a> )		3
GEP Health and Exercise Studies ( <a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/</a> )		1
<b>Hours</b>		<b>16</b>

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**Total Hours** **120**

**Career Opportunities**

Career opportunities for graduates of the Department of Graphic and Industrial Design span the range from industrial design to virtual design. Graduates of this department are currently working in fields such as product development, furniture design, recreational product design, toy design, exhibition design, textile design, fashion design, photography, film making, special effects, set design, ergonomics and human factors.