Twin Cities Campus

Product Design Minor
DESGN GARP Administration
College of Design

Link to a [list of faculty](#) for this program.

Contact Information:
Director of Graduate Studies, Product Design Graduate Minor, 240 McNeal Hall, 1985 Buford Avenue, St. Paul, MN 55108
Email: dhagrad@umn.edu
Website: http://product.design.umn.edu

- Program Type: Graduate free-standing minor
- Requirements for this program are current for Spring 2018
- Length of program in credits (Masters): 11
- Length of program in credits (Doctorate): 12
- This program does not require summer semesters for timely completion.

Along with the program-specific requirements listed below, please read the [General Information](#) section of the catalog website for requirements that apply to all major fields.

Product design is the planning of an item intended to be manufactured and sold. These items exist both as discrete artifacts and as actors in larger social systems, such as branded environments, services, experiences, and social interactions. A graduate minor may be earned in product design when it logically relates to the graduate major field. The minor program is designed to suit the particular needs and interests of the student. The course of study is determined in consultation with the student's major advisor and the director of graduate studies for the minor.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission
A graduate minor may be earned in product design when it logically relates to the graduate major field.

For an online application or for more information about graduate education admissions, see the [General Information](#) section of the catalog website.

Program Requirements
Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum of two courses with the PDes designator must be taken to fulfill the minor requirements.

The course of study must be approved by the director of graduate studies for the minor.

Product Design Core Courses
Courses listed under the core requirement may be used to fulfill the remaining credits if they were not taken to meet the core requirement.
Required Course
PDES 5701 - User-Centered Design Studio (4.0 cr)
Product Design Process
  Option 1
  PDES 5711 - Product Innovation Lab (4.0 cr)
  or **Option 2**
  DES 8151 - Product Development: Theory and Practice (3.0 cr)
  or **Option 3**
  ME 8221 - New Product Design and Business Development I (4.0 cr)
  ME 8222 - New Product Design and Business Development II (4.0 cr)
  or **Option 4**
  BMEN 8401 - New Product Design and Business Development (4.0 cr)
  BMEN 8402 - New Product Design and Business Development (4.0 cr)

or **Option 5**
  ENTR 6041 - Initiating New Product Design and Business Development (4.0 cr)
  ENTR 6042 - Implementing New Product Design and Business Development (4.0 cr)

Program Sub-plans

Students are required to complete one of the following sub-plans.
Students may not complete the program with more than one sub-plan.

Masters
Electives
 Design Process
  PDES 5711 - Product Innovation Lab (4.0 cr)
  or DES 8151 - Product Development: Theory and Practice (3.0 cr)
  or BMEN 8401 - New Product Design and Business Development (4.0 cr)
   BMEN 8402 - New Product Design and Business Development (4.0 cr)
  or ME 8221 - New Product Design and Business Development I (4.0 cr)
   ME 8222 - New Product Design and Business Development II (4.0 cr)
  or DES 8164 - Innovation Theory and Analysis (3.0 cr)
 or **Drawing and Visualization**
  PDES 5702 - Visual Communication (3.0 cr)
  or PDES 5704 - Computer-Aided Design Methods (3.0 cr)
  or GDES 8362 - The Nature of Representation in Visual Communication (3.0 cr)
 or **Prototyping, Manufacturing, and the Environment**
  PDES 5703 - Prototyping Methods (4.0 cr)
  or CEGE 5571 *{Inactive}*[GP] (3.0 - 4.0 cr)
  or ME 5221 - Computer-Assisted Product Realization (4.0 cr)
  or ME 5223 - Materials in Design (4.0 cr)
  or ME 5241 - Computer-Aided Engineering (4.0 cr)
  or ME 8243 - Topics in Design: Advanced Materials (4.0 cr)
  or ESPM 5603 - Environmental Life Cycle Analysis (3.0 cr)
  or ESPM 5605 - Recycling: Extending Raw Materials Supplies (3.0 cr)
 or **Human Factors**
  DES 5185 - Human Factors in Design (3.0 cr)
  or CSCI 5115 - User Interface Design, Implementation and Evaluation (3.0 cr)
  or GDES 5341 - Interaction Design (3.0 cr)
  or GDES 5386 - Fundamentals of Game Design (3.0 cr)
  or KIN 5505 - Human-Centered Design - Principles and Applications (3.0 cr)
  or HUMF 5001 - Foundations of Human Factors/Ergonomics (3.0 cr)
 or **Understanding the Consumer and the Market**
  PDES 5705 - History and Future of Product Design (3.0 cr)
  or ANTH 5121 - Business Anthropology (2.0 cr)
  or DES 8164 - Innovation Theory and Analysis (3.0 cr)
  or MKTG 6055 - Buyer Behavior (2.0 cr)
  or MKTG 6052 - Marketing Analytics: Managerial Decisions (2.0 cr)

Doctoral
Electives
 Design Process
  PDES 5711 - Product Innovation Lab (4.0 cr)
  or DES 8151 - Product Development: Theory and Practice (3.0 cr)
  or BMEN 8401 - New Product Design and Business Development (4.0 cr)
   BMEN 8402 - New Product Design and Business Development (4.0 cr)
  or ME 8221 - New Product Design and Business Development I (4.0 cr)
   ME 8222 - New Product Design and Business Development II (4.0 cr)
  or DES 8164 - Innovation Theory and Analysis (3.0 cr)
 or **Drawing and Visualization**
  PDES 5702 - Visual Communication (3.0 cr)
  or PDES 5704 - Computer-Aided Design Methods (3.0 cr)
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