

MANUFACTURING & DESIGN ENGINEERING





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The **MANUFACTURING AND DESIGN ENGINEERING (MADE) PROGRAM** at the Segal Design Institute offers valuable and immersive opportunities for undergraduates with its rigorous, team-based design curriculum. Areas of emphasis include **sustainability, human-centered design, socially conscious entrepreneurship**, and the **design and development of impactful products and services**.

Segal's project-focused approach to coursework ensures students leave with the tools and collaborative experience needed to advance their careers. The undergraduate program focuses on three key areas: **process and product design, manufacturing systems, and manufacturing management**. Students develop the ability to integrate various design and manufacturing processes into an effective system.

UNDERGRADUATE STUDY

PROGRAMS OF STUDY

- \ Bachelor of science in manufacturing and design engineering
- \ Segal Design Certificate



EXAMPLE COURSES

- DSGN 106 *Design Thinking and Communication*
- DSGN 308 *Human-Centered Product Design*
- DSGN 348 *Rapid Prototyping*
- DSGN 350 *Intellectual Property and Innovation*
- DSGN 384 *Interdisciplinary Design Projects*



OUTSIDE THE CLASSROOM

DESIGN COMPETITION \ Teams of Northwestern Engineering undergraduates from different departments come together each year to build robots and compete for prizes.

DESIGN FOR AMERICA \ Founded at Northwestern, this award-winning, nationwide network of interdisciplinary student teams and community members use design to create local, social impact.

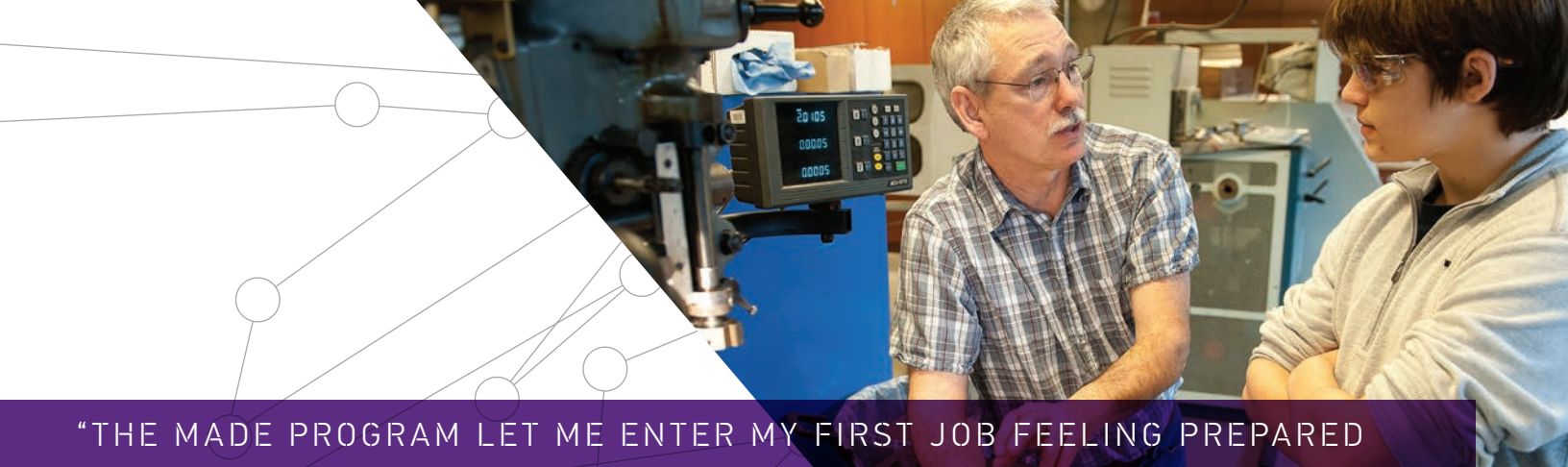
NORTHWESTERN ORGANIZATION OF DESIGN ENGINEERS \ This student organization provides workshops and access to tools that improve community design work and instruction while inspiring fun and creativity.

SEGAL PROFESSIONAL BRIDGE \ The networking organization connects Segal's graduate and undergraduate students with like-minded professionals and students from other schools who are passionate about the broad field of design.

GRADUATE STUDY

PROGRAMS OF STUDY

- \ **Master of science in engineering design and innovation** \ A full-time, 15-month program for recent engineering graduates.
- \ **Master of Product Design and Development Management (MPD²)** \ A master's level program designed for working professionals enrolled on a full-time or part-time basis.
- \ **MMM program** \ A dual-degree MBA and design innovation program designed for future business leaders.
- \ **PhD program** \ Students at Segal work in the Design Cluster, an interdisciplinary doctoral cluster program.



“THE MADE PROGRAM LET ME ENTER MY FIRST JOB FEELING PREPARED TO TAKE ON ALL ASPECTS OF PRODUCT CREATION. THE REAL DESIGN PROJECTS GAVE ME SKILLS AND EXPERIENCE BEYOND WHAT A TRADITIONAL ENGINEERING CLASSROOM COULD HAVE PROVIDED.”

AUSTIN APPEL \ MANUFACTURING AND DESIGN ENGINEERING

RESEARCH AREAS

Design optimization \ Crowd funding \ Social computing \ Human-computer interaction \ Haptic interfaces \ Creativity

CAREERS IN MANUFACTURING AND DESIGN ENGINEERING

WHAT'S NEXT?

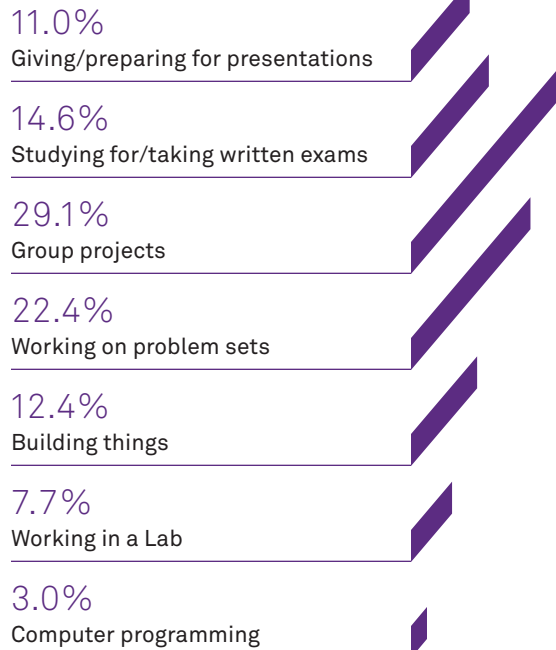
Manufacturing and design engineering majors find positions across a wide range of industries in manufacturing, product design, and systems analysis.

RECENT GRADUATE PLACEMENTS

- \ Design and manufacturing engineer at **SwipeSense**
- \ Product researcher, research and development at **Proctor & Gamble**
- \ Product development engineer at **3M**
- \ Associate manufacturing engineer at **Tesla Motors**
- \ Mechanical engineer at **Google**
- \ Business analyst at **McKinsey and Company**

HOW YOU SPEND YOUR TIME IN THIS PROGRAM

BASED ON A SURVEY OF CURRENT STUDENTS.



ENVISION WHAT'S POSSIBLE

NORTHWESTERN ENGINEERING STUDENTS CONSTANTLY
EXPLORE NEW PATHWAYS IN MANUFACTURING
AND DESIGN ENGINEERING. IMAGINE YOURSELF:



- \ Working on projects for real clients in an environment that encourages innovation, collaboration, problem solving, and creativity
- \ Exploring all aspects of product realization, from design to manufacturing technologies and operations
- \ Building relationships with design industry leaders
- \ Collaborating in teams to develop problem-solving products such as a low-cost, modular home water storage system that reduces storm runoff
- \ Improving people's safety by helping develop an easy-to-maintain breathing valve for a helmet used in hazardous areas



FIND YOUR DIRECTION HERE

Northwestern | McCORMICK SCHOOL OF
ENGINEERING

www.mccormick.northwestern.edu