

# Product Development, MS

Product development is in demand across many technology industries and is widely thought to be the engine of innovation. The Sherman Center for Entrepreneurial Engineering Education is uniquely positioned to offer students a combination of product process and technical skills. The mission of the center is to enable interdisciplinary student entrepreneurship in the broadest sense by providing education about tools, concepts, and resources to foster creativity and the ability to develop commercially viable ideas.

Products ranging from smart devices, to the Internet of Things, to software as a service all require people with product development skills. These positions guide product innovation and lead in crafting products for users. A look at any careers page for any technology firm currently hiring shows many positions open for individuals that have a mix of technical and product development knowledge.

The Master of Science in Product Development program contains a core of courses that span the product development cycle and then allows students to customize the rest of their degree to fit their chosen industry or path. The core courses cover topics such as customer acquisition, technical market analysis, product life cycle, intellectual property, prototyping, iterative development, product design, user testing, and manufacturing.

## Program Requirements

### Core Requirements

Code	Title	Hours
GE 5010	Customer-Driven Technical Innovation for Engineers	4
GE 5020	Engineering Product Design Methodology	4
GE 5030	Iterative Product Prototyping for Engineers	4
GE 5100	Product Development for Engineers	4

### Options

Complete one of the following options:

#### COURSEWORK OPTION

Code	Title	Hours
	Complete 16 semester hours from the course list below. (p. 1)	16

#### PROJECT OPTION

Code	Title	Hours
GE 7945	Master's Project	4
	Complete 12 semester hours from the course list below. (p. 1)	12

#### THESIS OPTION

Code	Title	Hours
GE 7990	Thesis	8
	Complete 8 semester hours from the course list below. (p. 1)	8

## COURSE LIST

Code	Title	Hours
<b>College of Engineering</b>		
BIOE 5250	Design, Manufacture, and Evaluation of Medical Devices	
BIOE 5810	Design of Biomedical Instrumentation	
CSYE 6200	Concepts of Object-Oriented Design	
CSYE 6205	Concepts of Object-Oriented Design with C++	
CSYE 7280	User Experience Design and Testing	
EECE 5155	Wireless Sensor Networks and the Internet of Things	
EECE 5550	Mobile Robotics	
EECE 5552	Assistive Robotics	
EECE 5580	Classical Control Systems	
EECE 5639	Computer Vision	
EECE 5666	Digital Signal Processing	
IE 5617	Lean Concepts and Applications	
IE 5630	Biosensor and Human Behavior Measurement	
IE 6200	Engineering Probability and Statistics	
IE 6500	Human Performance	
IE 7200	Supply Chain Engineering	
IE 7270	Intelligent Manufacturing	
INFO 6660	Business Ethics and Intellectual Property for Engineers	
ME 5245	Mechatronic Systems	
ME 5250	Robot Mechanics and Control	
ME 5645	Environmental Issues in Manufacturing and Product Use	
ME 5650	Advanced Mechanics of Materials	
ME 5659	Control Systems Engineering	
TELE 6510	Fundamentals of the Internet of Things	
TELE 6530	Connected Devices	
<b>D'Amore McKim School of Business</b>		
ENTR 6230	Platform Innovation	
ENTR 6320	Innovation, Entrepreneurship, and Dynamic Competition	
MKTG 6200	Creating and Sustaining Customer Markets	
TECE 6222	Emerging and Disruptive Technologies	
TECE 6250	Lean Design and Development	
<b>College of Arts, Media and Design</b>		
ARTG 5120	Research Methods for Design	
ARTG 5310	Visual Cognition	
ARTG 5610	Design Systems	
ARTG 5640	Prototyping for Experience Design	
ARTG 6310	Design for Behavior and Experience	
GSND 5110	Game Design and Analysis	
GSND 5122	Business Models in the Game Industry	
GSND 5130	Mixed Research Methods for Games	

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GSND 6320 Psychology of Play

GSND 6340 Biometrics for Design

**Bouvé College of Health Sciences**

PT 5321 Applications of Biomechanics in  
Human Function and Movement

PT 7010 Measurement and Analysis of Human  
Movement and Bioinstrumentation

**Program Credit/GPA Requirements**

32 total semester hours required

Minimum 3.000 GPA required