Product Design

Trygve Faste, Department Head
541-346-6891
251E Lawrence Hall
5282 University of Oregon
Eugene, Oregon 97403-5232

The Department of Product Design rigorously explores the invention, production, and use of products. It integrates the theories and applied practices in the design, art, and architecture disciplines, creating collaborative opportunities across campus with the business school and the anthropology and chemistry departments. The critical research and design work produced by students and faculty members has an impact on both the local and international design communities.

The program exposes and expands on the significance of materials in products, helping students develop an understanding of how aspects of sustainability and ergonomics, tactile and visual aesthetics, and structural integrity can influence their choices in materials.

Overview

The department offers a bachelor of arts (BA) or bachelor of science (BS) degree in product design on the Eugene campus, and a bachelor of fine arts (BFA) degree in product design in Portland. The BA and BS degrees are four-year liberal arts programs designed to prepare students for the BFA program in product design. Students enrolled in either degree option share a foundation in design, graphics, drawing, and art history with majors in both architecture and art.

Eugene

Students studying for the bachelor's degree in product design are well-equipped with computer and digital-imaging labs, new digital computer-controlled mill, laser cutter, wood shop, digital loom, metals and ceramics shops, large-format printing facility, and other specialized art studios in Lawrence Hall and the Northsite studio complex. The Eugene campus has strong undergraduate and graduate degree programs in architecture, art, ceramics, digital arts, fibers, interior architecture, metalsmithing and jewelry, painting, photography, printmaking, and sculpture. In addition, students have access to other university resources, such as the architecture and allied arts and main libraries, Student Recreation Center, Erb Memorial Union, and Craft Center.

Portland

Students pursuing the fifth-year product design BFA degree work at the university's new facility in Portland's Old Town Historic District. The White Stag Block houses studio facilities, digital fusion laboratory, classrooms, library, exhibit and research spaces, and work areas for students and faculty members. An integrated shop and an output center for two- and three-dimensional computer numerical controlled production are available. Product design students benefit by interacting with students of other professional disciplines, such as digital arts and architecture. An internship component of the BFA program gives students access to design professionals and direct experience at leading Northwest design companies.

Preparation

High school and college students interested in product design should prepare themselves by taking courses in the following subjects:

- Fine arts and design (e.g., drawing, painting, sculpture, two- and three-dimensional design, fiber arts, metal arts, ceramics, drafting, art history, architecture, furniture or interior design)
- Social sciences (e.g., sociology, psychology, cultural anthropology)
- Sciences and mathematics (e.g., physics, algebra, geometry)
- Humanities (e.g., literature, writing)

To better understand the professional field, prospective students may plan to visit and discuss opportunities with local designers and firms practicing product design.

Product design students are required to own a laptop computer. If students purchase recommended equipment, they are eligible for technical support from our computing staff. Recommended systems are listed on the program's website. Purchase of a digital camera to record studio work and use for classroom assignments is strongly advised.

Faculty

John Arndt, associate professor (product design). BFA, 1997, Alfred; MDes, 2006, Design Academy Eindhoven. (2008)

Wonhee Jeong Arndt, associate professor. BFA, 2002, Kookmin; MDes, 2006, Design Academy Eindhoven. (2014)

Elizabeth Esponnette, associate professor (product design). BS, 2010, Cornell; MFA, 2015, Stanford. (2015)

Trygve Faste, associate professor (product design). BA, 1997, Whitman College; MFA, 2004, Cranbrook Academy of Art. (2010)

Kiersten Muenchinger, Tim and Mary Boyle Chair in Material and Product Studies; associate professor (product design). BA, 1993, Dartmouth College; MS, 1998, Stanford. (2008)

Erdem Selek, associate professor (product design). BID, 2004, Middle East Technical; MA, 2007, Ecole Supérieure d'Art et de Design; MS, 2008, Istanbul Technical. (2015)

Hale Selek, associate professor (product design). BID, 2004, Middle East Technical; MA, 2007, Ecole Supérieure d'Art et de Design; MS, 2008, Istanbul Technical. (2015)

Susan Sokolowski, associate professor (sports product design). BFA, 1990, Fashion Institute of Technology; MA, 1997, Cornell; PhD, 1999, Minnesota, Twin Cities. (2015)

The date in parentheses at the end of each entry is the first year on the University of Oregon faculty.

- **Bachelor of Arts in Product Design** (p.)
- **Bachelor of Science in Product Design** (p. 2)
- **Bachelor of Fine Arts in Product Design** (p. 3)

Undergraduate Studies

Application for Product Design Major

The major in product design is an intensive, limited-enrollment program. Acceptance is competitive and based on documented evidence of potential to excel in the field. Admission screening takes place once a year and requires review of a portfolio of visual materials submitted by each applicant. These portfolios should display promise and creativity, but need not demonstrate extensive experience in design or product-

related projects. Applications that don't include visual materials are not reviewed.

Students apply directly to the department for admission as majors. The postmark deadline for applications is January 15 for fall term admission. Visit the program website for the application form and instructions.

BFA Application

Admission to the bachelor of fine arts program requires an application that includes a portfolio review of the student's work, usually in the last term of the fourth year of study. Students who have completed a comparable four-year degree in material and product studies at another institution may be admitted to the fifth-year BFA program. Such BFA candidates must satisfy the university's 45-credit residence requirement. Students accepted to the BFA program from schools other than the University of Oregon should speak with an advisor to determine how their credits will transfer. Prerequisites may require the student to spend more than one year in the program.

Bachelor of Arts in Product Design Requirements

Students must complete a minimum of 180 credits, which include general-university requirements for a bachelor of arts or bachelor of science degree.

Code	Title	Credits
Core Courses		
ART 115	Surface, Space, and Time	4
ART 116	Core Interdisciplinary Laboratory	4
IARC 204	Understanding Contemporary Interiors	4
PD 223	Beginning Design Drawing	4
PD 240	Designers' Tools	4
ARTD 250	Print Media Digital Arts	4
ARH 358	History of Design	4
Select one of the following:		4
Product design studio course (PD)		
Ceramics studio course (ARTC)		
Fibers studio course (ARTF)		
Metalsmithing and jewelry studio course (ARTM)		
Sculpture studio course (ARTS)		
Art history course		4
Upper-Division Studio Courses		
PD 301	Introduction to Design Studio	4
PD 323	Design Drawing	4
PD 340	Design for Use	4
PD 350	Objects and Impacts	4
PD 370	Design Process	4
PD 430	Computer-Assisted Design and Production	4
IARC 447	Color Theory and Application for the Built Environment	3
or ARTP 281	Introductory Painting I	
PD 483	Senior Studio I	4
PD 484	Senior Studio II	4
PD 485	Senior Studio III	4
Select five of the following studio electives: [1, 2]		20
Product design electives (PD)		
Art electives (ART)		
Ceramics electives (ARTC)		
Fibers electives (ARTF)		
Interior architecture electives (IARC)		
Metalsmithing and jewelry electives (ARTM)		
Sculpture electives (ARTS)		
Other Requirements		
BA 101	Introduction to Business	4
ANTH 161	Introduction to Cultural Anthropology	4
BA 317	Marketing: Creating Value for Customers	4
Total Credits		107

1. With product design advisor approval, students may select electives from any studio course taught in the College of Design. Students are welcome to propose studio courses from outside the school to fulfill product design electives, although they require approval by the advisor.
2. Electives must be 300- or 400-level courses.

Bachelor of Science in Product Design Requirements

Code	Title	Credits
Core Courses		
ART 115	Surface, Space, and Time	4
ART 116	Core Interdisciplinary Laboratory	4
IARC 204	Understanding Contemporary Interiors	4
PD 223	Beginning Design Drawing	4
PD 240	Designers' Tools	4
ARTD 250	Print Media Digital Arts	4
ARH 358	History of Design	4
Select one of the following:		4
Product design studio course (PD)		
Ceramics studio course (ARTC)		
Fibers studio course (ARTF)		
Metalsmithing and jewelry studio course (ARTM)		
Sculpture studio course (ARTS)		
Art history course		4
Upper-Division Studio Courses		
PD 301	Introduction to Design Studio	4
PD 323	Design Drawing	4
PD 340	Design for Use	4
PD 350	Objects and Impacts	4
PD 370	Design Process	4
PD 430	Computer-Assisted Design and Production	4
IARC 447	Color Theory and Application for the Built Environment	3
or ARTP 281	Introductory Painting I	
PD 483	Senior Studio I	4
PD 484	Senior Studio II	4
PD 485	Senior Studio III	4
Select five of the following studio electives: [1, 2]		20
Product design electives (PD)		
Art electives (ART)		

Ceramics electives (ARTC)	
Fibers electives (ARTF)	
Interior architecture electives (IARC)	
Metalsmithing and jewelry electives (ARTM)	
Sculpture electives (ARTS)	
Other Requirements	
BA 101 Introduction to Business	4
ANTH 161 Introduction to Cultural Anthropology	4
BA 317 Marketing: Creating Value for Customers	4
Total Credits	107

1 With product design advisor approval, students may select electives from any studio course taught in the College of Design. Students are welcome to propose studio courses from outside the school to fulfill product design electives, although they require approval by the advisor.

2 Electives must be 300- or 400-level courses.

Bachelor of Fine Arts in Product Design Requirements

Students must complete a minimum of 180 credits, including requirements for the bachelor or arts or bachelor of science in product design or its equivalent.

Code	Title	Credits
Three art history courses (ARH)		12
PD 404	Internship: [Topic]	12
PD 486–488	BFA Studio I-III	18
Total Credits		42

Four-Year Degree Plan

The degree plan shown is only a sample of how students may complete their degrees in four years. There are alternative ways. Students should consult their advisor to determine the best path for them.

- **BA or BS in Product Design** (p.)
- **BFA in Product Design**

Bachelor of Arts in Product Design

Course	Title	Credits	Milestones
First Year			
Fall			
ART 115	Surface, Space, and Time	4	
WR 121	College Composition I	4	
IARC 204	Understanding Contemporary Interiors	4	
First term of first-year second-language sequence		4	
	Credits	16	
Winter			
Placeholder			
ART 116	Core Interdisciplinary Laboratory	4	
BA 101	Introduction to Business	4	
WR 122	College Composition II	4	
Second term of first-year second-language sequence		4	
	Credits	16	
Spring			
Placeholder			
ARTD 250	Print Media Digital Arts	4	
ANTH 161	Introduction to Cultural Anthropology	4	
General education course in social science		4	
Third term of first-year second-language sequence		4	
	Credits	16	
	Total Credits	48	

Course	Title	Credits	Milestones
Second Year			
Fall			
PD 223	Beginning Design Drawing	4	
PD 240	Designers' Tools	4	
General education course in arts and letters		4	
First term of second-year second-language sequence		4	
	Credits	16	
Winter			
PD 430	Computer-Assisted Design and Production	4	
PD 323	Design Drawing	4	
Second term of second-year second-language sequence		4	
General education course in science		4	
	Credits	16	
Spring			
BA 317	Marketing: Creating Value for Customers	4	
ARH 358	History of Design	4	
General education course in science		4	
Third term of second-year second-language sequence		4	
	Credits	16	
	Total Credits	48	

Course	Title	Credits	Milestones
Third Year			
Fall			
PD 340	Design for Use	4	
General education course in arts and letters		4	
Upper-division elective course with ARH subject code		4	
Upper-division PD, ART, AAA, or IARC elective course		4	
	Credits	16	
Winter			
PD 350	Objects and Impacts	4	
General education course that also satisfies a multicultural requirement		4	
General education course in science		4	
Upper-division PD, ART, AAA, or IARC elective course		4	
	Credits	16	
Spring			
PD 370	Design Process	4	

PD 301	Introduction to Design Studio	4
IARC 447	Color Theory and Application for the Built Environment	3
General education course in social science		4
	Credits	15
	Total Credits	47

Course	Title	Credits Milestones
Fourth Year		
Fall		
PD 483	Senior Studio I	4
General education course in science		4
Upper-division PD, ART, AAA, or IARC elective course		4
	Credits	12
Winter		
PD 484	Senior Studio II	4
Upper-division PD/ART, AAA, or IARC elective courses		8
	Credits	12
Spring		
PD 485	Senior Studio III	4
PD 440	Advanced Designers' Tools	4
Upper-division PD/ART, AAA, or IARC elective course		4
	Credits	12
	Total Credits	36

Bachelor of Science in Product Design

Course	Title	Credits Milestones
First Year		
Fall		
ART 115	Surface, Space, and Time	4
IARC 204	Understanding Contemporary Interiors	4
WR 121	College Composition I	4
Mathematics course		4
	Credits	16
Winter		
ART 116	Core Interdisciplinary Laboratory	4
BA 101	Introduction to Business	4
WR 122	College Composition II	4
Mathematics course		4
	Credits	16
Spring		
ARTD 250	Print Media Digital Arts	4
ANTH 161	Introduction to Cultural Anthropology	4
Mathematics course		4
General education course in social science		4
	Credits	16
	Total Credits	48

Course	Title	Credits Milestones
Second Year		
Fall		
PD 223	Beginning Design Drawing	4
PD 240	Designers' Tools	4
General education course in arts and letters		4
Upper-division elective course		4
	Credits	16
Winter		
PD 323	Design Drawing	4
PD 430	Computer-Assisted Design and Production	4
General education course in science		4
Upper-division elective course		4
	Credits	16
Spring		
BA 317	Marketing: Creating Value for Customers	4
ARH 358	History of Design	4
General education course in science		4
Upper-division elective course		4
	Credits	16
	Total Credits	48

Course	Title	Credits Milestones
Third Year		
Fall		
PD 340	Design for Use	4
General education course in arts and letters		4
Upper-division PD/ART, AAA, or IARC elective course		4
Upper-division elective course with ARH subject code		4
	Credits	16
Winter		
PD 350	Objects and Impacts	4
General education course in science		4
General education course that also satisfies a multicultural requirement		4
Upper-division PD/ART, AAA, or IARC elective course		4
	Credits	16
Spring		
PD 370	Design Process	4
PD 301	Introduction to Design Studio	4
IARC 447	Color Theory and Application for the Built Environment	3
General education course in social science		4
	Credits	15
	Total Credits	47

Course	Title	Credits Milestones
Fourth Year		
Fall		
PD 483	Senior Studio I	4
General education course in science		4

Upper-division PD/ART, AAA, or IARC elective course		4
	Credits	12
Winter		
PD 484	Senior Studio II	4
Upper-division PD/ART, AAA, or IARC elective courses		8
	Credits	12
Spring		
PD 485	Senior Studio III	4
PD 440	Advanced Designers' Tools	4
Upper-division PD/ART, AAA, or IARC elective course		4
	Credits	12
	Total Credits	36

Bachelor of Fine Arts in Product Design

Course	Title	Credits Milestones
First Year		
Fall		
Placeholder		
	Credits	0
Winter		
Placeholder		
	Credits	0
Spring		
Placeholder		
	Credits	0
	Total Credits	0

Course	Title	Credits Milestones
Second Year		
Fall		
Placeholder		
	Credits	0
Winter		
Placeholder		
	Credits	0
Spring		
Placeholder		
	Credits	0
	Total Credits	0

Course	Title	Credits Milestones
Third Year		
Fall		
Placeholder		
	Credits	0
Winter		
Placeholder		
	Credits	0
Spring		
Placeholder		
	Credits	0
	Total Credits	0

Course	Title	Credits Milestones
Fourth Year		
Fall		
Placeholder		
	Credits	0
Winter		
Placeholder		
	Credits	0
Spring		
Placeholder		
	Credits	0
	Total Credits	0

Course	Title	Credits Milestones
Fifth Year		
Fall		
Placeholder		
	Credits	0
Winter		
Placeholder		
	Credits	0
Spring		
Placeholder		
	Credits	0
	Total Credits	0

Graduate Studies

The Department of Product Design offers a master of science degree in sports product design, a two-year program based in Portland, Oregon. (Change opening page as well)

The master of science in sports product design prepares designers to be key members and leaders of multidisciplinary development teams within the more than 700 sports product companies located in Oregon and beyond. The program focuses on innovation methods, design tailored for the athlete, product sustainability, and sports product marketing and branding through the study of sports-specific design techniques, human physiology, biomechanics, and sports psychology.

Students who graduate from this program will be capable of making strong contributions to the sports design culture of Oregon and the world at large.

Master of Science in Sports Product Design

The MS in sports product design is a two-year program intended for students already equipped with conceptual problem-solving abilities, knowledge of materials and production, strategies for emotional product resonance and relevance, and entrepreneurial skills (typically, but not always, acquired in an undergraduate program in product design or its equivalent).

Degree Requirements

The curriculum is divided into three categories:

1. core content (42 credits)
2. core-related content (10 credits)
3. elective content (6 or more credits)

The **core content** comprises a series of applied studio courses and one content-based course, structured to increase knowledge and skills through immersion in the design process in conjunction with sports product professionals.

Code	Title	Credits
SPD 650	Sports Product Materials and Manufacturing	3
SPD 684	Research Methodology and Innovation Process Studio	6
SPD 685	Sports Product Design Studio I	6
SPD 686	Sports Product Design Studio II	6
SPD 687	Sports Product Design Studio III	6
SPD 688	Innovative Project Strategy Development Studio	6
SPD 689	Collaborative Creation and Launch Studio	9

The **core-related content** comprises three courses in related disciplines intended to build the necessary understanding of human performance and business practices related to the sports product industry.

Code	Title	Credits
HPHY 631	Human Performance and Sports Products	3
J 626	Strategic Marketing Communication	4
SBUS 645	Sports Product	3

Students are also required to take at least six credits of **elective content** from the options below.

Code	Title	Credits
ACTG 662	Strategic Cost Management	4
J 621	Foundations of Strategic Communication	4
J 624	Strategic Communication: [Topic]	2
MGMT 614	Strategic Management	3
MGMT 625	New Venture Planning	3
MGMT 641	Industrial Ecology	3

Professional Connections

Industry partners for sports product design provide special opportunities for students, fulfilling a number of critical roles as part of the learning environment of this program: instructors, advisors, guest reviewers, lecturers, mentors. Some examples of recent partners include Intel, Leatherman, Logitech, Nike, and Under Armour.

Admission

Incoming students must have completed an undergraduate degree and demonstrate a combination of education and relevant experience to begin work immediately designing products manually and digitally. This is typically demonstrated through formal transcripts, but applicants are also required to submit the following:

- A 300-word personal statement describing the applicant's interest in sports product design and how they see design influencing their life and the world around them
- A portfolio of creative work (a maximum of 20 pages and 5 megabytes) showcasing problem-solving in the design process, drawing and prototyping skills, and storytelling, serving as a demonstration of the candidate's design abilities
- Three letters of recommendation from faculty members outside of the UO Department of Product Design

Applications are reviewed beginning on January 15 of each year and undergo rolling review for admission until the cohort is complete. Incoming students begin the fall term immediately after acceptance.

Product Design Courses

PD 101. Introduction to Product Design. 4 Credits.
This course is an introduction to the Product Design profession and its cultural relevance. Lectures, reading and projects convey theory (critical thinking), designers (history), design methods (CAD, drawing, building), and storytelling (documentation / presentation) to give a foundation in product innovation, creation, and portfolio generation.

PD 198. Workshop: [Topic]. 1-12 Credits.
Repeatable.

PD 199. Special Studies: [Topic]. 1-5 Credits.
Repeatable.

PD 223. Beginning Design Drawing. 4 Credits.
Focuses on perspective, line weight, construction with primary shapes, and shading in the creation of three-dimensional objects.

PD 240. Designers' Tools. 4 Credits.
Quick model-making and additive, subtractive, and mold-using fabrication methods are applied in the creation of products in three separate projects.
Prereq: ART 115

PD 301. Introduction to Design Studio. 4 Credits.
Students observe and design solutions for problems on campus in three team-based projects.
Prereq: Pre- or coreq: PD 370.

PD 302. Introduction to Design Studio II. 4 Credits.
Integrate 2D and 3D communication and presentation skills to develop project-based design solutions.

PD 323. Design Drawing. 4 Credits.
Introduces specific techniques in drawing and modeling objects and their spatial context; the demonstration and implementation of various media and types of drawing. Repeatable once for a maximum of 8 credits.
Prereq: ART 115, PD 223.

PD 330. Introduction to Computer Assisted Design & Production. 4 Credits.
Introduction to computer-assisted design (CAD) in which students learn virtual design and physical manufacturing relationships and techniques.

PD 340. Design for Use. 4 Credits.
Provides the basic theoretical underpinnings for considering the socio-cultural background and design of products. Lectures and readings present main issues; discussions complete conceptual principals.
Prereq: PD 350.

PD 350. Objects and Impacts. 4 Credits.
Explores how design influences and is influenced by materials and manufacturing processes. Lectures, readings, and discussions present sustainability, aesthetic, and functional aspects of product design.
Prereq: PD 370.

PD 360. Object Culture. 4 Credits.
Promotes a greater understanding of the material world and how everyday objects define culture.

PD 370. Design Process. 4 Credits.
Introduces design processes, from theoretical to professional, using readings, guest lectures, and experimental new structures.

PD 399. Special Studies: [Topic]. 1-5 Credits.
Repeatable.

PD 400M. Temporary Multilisted Course. 1-5 Credits.
Repeatable.

PD 401. Research: [Topic]. 1-12 Credits.
Repeatable with change of topic.

PD 404. Internship: [Topic]. 1-12 Credits.
Repeatable twice for a maximum of 12 credits with change of topic.

PD 405. Reading and Conference: [Topic]. 1-6 Credits.
Repeatable with change of topic.
Prereq: instructor's permission.

PD 406. Special Problems: [Topic]. 1-8 Credits.
Repeatable with change of topic.
Prereq: instructor's permission.

PD 407. Seminar: [Topic]. 1-4 Credits.

PD 408. Workshop: [Topic]. 1-6 Credits.
Repeatable with change of topic.

PD 410. Experimental Course: [Topic]. 1-6 Credits.
Repeatable.

PD 430. Computer-Assisted Design and Production. 4 Credits.
Meshes virtual design and physical design as students work on projects using shop tools and computer-aided design and manufacturing software and equipment.
Prereq: ART 115, ART 116, PD 223.

PD 440. Advanced Designers' Tools. 4 Credits.
Designing a production line for twenty identical items.
Prereq: PD 340.

PD 483. Senior Studio I. 4 Credits.
Design studio focuses on personal questions that are explored through active design development. Questions may relate to issues of user interface, sustainability, or societal problems. Sequence with PD 484, PD 485. Repeatable twice for a maximum of 12 credits.
Prereq: PD 240, PD 323, PD 340, PD 350, PD 370

PD 484. Senior Studio II. 4 Credits.
Design studio focuses on global questions explored through active development. Questions may relate to issues of user interface, sustainability, or societal problems. Only for seniors with declared major status in architecture, art, interior architecture, or product design. Sequence with PD 483, 485. Repeatable twice for a maximum of 12 credits.
Pre- or coreq: PD 240, PD 323, PD 340, PD 350, PD 370, PD 430, PD 483; senior standing in product design.

PD 485. Senior Studio III. 4 Credits.
Design studio focuses on corporate questions that are explored through active design development. Questions may relate to issues of user interface, sustainability, or societal problems. Sequence with PD 483, 484. Repeatable twice for a maximum of 12 credits.
Pre- or coreq: PD 240, PD 323, PD 340, PD 350, PD 370, PD 430, PD 483, PD 484; senior standing in product design.

PD 486. BFA Studio I. 6 Credits.
Explores problems that stress design development through innovation and the responsibility to solve complex societal, functional, and aesthetic issues. Seminar component fosters theoretical, professional, and creative discussion.

PD 487. BFA Studio II. 6 Credits.
Second course in series of interactive studios in which students engage in independent project-based learning. Sequence with PD 486, PD 488.
Prereq: PD 486, BFA standing.

PD 488. BFA Studio III. 6 Credits.
Third course in series of interactive studio in which students engage in independent project-based learning. Sequence with PD 486, PD 487.
Prereq: PD 487, BFA standing.

Sports Product Design Courses

SPD 601. Research: [Topic]. 1-6 Credits.
Repeatable.

SPD 604. Internship: [Topic]. 1-6 Credits.
Repeatable.

SPD 605. Reading and Conference: [Topic]. 1-6 Credits.
Repeatable.

SPD 606. Special Problems: [Topic]. 1-6 Credits.
Repeatable.

SPD 608. Workshop: [Topic]. 1-9 Credits.
Repeatable.

SPD 610. Experimental Course: [Topic]. 1-5 Credits.
Repeatable.

SPD 650. Sports Product Materials and Manufacturing. 3 Credits.
Explores the materials science, manufacturing, and sustainability theories applied in sports product design.
Prereq: SPD 684.

SPD 684. Research Methodology and Innovation Process Studio. 6 Credits.
Focuses on the design theories and methodologies used to design innovative sports products.

SPD 685. Sports Product Design Studio I. 6 Credits.
Explores the theories and creative problem-solving methods used to design solutions for sports soft goods. Theories of human thermoregulation, hydroprotection, support, aerodynamics, wearable technology, and kinematics.
Prereq: SPD 684.

SPD 686. Sports Product Design Studio II. 6 Credits.
Explores the theories and creative problem-solving methods used to design solutions for sports footwear. Mechanical theories of cushioning, stability, support, traction, and slipping-sliding.
Prereq: SPD 650, SPD 685.

SPD 687. Sports Product Design Studio III. 6 Credits.
Explores the theories and creative problem-solving methods used to design solutions for sports hard goods. Performance theories are considered to generate creative solutions.
Prereq: SPD 650, SPD 686.

SPD 688. Innovative Project Strategy Development Studio. 6 Credits.
First of a two-term capstone studio that critically examines the alignment of design, materials, science, sustainability, research, and business theories to create an innovative sports product design opportunity.
Prereq: SPD 650, SPD 687.

SPD 689. Collaborative Creation and Launch Studio. 9 Credits.
Second of a two-term capstone studio that critically examines the alignment of design, materials, science, research, and business theories to create an innovative sports product design opportunity.
Prereq: SPD 688.