

# Product Design - B.S.

## Curriculum

The Product Design bachelor's degree program at JWU invites students to imagine and create the next generation of connected products, high-tech systems and user experiences. Graduates leave prepared to lead as technologists, innovators and designers in a rapidly changing global economy.

The edges of professional design practice are becoming porous, revealing new challenges and opportunities in the field. A new kind of design thinking is needed to develop the next generation of experiences, interconnected products and interfaces. The Product Design B.S. degree prepares students to integrate system and experience design with strategic innovation, removing traditional boundaries within design practice.

JWU Product Design students explore the web of systems and human experiences surrounding and supported by a design proposal. This approach positions graduates to create smart, connected products or integrate design thinking and problem-solving into established businesses and industries, helping them adapt and differentiate themselves.

Students begin their studies with an intensive design foundation. In small project-based classes, students work closely with faculty to develop their representation, research and communication skills. With skills in hand, students proceed through a studio sequence of increasingly complex design projects with exposure to real clients and real-world problems. In their final year, students develop a capstone design investigation to explore a specific area of interest and begin the transition from student to design professional. Graduating students enter the world ready to use design as a catalyst for change, transforming and improving people's lives.

Upon completion of the program, graduates will be able to:

- Apply the concepts of universal design to create inspiring, user-focused products and experiences.
- Model systems to improve system performance through design intervention.
- Move iteratively and critically from open-ended problems to design proposals.
- Communicate complex ideas visually, orally and in written form.
- Propose appropriate materials, technologies and processes for design proposals.

## Product Design

A four-year program leading to the bachelor of science degree

### Major Courses

GDES1000	Drawing for Design	3
GDES1001	First Year Design Student Seminar	1
GDES1020	Design Theory and Practice	3
GDES1030	Vector-Based Design	3
GDES1040	Foundations of Web Design	3
GDES1050	Image Editing and Design	3
IDES1010	Introduction to 3D Design	3
IDES1030	Direct Modeling	3
IDES2010	Human Factors	3
IDES2040	Materials and Processes	3
IDES2050	Parametric Modeling	3
IDES3010	System Design	3
IDES3030	Simulation, Analysis and Optimization	3
IDES3050	Emerging Design Technologies	3
IDES4030	Preparation for Capstone Project	1
IDES4050	Capstone Project	3

### Design Studios

IDES3090	Design Studio	20
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Students will take the Design Studio course five times. Course objectives change based on individual student levels.

### Applied/Experiential Learning

Choose 6 credits from the following:		
DEE3999	Directed Experiential Education <sup>D</sup>	6
TECX4099	College of Engineering & Design Internship <sup>1c</sup>	
TECX4190	Technical Solutions Design Project	

### Related Professional Studies

CAR0010	Career Management	1
FYS1020	First-Year Seminar	1

### A&S Core Experience

Communications Foundation Courses		9
ENG1020	Rhetoric & Composition I	
ENG1021	Rhetoric & Composition II	
ENG1030	Communication Skills	
Integrative Learning		6
Two ILS courses, one at the 2000 level, and one at the 4000 level		
Arts and Humanities		6
Two courses from different disciplines: ART, HIST, HUM, LIT, PHIL or REL		
Mathematics		6
MATH1020	Fundamentals of Algebra (or higher, based on student's placement)	
MATH2020	Discrete Mathematics	
Science		3
One course from BIO, CHM, PHY or SCI		
Social Sciences		6
Two courses from different disciplines: ANTH, ECON, GEND, LEAD, PSCI, PSYC, RES or SOC		
A&S Electives		6
Two courses with an EASC attribute		
<b>Free Electives #</b>		
9 Credits selected from 1000-4999 numbered offerings within the university		9
<b>Total Credits</b>		<b>123.0</b>

<sup>D</sup> Directed Experiential Education (DEE) opportunities are based on project availability with community partners and student eligibility. For more information, visit Experiential Education & Career Services (EE&CS).

<sup>1c</sup> Typically, internships require a minimum of six credits. Students interested in a 9 or 12-credit internship can apply additional experiential learning and free elective credits, if available. Students are strongly encouraged to contact a faculty advisor before scheduling internship and free elective credits.

# In addition to classes, free elective credits may be applied to a number of options such as internship, study abroad, Directed Experiential Education courses and courses in a specialization or minor as relevant. For students who qualify for the J2 program, up to four graduate courses may apply. Students are strongly encouraged to contact a faculty advisor before scheduling free elective credits.

Note: Students must pass MATH0010 Pre-Algebra or have equivalent placement scores to enroll in required math courses.

Note: Students must pass ENG0001 Writing Workshop or have equivalent placement scores to enroll in ILS 2000-level courses.

In collaboration with academic colleges across all JWU campuses, JWU Global Study Abroad programs offer a variety of international, domestic, and digital options for major, minor, free electives, experiential learning, and transferable courses. There are many affordable options for students during a semester, winter session, spring and/or summer breaks. Faculty-led, exchange, affiliate, and direct-enroll programs range in duration from one week to a full semester or full year. Financial aid may be applied, and some partners offer external scholarships. Premiere programs do not qualify for JWU scholarships or grants; however federal aid is available. Visit the study abroad website for information, program descriptions and online applications. Where will you go? Wherever you decide, make the best of your educational journey!

## Accelerated Program Options

### J2 Program

The JWU J2 program allows qualified students enrolled in a matriculating undergraduate program to take graduate level courses at JWU. Students interested in pursuing this option should meet with their academic advisor to discuss their interest, qualifications, and plans. The undergraduate student may take up to four graduate courses (maximum 12 credits) and are limited to 6 credits a semester and 3 credits per session (Fall Session I and Fall Session II).

The completion of graduate credits to fulfill undergraduate program requirements does not guarantee acceptance into the graduate program after completion of the baccalaureate degree. Matriculating undergraduate students who wish to formally enroll in a graduate program, must fulfill all requirements for entrance into the intended graduate program and complete a graduate program application.

**Note:** Not all graduate courses are included as part of this policy. Courses offered as part of the Masters of Arts in Teaching, Masters of Education,

Masters of Science in Physician Assistant Studies and doctoral courses are excluded from this policy and are restricted to program majors only. Additional courses and/or programs as determined by individual colleges may also have restricted access.

**Eligibility Criteria:**

To be eligible to enroll in graduate level courses (excludes: Masters of Arts in Teaching, Masters of Education, Masters of Science in Physician Assistant Studies, doctoral courses and other programs as outlined by the colleges).

Undergraduate students must meet the following criteria:

- Undergraduate cumulative GPA of 3.00 or higher
- Completed & registered undergraduate credits at least 90 credits
- Meet the individual course prerequisites

**Appeal to Eligibility Criteria:** College Dean or designee will receive a copy of the Petition Form, Student's GPS and email requesting appeal if the student requests to appeal the GPA or earned/registered credit criteria. College Dean / designee will review and determine approval.

These courses carry graduate credit and will replace undergraduate degree requirements when applicable, traditionally free-electives (maximum of 12 credits). The course will be applied to the undergraduate degree in the order in which they are taken (if required) and will also be applied towards both the students undergraduate and graduate GPA.

Students should maintain enrollment in at least 12 credits of undergraduate coursework to maintain full-time status; graduate course enrollment is not calculated into undergraduate full-time status. For students already attending full-time as undergraduates (12 credits or more) and paying the full-time tuition, the graduate credits will be included in full-time tuition fee. Students attending part-time (11 credits or less) will pay the cost per-credit undergraduate tuition for the graduate course.

Course registration will be based on space availability and students enrolled in graduate level courses will be required to maintain good academic standing at the undergraduate and graduate level.