INDUSTRIAL DESIGN: CONCENTRATION IN PRODUCT DESIGN AND DEVELOPMENT SF SCHOLARS ROADMAP

The San Francisco State Scholars program provides undergraduate students with an accelerated pathway to a graduate degree. Students in this program pursue a bachelor's and master's degree simultaneously. This program allows students to earn graduate credit while in their junior and/or senior year, reducing the number of semesters required for completion of a master's degree.

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult an advisor in your major program for further guidance.

Course	Title	Units
First Year		
Fall Semester		
ENG 114	Writing the First Year: Finding Your Voice (A2) [1]	3
GE Area A [2]		3
GE Area B: Quantitative Reasoning (B4) [3]		3
GE Area C		3
SF State Studies or University Elective		3
	Units	**15**
Spring Semester		
GE Area A		3
GE Area B: Physical Science (B1) and Laboratory Science (B3) [4]		3-4
GE Area C		3
GE Area E		3
SF State Studies or University Elective		3
	Units	**15-16**
Second Year		
Fall Semester		
GE Area C		3
GE Area D - Take Two		6
SF State Studies or University Elective - Take Two		7
	Units	**16**
Spring Semester		
DES 200	Visual Design Literacy (Major Foundation)	3
DES 222	Digital Design Foundations I (Major Foundation)	3
GE Area B: Life Science (B2) and Laboratory Science (B3) [4]		3-4
GE Area F [±]		3
U.S. and California Government (http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg)		3
	Units	**15-16**
Third Year		
Fall Semester		
DES 305	Lab Safety Basics (Major Requirement)	1
DES 320	Drafting and Sketching for Design (Major Requirement)	3
DES 321	Technical Drawing I: Introduction to CAD (Major Requirement)	3
DES 322	Digital Design Foundations II (Major Core)	3
DES 356	A History of Design and Technology (Major Core) [5]	3
DES 370	Introduction to The School of Design (Major Core)	1
GE Area UD-B: Upper-Division Physical and/or Life Sciences		3
	Units	**17**
Spring Semester		
DES 300	Design Process (Major Core)	3
DES 310	Product Design I (Major Requirement)	3
DES 324GW	Research and Writing for Design - GWAR (Major Core)	3
DES 420	Rapid Visualization (Major Requirement)	3
DES 360	Model Development Laboratory (Major Requirement)	3
	Units	**15**
Fourth Year		
Summer Semester		
GE Area UD-D: Upper-Division Social Sciences		3
	Units	**3**
Fall Semester		
DES 340	Design and Materials (Major Requirement)	3
DES 410	Product Design II (Major Requirement)	3
DES 421	Technical Drawing II: 3-D Solid Modeling (Major Concentration)	3
DES 460	Rapid Prototyping and Manufacturing Systems (Major Core)	3
Major Electives (6 Units Total) - Take One [6]		3
	Units	**15**

Spring Semester		
DES 505	Senior Design Project (Major Culminating Requirement)	3
DES 570	Professional Practices for Designers (Major Culminating Requirement)	3
DES 700	Seminar in Design Research (Graduate Core)	3
Major Electives (6 Units Total) - Take One [6]		3
Graduate Elective (9 units total) - Take One [7]		3
	Units	**15**
Fifth Year		
Fall Semester		
DES 724	Graduate Research and Writing Methods in Design (Graduate Core)	3
DES 800	Seminar in Design Topics (Graduate Core)	3
DES 852	Directed Experience in Design (Graduate Core)	3
Graduate Elective (9 Units Total) - Take One [7]		3
	Units	**12**
Spring Semester		
DES 755	Seminar in Design Management (Graduate Core)	3
DES 805	Seminar in Design Methodology (Graduate Core)	3
Select One (Culminating Experience):		3
DES 894	Creative Work Project	
DES 898	Master's Thesis	
Graduate Elective (9 units total) - Take One [7]		3
	Units	**12**
	Total Units	**150-152**

[1] ENG 114 can only be taken if you complete Directed Self-Placement (DSP) and select ENG 114; if you choose ENG 104/ENG 105 through DSP you will satisfy A2 upon successful completion of ENG 105 in the second semester; multilingual students may be advised into alternative English courses.

[2] To avoid taking additional units, it is recommended that you meet the **SF State Studies** (AERM, GP, ES, SJ) requirements within your GE or major.

[3] To determine the best B4 course option, students should complete the online advising activity at mathadvising.sfsu.edu (https://mathadvising.sfsu.edu/). Questions? Contact Gator Smart Start. (https://gatorsmartstart.sfsu.edu/)

[4] Consider taking a class combined with a laboratory or a separate lab to fulfill B3 if not already satisfied.

[5] Upper-Division General Education, Arts and/or Humanities (UD-C) is satisfied upon completion of DES 356.

[6] **Electives**
Select two from the following:
DES 221 Introduction to 3D Digital Design (3 units)
DES 325 Graphic Design I (3 units)
DES 327 Interactive Design I (3 units)
DES 332 Electricity and Electronics (3 units)
DES 405 How to Develop, Patent, and Market an Idea (3 units)
DES 475 Topics in Design (3 units)
DES 521 Technical Drawing III: Advanced Modeling and Rendering (3 units)
DES 523 Information Design I: Data Visualization (3 units)
DES 560 Prototyping Smart Devices (3 units)
DES 576 Practical Experience: Internship (3 units)*
DES 628 Design Gallery: Exhibitions and Communications (3 units)
DES 685 Projects in the Teaching of Design (1-4 units)
DES 699 Independent Study in Design (3 units)*
Or Elective Approved by Advisement

[7] **Graduate Electives (9 units)**
Select supporting upper-division/graduate courses as approved by Graduate Coordinator.

* Students may choose DES 576 ***or*** DES 699, but may not choose DES 576 ***and*** DES 699.

± Given catalog rights, fall 2023 transfer students do not need to complete an Area F course.