

BACHELOR OF SCIENCE IN INDUSTRIAL DESIGN: CONCENTRATION IN PRODUCT DESIGN AND DEVELOPMENT - QUANTITATIVE REASONING CATEGORY I/II AND STRETCH ENGLISH

120 Total Units Required

Minimum Number of Units in the Major: 61

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 Semester		
ENG 104	Writing the First Year. Finding Your Voice Stretch I 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
Second Semester		
ECON 101	Introduction to Microeconomic Analysis (Major Core, D1)	3
ENG 105	Writing the First Year. Finding Your Voice Stretch II (A2) ¹	3
PHYS 101	Conceptual Physics (Major Core, B1)	3
GE Area A		3
GE Area C		3
	Units	15
Third Semester		
GE Area B: Life Science (B2) and Laboratory Science (B3) ⁴		3-4
GE Area D		3
GE Area E		3
SF State Studies or University Elective		4
	Units	13-14
Fourth Semester		
GE Area C		3
GE Area D		3
SF State Studies or University Elective - Take Three		9
	Units	15

Fifth Semester		
DES 323	Visual Design Literacy (Major Prerequisites)	3
DES 356	A History of Design and Technology (Major Core) ⁵	3
DES 370	Introduction to Design (Major Core)	1
Concentration Electives (9 Units Total) - Take Two ⁶		6
GE Area UD-B: Upper-Division Physical and/or Life Sciences (Consider SF State Studies Course)		3
	Units	16

Sixth Semester		
DES 300	Design Process (Major Foundation)	3
DES 305	Lab Safety Basics (Major Concentration)	1
DES 320	Drafting and Sketching for Design (Major Foundation)	3
DES 321	Technical Drawing I: Introduction to CAD (Major Concentration)	3
DES 322	Computer Graphic Imaging (Major Foundation)	3
DES 324GW	Research and Writing for Design - GVAR (Major Foundation)	3
	Units	16

Seventh Semester		
DES 310	Product Design I (Major Concentration)	3
DES 420	Rapid Visualization (Major Concentration)	3
MKTG 431	Principles of Marketing (Major Core)	3
Concentration Electives (9 Units Total) - Take One ⁶		3
GE Area UD-D: Upper-Division Social Sciences (Consider SF State Studies Course)		3
	Units	15

Eighth Semester		
DES 410	Product Design II (Major Concentration)	3
DES 421	Technical Drawing II: 3-D Solid Modeling (Major Concentration)	3

DES 460	Rapid Prototyping and Manufacturing Systems (Major Core)	3
DES 505	Senior Design Project (Major Culminating Requirement)	3
SF State Studies or University Elective		3
	Units	15
	Total Units	120-121

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 **SF State Studies** requirements (AERM, GP, ES, SJ) within your GE.

³ Depending on courses completed through Early Start, students in Pathway/Category III or IV may be required to enroll in a support course to complement their Quantitative Reasoning/B4 requirement. There are multiple course options for this pathway. Before enrolling in a B4 course, students should verify their MATH Pathway/Category in their Student Center (<http://cms.sfsu.edu/content/student-center/>). Information regarding the courses that correspond with your MATH Pathway/Category can be found on the Developmental Studies Office Website (<http://developmentalstudies.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**

ACCT 100 Introduction to Financial Accounting (3 units)

DES 210 Industrial Science (3 units)

DES 332 Electricity and Electronics (3 units)

DES 340 Design and Materials (3 units)

DES 360 Model Development Laboratory (3 units)

DES 475 Topics in Design (3 units)

DES 524 Information Design II (3 units)

DES 575 Contemporary Design Workshop (3 units)*

DES 576 Practical Experience: Internship (3 units)*

* Students may choose DES 575 **or** DES 576, but may not choose DES 575 **and** DES 576.