BACHELOR OF SCIENCE IN INDUSTRIAL DESIGN: CONCENTRATION IN PRODUCT DESIGN AND DEVELOPMENT - QUANTITATIVE REASONING CATEGORY I/II AND ENG 114

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
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<tr>
<td>ENG 114</td>
<td>Writing the First Year: Finding Your Voice (A2)</td>
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<tr>
<td>GE Area A</td>
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</tr>
<tr>
<td>GE Area B: Quantitative Reasoning (B4)</td>
<td></td>
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<tr>
<td>GE Area C</td>
<td></td>
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<tr>
<td>SF State Studies or University Elective</td>
<td></td>
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<tr>
<td>** Units**</td>
<td>** 15**</td>
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<tr>
<td><strong>Second Semester</strong></td>
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<tr>
<td>ECON 101</td>
<td>Introduction to Microeconomic Analysis (Major Core, D1)</td>
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</tr>
<tr>
<td>PHYS 101</td>
<td>Conceptual Physics (Major Core, B1)</td>
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<tr>
<td>GE Area A</td>
<td></td>
<td>3</td>
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<tr>
<td>GE Area C</td>
<td></td>
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<tr>
<td>GE Area E</td>
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<td>** Units**</td>
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<tr>
<td><strong>Third Semester</strong></td>
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<tr>
<td>GE Area B: Life Science (B2) and Laboratory Science (B3)</td>
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<td>3-4</td>
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<tr>
<td>GE Area D</td>
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<tr>
<td>SF State Studies or University Elective - Take Two</td>
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<td>** Units**</td>
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<td><strong>Fourth Semester</strong></td>
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<tr>
<td>GE Area C</td>
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</tr>
<tr>
<td>GE Area D</td>
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<tr>
<td>SF State Studies or University Elective - Take Three</td>
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<tr>
<td>** Units**</td>
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<tr>
<td><strong>Fifth Semester</strong></td>
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<tr>
<td>DES 323</td>
<td>Visual Design Literacy (Major Prerequisites)</td>
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<tr>
<td>DES 356</td>
<td>A History of Design and Technology (Major Core)</td>
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<tr>
<td>DES 370</td>
<td>Introduction to Design (Major Core)</td>
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<td>Concentration Electives (9 Units Total) - Take Two</td>
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<td>GE Area UD-B: Upper-Division Physical and/or Life Sciences (Consider SF State Studies Course)</td>
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<td>** Units**</td>
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<td><strong>Sixth Semester</strong></td>
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<tr>
<td>DES 300</td>
<td>Design Process (Major Foundation)</td>
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<tr>
<td>DES 305</td>
<td>Lab Safety Basics (Major Concentration)</td>
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<tr>
<td>DES 320</td>
<td>Drafting and Sketching for Design (Major Foundation)</td>
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<td>DES 321</td>
<td>Technical Drawing I: Introduction to CAD (Major Concentration)</td>
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<td>DES 322</td>
<td>Computer Graphic Imaging (Major Foundation)</td>
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<td>DES 324GW</td>
<td>Research and Writing for Design - GWAR (Major Foundation)</td>
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<td>** Units**</td>
<td>** 16**</td>
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<td><strong>Seventh Semester</strong></td>
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<tr>
<td>DES 310</td>
<td>Product Design I (Major Concentration)</td>
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<tr>
<td>DES 420</td>
<td>Rapid Visualization (Major Concentration)</td>
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<tr>
<td>MKTG 431</td>
<td>Principles of Marketing (Major Core)</td>
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<tr>
<td>Concentration Electives (9 Units Total) - Take One</td>
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<tr>
<td>GE Area UD-D: Upper-Division Social Sciences (Consider SF State Studies Course)</td>
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<td>** Units**</td>
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<tr>
<td><strong>Eighth Semester</strong></td>
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<tr>
<td>DES 410</td>
<td>Product Design II (Major Concentration)</td>
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<tr>
<td>DES 421</td>
<td>Technical Drawing II: 3-D Solid Modeling (Major Concentration)</td>
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</tr>
<tr>
<td>DES 460</td>
<td>Rapid Prototyping and Manufacturing Systems (Major Core)</td>
<td>3</td>
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</tbody>
</table>
San Francisco State University Bulletin 2020-2021

Bachelor of Science in Industrial Design: Concentration in Product Design and Development - Quantitative Reasoning Category I/II and ENG 114

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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<tbody>
<tr>
<td>DES 505</td>
<td>Senior Design Project (Major Culminating Requirement)</td>
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</tr>
<tr>
<td>GE Area UD-C: Upper-Division Arts and/or Humanities (Consider SF State Studies Course)</td>
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<td></td>
</tr>
<tr>
<td>ENG 114</td>
<td>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.</td>
<td></td>
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</tbody>
</table>

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. 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: Exhibit Design (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.