

Proposed Four-Year Plan BS, Biological Sciences, Systems Physiology

Below is a sample program for an entering freshman who wishes to complete a biology degree in 4 years. Keep in mind that most majors extend their stay at San Jose State University to more than 4 years because they work or have other obligations that necessitate that they proceed more slowly through their coursework. This program presumes that the student has passed the English Placement Test and Entry Level Math Test, and has gotten a C or better in high school chemistry, and has placed in Calculus 30 via the Calculus Placement Test. The program is for the Bachelor of Science in Biological Sciences, Concentration in Systems Physiology. Students should consult a Biology advisor as soon as possible and, at a minimum, each year thereafter. Note that Biology Majors fulfill the General Education Requirements for Areas B1, B2, B3, and B4 by courses in the major. Biology majors should not take GE courses in Area B.

<p>Fall 1</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Chemistry 1A</td> <td style="text-align: right;">5</td> </tr> <tr> <td>Biology 1A</td> <td style="text-align: right;">5</td> </tr> <tr> <td>GE Area A2 (English 1A)</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 6</td> <td style="text-align: right;">1</td> </tr> <tr> <td>PE</td> <td style="text-align: right;">1</td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">15</td> </tr> </tbody> </table>	Course	Units	Chemistry 1A	5	Biology 1A	5	GE Area A2 (English 1A)	3	Biology 6	1	PE	1	Total Units	15	<p>Spring 1</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Chemistry 1B</td> <td style="text-align: right;">5</td> </tr> <tr> <td>Biology 1B</td> <td style="text-align: right;">5</td> </tr> <tr> <td>GE Area C3 (English 1B)</td> <td style="text-align: right;">3</td> </tr> <tr> <td><u>Math 30 or other calculus*</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">16</td> </tr> </tbody> </table>	Course	Units	Chemistry 1B	5	Biology 1B	5	GE Area C3 (English 1B)	3	<u>Math 30 or other calculus*</u>	<u>3</u>	Total Units	16						
Course	Units																																
Chemistry 1A	5																																
Biology 1A	5																																
GE Area A2 (English 1A)	3																																
Biology 6	1																																
PE	1																																
Total Units	15																																
Course	Units																																
Chemistry 1B	5																																
Biology 1B	5																																
GE Area C3 (English 1B)	3																																
<u>Math 30 or other calculus*</u>	<u>3</u>																																
Total Units	16																																
<p>Fall 2</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Chemistry 112A</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Chemistry 120S</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Physics 2A</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Biology 115</td> <td style="text-align: right;">4</td> </tr> <tr> <td><u>GE Area A3(Critical Thinking)</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">15</td> </tr> </tbody> </table>	Course	Units	Chemistry 112A	3	Chemistry 120S	1	Physics 2A	4	Biology 115	4	<u>GE Area A3(Critical Thinking)</u>	<u>3</u>	Total Units	15	<p>Spring 2</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Chemistry 112B</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Physics 2B</td> <td style="text-align: right;">4</td> </tr> <tr> <td>GE Area D2 (Comparative Systems)</td> <td style="text-align: right;">3</td> </tr> <tr> <td>GE Area A1 (Oral Communication)</td> <td style="text-align: right;">3</td> </tr> <tr> <td><u>GE Area D1 (Human Behavior) ***</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">16</td> </tr> </tbody> </table>	Course	Units	Chemistry 112B	3	Physics 2B	4	GE Area D2 (Comparative Systems)	3	GE Area A1 (Oral Communication)	3	<u>GE Area D1 (Human Behavior) ***</u>	<u>3</u>	Total Units	16				
Course	Units																																
Chemistry 112A	3																																
Chemistry 120S	1																																
Physics 2A	4																																
Biology 115	4																																
<u>GE Area A3(Critical Thinking)</u>	<u>3</u>																																
Total Units	15																																
Course	Units																																
Chemistry 112B	3																																
Physics 2B	4																																
GE Area D2 (Comparative Systems)	3																																
GE Area A1 (Oral Communication)	3																																
<u>GE Area D1 (Human Behavior) ***</u>	<u>3</u>																																
Total Units	16																																
<p>Fall 3</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Biology 124</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 125</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Chemistry 113A</td> <td style="text-align: right;">2</td> </tr> <tr> <td>GE Area C1 (Arts)</td> <td style="text-align: right;">3</td> </tr> <tr> <td>GE Area D3 (Social Issues)***</td> <td style="text-align: right;">3</td> </tr> <tr> <td><u>GE Area C2 (Letters)</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">16</td> </tr> </tbody> </table>	Course	Units	Biology 124	3	Biology 125	2	Chemistry 113A	2	GE Area C1 (Arts)	3	GE Area D3 (Social Issues)***	3	<u>GE Area C2 (Letters)</u>	<u>3</u>	Total Units	16	<p>Spring 3</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Biology Elective **</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology Elective**</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Chemistry 135</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Biology 100W (GE Area Z)</td> <td style="text-align: right;">3</td> </tr> <tr> <td>PE</td> <td style="text-align: right;">1</td> </tr> <tr> <td><u>GE Area E (Biol 54)</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">15</td> </tr> </tbody> </table>	Course	Units	Biology Elective **	3	Biology Elective**	1	Chemistry 135	4	Biology 100W (GE Area Z)	3	PE	1	<u>GE Area E (Biol 54)</u>	<u>3</u>	Total Units	15
Course	Units																																
Biology 124	3																																
Biology 125	2																																
Chemistry 113A	2																																
GE Area C1 (Arts)	3																																
GE Area D3 (Social Issues)***	3																																
<u>GE Area C2 (Letters)</u>	<u>3</u>																																
Total Units	16																																
Course	Units																																
Biology Elective **	3																																
Biology Elective**	1																																
Chemistry 135	4																																
Biology 100W (GE Area Z)	3																																
PE	1																																
<u>GE Area E (Biol 54)</u>	<u>3</u>																																
Total Units	15																																
<p>Fall 4</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Biology Elective**</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 155</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 135A</td> <td style="text-align: right;">3</td> </tr> <tr> <td>GE Area V (Global Understanding)</td> <td style="text-align: right;">3</td> </tr> <tr> <td><u>GE Area S (Self, Society, Equality)</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">15</td> </tr> </tbody> </table>	Course	Units	Biology Elective**	3	Biology 155	3	Biology 135A	3	GE Area V (Global Understanding)	3	<u>GE Area S (Self, Society, Equality)</u>	<u>3</u>	Total Units	15	<p>Spring 4</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Course</th> <th style="text-align: right; border-bottom: 1px solid black;">Units</th> </tr> </thead> <tbody> <tr> <td>Biology Elective**</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology 178 (Area R)</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Biology Elective**</td> <td style="text-align: right;">3</td> </tr> <tr> <td><u>Biology Elective**</u></td> <td style="text-align: right;"><u>3</u></td> </tr> <tr> <td style="border-top: 1px solid black;">Total Units</td> <td style="text-align: right; border-top: 1px solid black;">12</td> </tr> </tbody> </table>	Course	Units	Biology Elective**	3	Biology 178 (Area R)	3	Biology Elective**	3	<u>Biology Elective**</u>	<u>3</u>	Total Units	12						
Course	Units																																
Biology Elective**	3																																
Biology 155	3																																
Biology 135A	3																																
GE Area V (Global Understanding)	3																																
<u>GE Area S (Self, Society, Equality)</u>	<u>3</u>																																
Total Units	15																																
Course	Units																																
Biology Elective**	3																																
Biology 178 (Area R)	3																																
Biology Elective**	3																																
<u>Biology Elective**</u>	<u>3</u>																																
Total Units	12																																

* A second calculus course may or may not be required for pre-health preparation. Check with your advisor. Math 60 (Calculus for Biological Sciences) or Math 30P (Calculus I with Pre-calculus) can be substituted for Math 30 (Calculus I) **Students must take the Calculus Placement Exam in the Fall prior to enrolling in calculus in the Spring.**

** See list of approved electives in catalog

*** GE Area D2, D3, F1, F2, F3 can be satisfied with a two course sequence of Hist 15A/B, AAS 33A/B, or MAS 10 A/B