

## +1 BA Biology/PSM Bioinformatics Academic Plan

<p><b><u>Freshman – Fall</u></b> (15 cr.)</p> <p>Select one of the following (4 cr.):            CHEM 1031 &amp; 1033 General Chemistry I (3+1 cr.)            CHEM 1951 &amp; 1953 Honors General Chemical Science I<sup>F</sup> (3+1 cr.)</p> <p>Select one of the following (4 cr.):            MATH 1041 Calculus I            MATH 1941 Honors Calculus I<sup>F</sup></p> <p>Gen Ed/Elective (7 cr.)</p>	<p><b><u>Freshman – Spring</u></b> (15 cr.)</p> <p>BIOL 1111 Introduction to Biology I OR BIOL 1911 Honors Introduction to Biology I (4 cr.)</p> <p>Select one of the following:            CHEM 1032 &amp; 1034 General Chemistry II (3+1 cr.)            CHEM 1952 &amp; 1954 Honors General Chemical Science II<sup>S</sup> (3+1 cr.)</p> <p>Select one of the following (4 cr.):            MATH 1042 Calculus II            MATH 1942 Honors Calculus II            MATH 1044 Introduction to Probability and Statistics for the Life Sciences</p> <p>Gen Ed/Elective (3 cr.)</p>
<p><b><u>Sophomore – Fall</u></b> (15 cr.)</p> <p>BIOL 2112 Introduction to Biology II OR BIOL 2912 Honors Introduction to Biology II (4 cr.)</p> <p>Select one of the following (4 cr.):            CHEM 2201 &amp; 2203 Organic Chemistry I (3+1 cr.)            CHEM 2211 &amp; 2213 Organic Chemistry for Majors I<sup>F</sup> (3+1 cr.)            CHEM 2921 &amp; 2923 Organic Chemistry for Honors I<sup>F</sup> (3 + 1 cr.)</p> <p>Gen Ed/Elective (7 cr.)</p>	<p><b><u>Sophomore – Spring</u></b> (16 cr.)</p> <p>Select one of the following (3-4 cr.):            BIOL 2227 Principles of Ecology<sup>S</sup> (3 cr.)            BIOL 2296 Genetics [WI]<sup>S</sup> (4 cr.)</p> <p>Select one of the following (4 cr.):            CHEM 2202 &amp; 2204 Organic Chemistry II (3+1 cr.)            CHEM 2212 &amp; 2214 Organic Chemistry for Majors II<sup>S</sup> (3+1 cr.)            CHEM 2922 &amp; 2924 Organic Chemistry for Honors II<sup>S</sup> (3 + 1 cr.)</p> <p>Gen Ed/Elective (9-8 cr.)</p>
<p><b><u>Junior –Fall</u></b> (16 cr.)</p> <p>BIOL 3096 Cell Structure and Function [WI]<sup>F</sup> (4 cr.)            PHYS 2021 General Physics I OR PHYS 2921 Honors General Physics I (4 cr.)</p> <p>Gen Ed/Elective (5 cr.)            BIOL 5411 Structural Bioinformatics I (3 cr.)</p>	<p><b><u>Junior – Spring</u></b> (15 cr.)</p> <p>Select one of the following (3-4 cr.):            BIOL 2227 Principles of Ecology<sup>S</sup> (3 cr.)            BIOL 2296 Genetics [WI]<sup>S</sup> (4 cr.)</p> <p>PHYS 2022 General Physics II OR PHYS 2922 Honors General Physics II (4 cr.)</p> <p>Gen Ed/Elective (8-7 cr.)</p>
<p><b><u>Senior – Fall</u></b> (15 cr.)</p> <p>Gen Ed/Elective (9 cr.)            BIOL 5403 Genomics (3 cr.)            CIS 5015 Scripting for Science and Business (3 cr.)</p>	<p><b><u>Senior – Spring</u></b> (16 cr.)</p> <p>Gen Ed/Elective (13 cr.)            BIOL 5509 Computational Genomics (3 cr.)</p>

### Undergraduate Degree:

Credits in the major: 60

PSM Graduate courses counting as Upper Level (2000+) CST Credits: 9

PSM Graduate Courses counting as Elective credits: 3

Credits in General Education: 25-26

Elective credits: 35-34

Total credits: 123

**Graduate Degree:**

18 Additional graduate credits for a total of 30 graduate credits

**5<sup>th</sup> Year – Summer** (2 cr.)BIOL 5506 Professional Development Seminar for PSM in Biotechnology (1 cr.)  
BIOL 9995 Capstone Project (1 cr.)**5<sup>th</sup> Year – Fall** (9 cr.)BIOL 5312 Biostatistics (3 cr.)  
BIOL 5511 Ethics in Bioinformatics (2 cr.)  
PSM Elective (3 cr.)  
BIOL 9995 Capstone Project (1 cr.)**5<sup>th</sup> Year – Spring** (7 cr.)BIOL 9995 Capstone Project (1 cr.)  
CHEM 5412 Structural Bioinformatics II (3 cr.)  
PSM Elective (3 cr.)