

**BS/MS BIOINFORMATICS SAMPLE SCHEDULE**

***Thesis Option***

	<b>Fall</b>	<b>Spring</b>
<b>Year 1</b>	General Biology (BIOL 101) (3) General Chemistry A (CHEM 101) (3) Applied Calculus I (MATH 131) <sup>1</sup> (3) CORE: Philosophical Knowledge Tier 1 (3) CORE: Theology and Religious Studies Tier 1 (3) UNIV 101 (1)	General Chemistry B (CHEM 102) (3) Introduction to Programming (COMP 170) (3) Applied Calculus II (MATH 132) <sup>2</sup> (3) CORE: Historical Knowledge Tier 1 (3) CORE: College Writing Seminar (3)
	<i>Total Credit Hours: 16</i>	<i>Total Credit Hours: 15</i>
<b>Year 2</b>	Genetics (BIOL 282) (3) Genetics Lab (BIOL 283) (1) Organic Chemistry A (CHEM 223) <sup>3</sup> (3) Discrete Structures (COMP 163) (3) CORE: Literary Knowledge & Experience Tier 1 (3) CAS Elective (3)	Genomics (BIOL 387) <sup>4,5</sup> (3) Organic Chemistry B (CHEM 224) <sup>6</sup> (3) Data Structures (COMP 271) (3) CORE: Historical Knowledge Tier 2 (3) CORE: Societal and Cultural Knowledge Tier 1 (3)
	<i>Total Credit Hours: 16</i>	<i>Total Credit Hours: 15</i>
<b>Year 3</b>	Bioinformatics (BIOL 388) <sup>7</sup> (3) Biochemistry (CHEM 361) (3) CORE: Theology and Religious Studies Tier 2 (3) CORE: Philosophical Knowledge Tier 2 (3) CAS Language Requirement 1 (3) <sup>8</sup> Bioinformatics Research (BIOI 399) <sup>9,10</sup> (3)	Proteomics (CHEM 365) <sup>11</sup> (3) Introduction to Biostatistics (STAT 335) (3) CORE: Literary Knowledge & Experience Tier 2 (3) CORE: Artistic Knowledge and Experience (3) CAS Language Requirement 2 (3) <sup>8</sup> <b>* APPLY FOR ACCELERATED PROGRAM *</b>
	<i>Total Credit Hours: 18</i>	<i>Total Credit Hours: 15</i>
<b>Year 4</b>	<b>RCRS (UNIV 370) (0)</b> <b>Bioinformatics Research Design (BIOI 494) (1)</b> Design and Analysis of Algorithms (COMP 363) (3) CORE: Societal and Cultural Knowledge Tier 2 (3) CAS Elective (3) CAS Elective (3) CORE: Ethics (3)	<b>Advanced Bioinformatics (BIOI 500) (2)</b> <b>Bioinformatics Seminar (BIOI 501) (1)</b> <b>Computational Biology (COMP 488) (4)</b> <b>Quant. Bioinformatics (STAT 437) (3)</b> <b>Bioinformatics Research (BIOI 499) (2)</b> CAS Elective (3)
	<i>Total Credit Hours: 16</i>	<i>Total Credit Hours: 15</i>
<b>Year 5</b>	<b>Bioinformatics Research (BIOI 499) (6)</b> <b>Bioinformatics Elective (3)</b>	<b>Bioinformatics Seminar (BIOI 501) (1)</b> <b>Bioinformatics Elective (3)</b> <b>Bioinformatics Elective (3)</b> <b>Thesis (BIOI 595) (1)</b>
	<i>Total Credit Hours: 9</i>	<i>Total Credit Hours: 8</i>

<sup>1</sup> May substitute with MATH 161; <sup>2</sup> May substitute with MATH 162; <sup>3</sup> May substitute with CHEM 221; <sup>4</sup> Offered in Spring semester only; <sup>5</sup> May substitute with BIOL 392 (Fall Only course); <sup>6</sup> May substitute with CHEM 222; <sup>7</sup> Offered in Fall semester only; <sup>8</sup> Language competency required at the 102 level by course or [test](#); <sup>9</sup> May substitute with BIOI 397 or BIOI 398 and may be repeated more than once (although only 1 credit hour is required); <sup>10</sup> 3 credit hours of BIOI 397, 398, or 399 fulfill Engaged Learning requirement; <sup>11</sup> CHEM 365 is offered every Spring semester of odd years.

**Notes:** CAS requires 2 Writing Intensive (WI) courses; many CORE Tier 2 courses are available as WI. Bold indicates courses required of the MS degree, totaling 30 credit hours. Courses applied towards both BS and MS degree in bold, underline.