### BS/MS Bioinformatics Sample Schedule

#### Thesis Option

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
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</table>
| 1    | General Biology (BIOL 101) (3)  
General Chemistry A (CHEM 101) (3)  
Applied Calculus I (MATH 131) (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) (3)  
CORE: Historical Knowledge Tier 1 (3)  
CORE: College Writing Seminar (3) |
|      | **Total Credit Hours: 16** | **Total Credit Hours: 15** |
| 2    | Genetics (BIOL 282) (3)  
Genetics Lab (BIOL 283) (1)  
Organic Chemistry A (CHEM 223) (3)  
Discrete Structures (COMP 163) (3)  
CORE: Literary Knowledge & Experience Tier 1 (3)  
CAS Elective (3) | Genomics (BIOL 387) (3)  
Organic Chemistry B (CHEM 224) (3)  
Data Structures (COMP 271) (3)  
CORE: Historical Knowledge Tier 2 (3)  
CORE: Societal and Cultural Knowledge Tier 1 (3) |
|      | **Total Credit Hours: 16** | **Total Credit Hours: 15** |
| 3    | Biinformatics (BIOL 388) (3)  
Biochemistry (CHEM 361) (3)  
CORE: Theology and Religious Studies Tier 2 (3)  
CORE: Philosophical Knowledge Tier 2 (3)  
CAS Language Requirement 1 (3)  
Bioinformatics Research (BIOL 399) (3) | Proteomics (CHEM 365) (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)  
*APPLY FOR ACCELERATED PROGRAM* |
|      | **Total Credit Hours: 18** | **Total Credit Hours: 15** |
| 4    | RCRS (UNIV 370) (0)  
Biinformatics Research Design (BIOI 494) (1)  
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) | Advanced Biinformatics (BIOI 500) (2)  
Biinformatics Seminar (BIOI 501) (1)  
Computational Biology (COMP 488) (4)  
Quant. Bioinformatics (STAT 437) (3)  
Biinformatics Research (BIOI 499) (2)  
CAS Elective (3) |
|      | **Total Credit Hours: 16** | **Total Credit Hours: 15** |
| 5    | Biinformatics Research (BIOI 499) (6)  
Biinformatics Elective (3) | Biinformatics Seminar (BIOI 501) (1)  
Biinformatics Elective (3)  
Biinformatics Elective (3)  
Thesis (BIOI 595) (1) |
|      | **Total Credit Hours: 9** | **Total Credit Hours: 8** |

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

Updated 11/2017