

# Bachelor of Science in Bioinformatics 2016-2018 Catalog

Student: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

ID#: \_\_\_\_\_

Advisor: \_\_\_\_\_

### Overall Requirements to Graduate

- 126+ semester hours
- Completion of core curriculum
- Completion of a major
- 36 upper division credit hours
- GPA above 2.0
- Major GPA above 2.0
- Minor/Program complete (optional)



Credit Hour Breakdown	
Hours completed	
Hours in progress	
Core hours needed	
Major hours needed	
(Minor hours needed)	
(Other hours needed)	
Elective hours needed	
<b>TOTAL HOURS (126+)</b>	

Core Curriculum (46 hours)			Complete	Needed		
<b>Theology (9 credit hours)</b> Must take in order. (Pre-req: Phil 1311 or 1315/3315) <ul style="list-style-type: none"> <li><input type="checkbox"/> THEO 1301/3301 Intro to Sacred Scriptures</li> <li><input type="checkbox"/> THEO 2301/3311 Teachings of the Catholic Church</li> <li><input type="checkbox"/> THEO 3349 Christ and the Moral Life (Phil 2314 or 2316/3316)</li> </ul>		<b>Students with 30-59 transfer hrs:</b> 6-9 hours THEO 6-9 hours PHIL 3 hours Synthesis <i>(18 hours total)</i>	<b>Students with 60+ transfer hrs:</b> 6 hours THEO 6 hours PHIL NO synthesis <i>(12 hours total)</i>			
<b>Philosophy (9 credit hours)</b> Choose one sequence:						
<u>Systematic Sequence (must take in order)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> PHIL 1311 Philosophy of the Human Person</li> <li><input type="checkbox"/> PHIL 2314 Ethics</li> <li><input type="checkbox"/> PHIL 3313 Metaphysics</li> </ul>		<u>Historical Sequence (must take in order)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> PHIL 1315/3315 Ancient Philosophy</li> <li><input type="checkbox"/> PHIL 2316/3316 Medieval Philosophy</li> <li><input type="checkbox"/> PHIL 3317 – Modern Philosophy</li> </ul>				
<b>Synthesis Course (3 credit hours)</b> Choose <b>one</b> synthesis course from the Synthesis Course List.						
<b>English (9 credit hours)*</b> Must take in order.						
<ul style="list-style-type: none"> <li><input type="checkbox"/> ENGL 1341 The Classical Tradition: Literature &amp; Composition I</li> <li><input type="checkbox"/> ENGL 1342 The Middle Ages: Literature &amp; Composition II</li> <li><input type="checkbox"/> ENGL 2312 The Modern World: Literature &amp; Composition III</li> </ul>		<b>*Students with transfer credit:</b> 3 transfer credits: Take 1341/1342 (left) 6 transfer credits: Take ENGL 3312 (below) <input type="checkbox"/> ENGL 3312 Perspectives in World Lit.				
<b>History (6 credit hours)</b> Choose <b>one</b> pair of courses:						
<u>World History</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> HIST 1335 World Community I</li> <li><input type="checkbox"/> HIST 1336 World Community II</li> </ul>		<u>U.S. History</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> HIST 2333 U.S. History to 1877</li> <li><input type="checkbox"/> HIST 2334 U.S. History since 1877</li> </ul>				
<b>Social and Behavioral Sciences (6 credit hours)</b> Choose <b>one</b> option:						
<u>Social and Behavioral Sciences Option</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> Choose <b>two</b> courses from the Social and Behavioral Sciences Core course list.</li> </ul>		<u>Social and Behavioral Sciences + Oral Communication Option</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> Choose <b>one</b> course from the Social &amp; Behavioral Sciences Core course list.</li> <li><input type="checkbox"/> Choose <b>one</b> course from the Communication Core Course list.</li> </ul>				
<b>Natural Sciences (8-10 credit hours)</b> Choose <b>one</b> option:						
<u>Natural Sciences Option (8 credit hours)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> Choose <b>two</b> lecture/laboratory courses from the Natural Sciences Core course list.</li> </ul>		<u>Natural Sciences + Modern and Classical Language Option (10 credit hours)</u> <ul style="list-style-type: none"> <li><input type="checkbox"/> Choose <b>one</b> lecture/laboratory course from the Natural Sciences Core course list.</li> <li><input type="checkbox"/> Choose <b>two</b> sequential courses in a language. Courses must be completed in order</li> </ul>				(Included in major)
<b>Mathematics (3 credit hours)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Choose <b>one</b> course from the Mathematics Core Course list.</li> </ul>						(Included in major)
<b>Fine Arts (3 credit hours)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Choose <b>one</b> course from the Fine Arts Core Course list.</li> </ul>						
<b>Freshman Symposium (1 credit hour)</b> Required for all incoming freshmen.						
<ul style="list-style-type: none"> <li><input type="checkbox"/> UNIV 1111 Freshman Symposium</li> </ul>						

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<b>Major Requirements (75 credit hours)</b>		Completed	Needed
<b>Biology (24 credit hours)</b>			
<input type="checkbox"/> BIOL 1351/1151 – Introduction to Population Biology and Evolution w/ lab <input type="checkbox"/> BIOL 1352/1152 – Introduction to Cell and Molecular Biology w/ lab <input type="checkbox"/> BIOL 3321/3121 – Genetics w/ lab (BIOL 1351/1151/1352/1152, CHEM 1341/1141/1342/1142) <input type="checkbox"/> BIOL 3351/3151 – Molecular Biology/Advanced Molecular Biology Lab (BIOL 3321/3121; CHEM 2343) <input type="checkbox"/> BIOL 3461 – Cell Biology w/ lab (BIOL 3321) <input type="checkbox"/> BIOL 4332 – Evolution (Capstone) (BIOL 3321, senior standing) <input type="checkbox"/> BIOL 3111 – Junior/Senior Seminar (BIOL 3321 and junior or senior standing)			
<b>Bioinformatics (4 credit hours)</b>			
<input type="checkbox"/> BIOL 2111 – Bioinformatics Colloquium I (BIOL 1351/1151, pre-req/co-req BIOL 1352/1152) <input type="checkbox"/> BIOL 3310 – Bioinformatics (BIOL 2111, 3321, 3351)			
<b>Additional Biology (3 credit hours) Choose one from the following: (Pre-req BIOL 3321 Genetics)</b>			
<input type="checkbox"/> BIOL 4321 – Nucleic Acids <input type="checkbox"/> BIOL 3362 – Cancer Biology <input type="checkbox"/> BIOL 4336 – Cells, Genes and Molecules (BIOL 3321, 3334, 3351, 3461 or 3362) <input type="checkbox"/> BIOL 4393 – Special Topics in Biology			
<b>Chemistry (12 credit hours) Must take in order:</b>			
<input type="checkbox"/> CHEM 1341/1141 General Chemistry I and laboratory <input type="checkbox"/> CHEM 1342/1142 General Chemistry II and laboratory <input type="checkbox"/> CHEM 2343/2143 Organic Chemistry I and laboratory			
<b>Mathematics (15 credit hours)</b>			
<input type="checkbox"/> MATH 1431 – Calculus I <input type="checkbox"/> MATH 1432 – Calculus II (MATH 1431) <input type="checkbox"/> MATH 3360 – Discrete Mathematics (MATH 1431) <input type="checkbox"/> MATH 3450/1050 – Biostatistics I (6 credit hours in mathematics or science)			
<b>Computer Science (13 credit hours)</b>			
<input type="checkbox"/> COMSC 1450 – Introduction to Programming and Computer Science <input type="checkbox"/> COMSC 1351 – Object-Oriented Programming (COMSC 1450; MATH 1431) <input type="checkbox"/> COMSC 2351 – Data Structures (COMSC 1351; MATH 1432) <input type="checkbox"/> COMSC 3375 – Database Systems (COMSC 1450; junior standing)			
<b>Physics (4 credit hours) Choose one of the following.</b>			
<input type="checkbox"/> PHYS 1331/1111 General Physics I w/ lab	<input type="checkbox"/> PHYS 2333/2111 University Physics I w/ lab (Math 1431)		

<b>Electives</b>		Completed	Needed
<b>Electives to reach the 126 hour minimum to graduate (5 hours)</b>			
<i>This major contains 32 upper-division (3000 or 4000 level) credit hours. 36 upper-division credit hours are required for graduation. Consider additional upper-division options in the core or electives.</i>			

<b>Totals</b>		Completed	Needed
<b>Total undergraduate hours (126 minimum):</b>			

MINIMUM TOTAL: 126+

**\*\*Note:** All biology students must complete a Major Field Test prior to graduation.\*\*