

# Bachelor of Science in Biology

2021-2022 Catalog

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

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

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

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

### Overall Requirements to Graduate

- 120+ 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)



UNIVERSITY OF  
ST. THOMAS

Credit Hour Breakdown	
Hours completed	
Hours in progress	
Core hours needed	
Major hours needed	
(Minor hours needed)	
(Other hours needed)	
Elective hours needed	
TOTAL HOURS (120+)	

Core Curriculum (46 hours)			Complete	Needed
<b>Theology (9 credit hours)</b> Must take in order. (Pre-req: Phil 1311 or 1315/3315)				
<input type="checkbox"/> THEO 1301/3301 Intro to Sacred Scriptures <input type="checkbox"/> THEO 2301/3311 Teachings of the Catholic Church <input type="checkbox"/> THEO 3349 Christ and the Moral Life (Phil 2314 or 2316/3316)	<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> <input type="checkbox"/> PHIL 1311 Philosophy of the Human Person <input type="checkbox"/> PHIL 2314 Ethics <input type="checkbox"/> PHIL 3313 Metaphysics	<u>Historical Sequence (must take in order)</u> <input type="checkbox"/> PHIL 1315/3315 Ancient Philosophy <input type="checkbox"/> PHIL 2316/3316 Medieval Philosophy <input type="checkbox"/> PHIL 3317 – Modern Philosophy			
<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.				
<input type="checkbox"/> ENGL 1341 The Classical Tradition: Literature & Composition I <input type="checkbox"/> ENGL 1342 The Middle Ages: Literature & Composition II <input type="checkbox"/> ENGL 2312 The Modern World: Literature & Composition III		<b>*Students with transfer credit:</b> 3 transfer credits: <i>Take 1341/1342 (left)</i> 6 transfer credits: <i>Take ENGL 3312 (below)</i> <input type="checkbox"/> ENGL 3312 <i>Perspectives in World Lit.</i>		
<b>History (6 credit hours)</b> Choose <b>one</b> pair of courses:				
<u>World History</u> <input type="checkbox"/> HIST 1335 World Community I <input type="checkbox"/> HIST 1336 World Community II	<u>U.S. History</u> <input type="checkbox"/> HIST 2333 U.S. History to 1877 <input type="checkbox"/> HIST 2334 U.S. History since 1877			
<b>Social and Behavioral Sciences (6 credit hours)</b> Choose <b>one</b> option:				
<u>Social and Behavioral Sciences Option</u> <input type="checkbox"/> Choose <b>two</b> courses from the Social and Behavioral Sciences Core course list.	<u>Social and Behavioral Sciences + Oral Communication Option</u> <input type="checkbox"/> Choose <b>one</b> course from the Social & Behavioral Sciences Core course list. <input type="checkbox"/> Choose <b>one</b> course from the Communication Core Course list.			
<b>Natural Sciences (8-10 credit hours)</b> Choose <b>one</b> option:				
<u>Natural Sciences Option (8 credit hours)</u> <input type="checkbox"/> Choose <b>two</b> lecture/laboratory courses from the Natural Sciences Core course list.	<u>Natural Sciences + Modern and Classical Language Option (10 credit hours)</u> <input type="checkbox"/> Choose <b>one</b> lecture/laboratory course from the Natural Sciences Core course list. <input type="checkbox"/> Choose <b>two</b> sequential courses in a language. Courses must be completed in order		(Included in major)	
<b>Mathematics (3 credit hours)</b>				
<input type="checkbox"/> Choose <b>one</b> course from the Mathematics Core Course list.			(Included in major)	
<b>Fine Arts (3 credit hours)</b>				
<input type="checkbox"/> Choose <b>one</b> course from the Fine Arts Core Course list.				
<b>Freshman Symposium (1 credit hour)</b> Required for all incoming freshmen.				
<input type="checkbox"/> UNIV 1111 Freshman Symposium				

Last updated on November 3, 2021

# Bachelor of Science in Biology

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Major Requirements (66 credit hours)	Complete	Needed		
<b>Biology (21 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 & Genetics & Molecular Biology Lab (BIOL 1351/1151/1352/1152, CHEM 1341/1141/1342/1142) <input type="checkbox"/> BIOL 3331 – Ecology* or BIOL 3341 Marine Biology*(the course used for this requirement cannot also count in the section below, but the other choice may be taken and used below) <input type="checkbox"/> BIOL/CHEM 3334 – Biochemistry (CHEM 2343/2143) <input type="checkbox"/> BIOL 4332 – Evolution (Capstone) (BIOL 3321, senior standing)				
<b>Biology Research Methods (3 credit hours)</b>				
<input type="checkbox"/> BIOL 3194 Introduction to Biological Research (BIOL 1351/1151/1352/1152, CHEM 1341/1141/1342/1142) <input type="checkbox"/> BIOL 4194 Guided Biological Research (BIOL 3194 and 50 independent lab research hours) <input type="checkbox"/> BIOL 4195 Biology Senior Thesis (BIOL 4194 and 100 independent lab research hours)				
<b>Additional Upper Division Biology Courses (22 credit hours)</b> Choose <b>six lecture</b> courses and <b>4 lab</b> courses. For 3 HR courses with 1 HR lab it is recommended to take them together. 4 HR courses include the lecture and the lab. *Courses marked with an asterisk require completion of BIOL 3321 Genetics)				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>3 HR Lecture Courses:</b>  <input type="checkbox"/> BIOL 3331 Ecology  <input type="checkbox"/> BIOL 3345 Physiology (BIOL 1352/1152, CHEM 1342/1142)  <input type="checkbox"/> BIOL 3333 Microbiology*  <input type="checkbox"/> BIOL 3339 Neuroscience*  <input type="checkbox"/> BIOL 3341 Marine Biology*  <input type="checkbox"/> BIOL 3351 Molecular Biology*  <input type="checkbox"/> BIOL 3362 Cancer Biology*  <input type="checkbox"/> BIOL 4321 Nucleic Acids*  <input type="checkbox"/> BIOL 4336 Cells, Genes &amp; Molecules (BIOL 3334, 3351)  <input type="checkbox"/> BIOL 4354 Pathogenic Microbiology*                 </td> <td style="width: 50%; vertical-align: top;"> <b>1 HR Lab Courses:</b>  <input type="checkbox"/> BIOL 3121 Genetics &amp; Molecular Lab (BIOL 3321)  <input type="checkbox"/> BIOL 3133 Microbiology Lab*  <input type="checkbox"/> BIOL/CHEM 3134 Biochemistry Lab (CHEM 2343/2143)  <input type="checkbox"/> BIOL 3151 Advanced Molecular Biology Lab*(BIOL 3334)  <input type="checkbox"/> BIOL 4154 Pathogenic Microbiology Lab*                 </td> </tr> </table>	<b>3 HR Lecture Courses:</b> <input type="checkbox"/> BIOL 3331 Ecology <input type="checkbox"/> BIOL 3345 Physiology (BIOL 1352/1152, CHEM 1342/1142) <input type="checkbox"/> BIOL 3333 Microbiology* <input type="checkbox"/> BIOL 3339 Neuroscience* <input type="checkbox"/> BIOL 3341 Marine Biology* <input type="checkbox"/> BIOL 3351 Molecular Biology* <input type="checkbox"/> BIOL 3362 Cancer Biology* <input type="checkbox"/> BIOL 4321 Nucleic Acids* <input type="checkbox"/> BIOL 4336 Cells, Genes & Molecules (BIOL 3334, 3351) <input type="checkbox"/> BIOL 4354 Pathogenic Microbiology*	<b>1 HR Lab Courses:</b> <input type="checkbox"/> BIOL 3121 Genetics & Molecular Lab (BIOL 3321) <input type="checkbox"/> BIOL 3133 Microbiology Lab* <input type="checkbox"/> BIOL/CHEM 3134 Biochemistry Lab (CHEM 2343/2143) <input type="checkbox"/> BIOL 3151 Advanced Molecular Biology Lab*(BIOL 3334) <input type="checkbox"/> BIOL 4154 Pathogenic Microbiology Lab*		
<b>3 HR Lecture Courses:</b> <input type="checkbox"/> BIOL 3331 Ecology <input type="checkbox"/> BIOL 3345 Physiology (BIOL 1352/1152, CHEM 1342/1142) <input type="checkbox"/> BIOL 3333 Microbiology* <input type="checkbox"/> BIOL 3339 Neuroscience* <input type="checkbox"/> BIOL 3341 Marine Biology* <input type="checkbox"/> BIOL 3351 Molecular Biology* <input type="checkbox"/> BIOL 3362 Cancer Biology* <input type="checkbox"/> BIOL 4321 Nucleic Acids* <input type="checkbox"/> BIOL 4336 Cells, Genes & Molecules (BIOL 3334, 3351) <input type="checkbox"/> BIOL 4354 Pathogenic Microbiology*	<b>1 HR Lab Courses:</b> <input type="checkbox"/> BIOL 3121 Genetics & Molecular Lab (BIOL 3321) <input type="checkbox"/> BIOL 3133 Microbiology Lab* <input type="checkbox"/> BIOL/CHEM 3134 Biochemistry Lab (CHEM 2343/2143) <input type="checkbox"/> BIOL 3151 Advanced Molecular Biology Lab*(BIOL 3334) <input type="checkbox"/> BIOL 4154 Pathogenic Microbiology Lab*			
<b>4 HR Lecture Courses:</b> <input type="checkbox"/> BIOL 3448 Comparative Anatomy & Lab* <input type="checkbox"/> BIOL 3461/3061 Cell Biology & Lab* <input type="checkbox"/> BIOL 4449 Immunology & Lab*				
<b>Chemistry (12 credit hours)</b> Must take in order:				
<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 (CHEM 1342/1142)				
<b>Physics (4 credit hours)</b> Choose <b>one</b> of the following.				
<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>Mathematics (4 credit hours)</b> Choose <b>one</b> from the following.				
<input type="checkbox"/> MATH 1431 Calculus I (MATH 1331 with a C or better) <input type="checkbox"/> MATH 3450/1050 Biostatistics I (6 credit hours math or science)				

Electives	Completed	Needed
<b>Electives to reach the 120 hour minimum to graduate (8 hours)</b>		
<i>This major contains 17-29 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>		
Totals	Completed	Needed
<b>Total undergraduate hours (120 minimum):</b>		

MINIMUM TOTAL: 120+

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

Last updated on November 3, 2021

www.StThom.edu | 713-831-7227 | advising@StThom.edu