

Student: _____

ID#: _____

Advisor: _____

Bachelor of Science in Applied Mathematics 2019-2020 Catalog

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



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
Theology (9 credit hours) 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)	Students with 30-59 transfer hrs: 6-9 hours THEO 6-9 hours PHIL 3 hours Synthesis <i>(18 hours total)</i>	Students with 60+ transfer hrs: 6 hours THEO 6 hours PHIL NO synthesis <i>(12 hours total)</i>	
Philosophy (9 credit hours) 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		
Synthesis Course (3 credit Hours)			
Choose one synthesis course from the Synthesis Course List.			
English (9 credit hours)* 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	*Students with transfer credit: 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>		
History (6 credit hours) Choose one 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		
Social and Behavioral Sciences (6 credit hours) Choose one option:			
<u>Social and Behavioral Sciences Option</u> <input type="checkbox"/> Choose two courses from the Social and Behavioral Sciences Core course list.	<u>Social and Behavioral Sciences + Oral Communication Option</u> <input type="checkbox"/> Choose one course from the Social & Behavioral Sciences Core course list. <input type="checkbox"/> Choose one course from the Communication Core Course list.		
Natural Sciences (8-10 credit hours) Choose one option:			
<u>Natural Sciences Option (8 credit hours)</u> <input type="checkbox"/> Choose two 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 one lecture/laboratory course from the Natural Sciences Core course list. <input type="checkbox"/> Choose two sequential courses in a language. Courses must be completed in order		(Included in major)
Mathematics (3 credit hours)			
<input type="checkbox"/> Choose one course from the Mathematics Core Course list.			(Included in major)
Fine Arts (3 credit hours)			
<input type="checkbox"/> Choose one course from the Fine Arts Core Course list.			
Freshman Symposium (1 credit hour) Required for all incoming freshmen.			
<input type="checkbox"/> UNIV 1111 Freshman Symposium			

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Major Requirements (51-52 credit hours)	Completed	Needed										
Mathematics Required Courses (30 credit hours)												
<input type="checkbox"/> MATH 1431 – Calculus I (MATH 1331 with a C or better) <input type="checkbox"/> MATH 1432 – Calculus II (MATH 1431 with a C or better) <input type="checkbox"/> MATH 2431 – Calculus III (MATH 1432 with a C or better) <input type="checkbox"/> MATH 2343 – Differential Equations I (MATH 1432 with a C or better) <input type="checkbox"/> MATH 3334 – Linear Algebra I (MATH 1432 with a C or better) <input type="checkbox"/> MATH 3360 – Discrete Mathematics (MATH 1431 with a C or better) <input type="checkbox"/> MATH 4331 – Real Analysis I or MATH 4338 – Abstract Algebra I <input type="checkbox"/> MATH 4344 – Mathematical Modeling <input type="checkbox"/> MATH 4370 – Capstone Project												
Mathematics Electives (9-10 credit hours) Choose three of the following.												
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> MATH 3335 – A First Course in Probability</td> <td style="width: 50%; border: none;"><input type="checkbox"/> MATH 3371 – Introduction to Data Analysis (F)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> MATH 3339 – Numerical Analysis (S)</td> <td style="border: none;"><input type="checkbox"/> MATH 4336 – Complex Analysis (F)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> MATH 3343 – Differential Equations II</td> <td style="border: none;"><input type="checkbox"/> MATH 4343 – Partial Differential Equations</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> MATH 3450 – Biostatistics I</td> <td style="border: none;"><input type="checkbox"/> MATH 4381 – Advanced Topics in Applied Statistics</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> MATH 4350 – Biostatistics II</td> <td></td> </tr> </table>	<input type="checkbox"/> MATH 3335 – A First Course in Probability	<input type="checkbox"/> MATH 3371 – Introduction to Data Analysis (F)	<input type="checkbox"/> MATH 3339 – Numerical Analysis (S)	<input type="checkbox"/> MATH 4336 – Complex Analysis (F)	<input type="checkbox"/> MATH 3343 – Differential Equations II	<input type="checkbox"/> MATH 4343 – Partial Differential Equations	<input type="checkbox"/> MATH 3450 – Biostatistics I	<input type="checkbox"/> MATH 4381 – Advanced Topics in Applied Statistics	<input type="checkbox"/> MATH 4350 – Biostatistics II			
<input type="checkbox"/> MATH 3335 – A First Course in Probability	<input type="checkbox"/> MATH 3371 – Introduction to Data Analysis (F)											
<input type="checkbox"/> MATH 3339 – Numerical Analysis (S)	<input type="checkbox"/> MATH 4336 – Complex Analysis (F)											
<input type="checkbox"/> MATH 3343 – Differential Equations II	<input type="checkbox"/> MATH 4343 – Partial Differential Equations											
<input type="checkbox"/> MATH 3450 – Biostatistics I	<input type="checkbox"/> MATH 4381 – Advanced Topics in Applied Statistics											
<input type="checkbox"/> MATH 4350 – Biostatistics II												
Computer Science (4 credit hours) Choose one of the following.												
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> COMSC 1450 – Introduction to Programming and Computer Science</td> <td style="width: 50%; border: none;"><input type="checkbox"/> COMSC 1460 – Computing for Engineering and Science</td> </tr> </table>	<input type="checkbox"/> COMSC 1450 – Introduction to Programming and Computer Science	<input type="checkbox"/> COMSC 1460 – Computing for Engineering and Science										
<input type="checkbox"/> COMSC 1450 – Introduction to Programming and Computer Science	<input type="checkbox"/> COMSC 1460 – Computing for Engineering and Science											
Science (8 credit hours) Choose one pair of courses.												
<input type="checkbox"/> CHEM 1341/1141 – General Chemistry I w/ lab <input type="checkbox"/> CHEM 1342/1142 – General Chemistry II w/ lab (CHEM 1341/1141 with a C or better) - OR - <input type="checkbox"/> BIOL 1351/1151 – Intro to Population Biology & Evolution/lab <input type="checkbox"/> BIOL 1352/1152 – Intro to Cell & Molecular Biology/lab (BIOL 1351/1151 with a C or better) -OR - <input type="checkbox"/> PHYS 2333/2111 – University Physics I/lab (Math 1431) <input type="checkbox"/> PHYS 2334/2112 – University Physics II/lab (PHYS 2333/2111 with a C or better)												
Electives	Completed	Needed										
Electives to reach the 120 hour minimum to graduate (22- 23 hours)												
<i>This major contains 33+ 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										
Total undergraduate hours (120 minimum):												

MINIMUM TOTAL: 120+