

Student: _____

ID#: _____

Advisor: _____

Bachelor of Science in Engineering Physics 2019-2020 Catalog

DATE: ____/____/____



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+)	

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)

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 (recommended by advisor) 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. <input type="checkbox"/> POSC 2331 is recommended	<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. <i>ARTHS 3352 Survey of Art II is recommended</i>				
Freshman Symposium (1 credit hour) Required for all incoming freshmen.				
<input type="checkbox"/> UNIV 1111 Freshman Symposium				

Last updated on August 28, 2019

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Major Requirements (74 credit hours)	Completed	Needed
Physics Coursework (44 credit hours)		
<input type="checkbox"/> PHYS 1314 – Fundamentals of Computer-Aided Design <input type="checkbox"/> PHYS 2333/2111 – University Physics I w/ lab (MATH 1431 co-req or pre-req) <input type="checkbox"/> PHYS 2334/2112 – University Physics II w/ lab (PHYS 2333/2111, MATH 1432 co-req or pre-req) <input type="checkbox"/> PHYS 3337/3137 – Modern Physics with Lab (PHYS 2334/2112) <input type="checkbox"/> PHYS 3341 – Mechanics I [Statics] (MATH 2431, PHYS 2333) <input type="checkbox"/> PHYS 3342 – Mechanics II [Dynamics] (PHYS 3341) <input type="checkbox"/> PHYS 3333/3133 – Electrical Circuits with Laboratory (PHYS 3343, PHYS 2334/2112) <input type="checkbox"/> PHYS 3343 – Mathematical Methods for Physics and Engineering (PHYS 2334, MATH 1432) <input type="checkbox"/> PHYS 3130 – Junior/Senior Seminar <input type="checkbox"/> PHYS 3336/CHEM 4162 – Thermodynamics w/ Lab (CHEM 1342/1142; MATH 1432; PHYS 2334) <input type="checkbox"/> PHYS 3138 – Advanced Laboratory (PHYS 3137) <input type="checkbox"/> PHYS 4333 – Electromagnetism (PHYS 3337, PHYS 3343 and either PHYS 3342 or PHYS 3338) <input type="checkbox"/> PHYS 4334 – Quantum Mechanics (PHYS 3337, PHYS 3343 and either PHYS 3342 or PHYS 3338) <input type="checkbox"/> PHYS 4320/4120 – Engineering Design Capstone w/ Lab (PHYS 1314, PHYS 4320)		
Physics electives (3 credit hours)		
Complete 3 physics elective hours. Consult with Academic Advisor for options.		
Chemistry (8 credit hours) 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 (CHEM 1341/1141)		
Mathematics (12 credit hours) Must take in order.		
<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)		
Computer Science (4 credit hours)		
<input type="checkbox"/> COMSC 1460 – Computer Programming for Science & Engineering		
English (3 credit hours)		
<input type="checkbox"/> ENGL 4393 – Technical Writing		

Electives	Completed	Needed
Electives to reach the 120 hour minimum to graduate (0 hours)		

Totals	Completed	Needed
Total undergraduate hours (120 minimum):		

MINIMUM TOTAL: 120+

Admission to all Physics courses with prerequisites require a “C” or better in those prerequisites.