

BS Mechanical Engineering - University of St. Thomas Normandale Community College Plus 2 Plan of Study

Students who complete the following courses at Normandale Community College are in a good position to complete a Bachelor of Science degree in Mechanical Engineering with two more years of study at the University of St. Thomas.

Courses Taken at Normandale Community College – Major Requirements			
Normandale Course #	Normandale Course Title	Cr.	St. Thomas Course Equivalence
ENGR 1020	Introduction to Engrg. Design	4	ENGR 100
ENGR 2235	Statics	3	ENGR 220
ENGR 2331	Deformable Bodies	3	ENGR 221 after completion of 1 cr. lab at UST
ENGR 2236	Dynamics	3	ENGR 322 after completion of 1 cr. lab at UST
ENGR 2231	Thermodynamics	3	ENGR 381 after completion of 1 cr. Lab at UST
CSCI 1113 (or CSCI 1111)	Introduction to C/C++ for Engrs.	4	CISC 130
MATH 1510	Calculus 1	5	MATH 113
MATH 1520	Calculus 2	5	MATH 114
MATH 2510	Calculus 3: Multivariable Calculus	5	MATH 200
MATH 2520	Differential Eqns. & Lin. Algebra	5	MATH 210
PHYS 1121	Physics I for Scientists and Engrs.	5	PHYS 211
PHYS 1122	Physics II for Scientists and Engrs.	5	PHYS 212
CHEM 1061	Principles of Chemistry	5	CHEM 109
Total Credits		55	

Courses Taken at Normandale – UST Core Curriculum Requirements		
Core Requirement	Credits	Normandale Course Options
Language and Culture	0-10	Normandale Course Transfer Guides including St. Thomas Core Curriculum and MnTC Goal Areas are available at: https://www.stthomas.edu/admissions/undergraduate/transfer/community-college-course-guides/index.html
Literature and Writing	4	
Social Analysis	3-4	
Fine Arts	3	
Historical Studies	4	
Total Credits	14-25	

Students are not required to complete all the coursework on page 1 before transferring to the University of St. Thomas. We invite prospective students to tour the School of Engineering and meet with faculty and financial aid staff to determine the best time for their transfer.

However, if a student does complete all the coursework on page 1, the remaining courses at the University of St. Thomas would require two years of full-time study. Courses are listed below, and a sample 2-year plan of study is provided on page 3.

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Courses Taken at University of St. Thomas – Major Requirements		
UST Course #	University of St. Thomas Course Title	Credits
ENGR 255	Fabrication Lab (complete before or concurrent with ENGR 320)	0
ENGR 170	Mechanical Engineering Graphics	2
ENGR 221	Mechanics of Materials – Lab After Transfer (LAT)	1
ENGR 320	Machine Design and Synthesis	4
ENGR 322	Dynamics – Lab After Transfer (LAT)	1
ENGR 350	Introduction to Electronics	4
ENGR 361	Engineering Materials	4
ENGR 371	Manufacturing Processes and Statistical Control	4
ENGR 381	Thermodynamics – Lab After Transfer (LAT)	1
ENGR 383	Fluid Mechanics	4
ENGR 384	Heat Transfer	4
ENGR 410	Control Systems and Automation	4
ENGR 480	Engineering Design Clinic I	4
ENGR 481	Engineering Design Clinic II	4
ENGR xxx	Engineering Elective	4
Total Credits		45

Courses Taken at University of St. Thomas – Core Requirements	
Core Requirement	Credits
Philosophy and Theology	12
Integrations in the Humanities	8
Total Credits	20
<p>Note: Some courses must also satisfy flagged requirements (DISJ, Global, WAC). Students with fewer than 60 credits at transfer must also complete First Year Experience Requirements. For more information on the Core Curriculum, see: https://www.stthomas.edu/core-curriculum/courses/index.html</p>	

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Proposed Schedule for Final Two Years at University of St. Thomas						
	Fall	Cr	Spring	Cr	Summer / J-term	Cr
1 st Yr	ENGR 371 Manufacturing Processes & Statistical Control	4	ENGR 320** Machine Design & Synthesis (LAB)	4	CORE Requirement	4
	ENGR 170 Mechanical Engineering Graphics	2	ENGR 350 Introduction to Electronics (LAB)	4		
	ENGR 381 Thermodynamics – LAT	1	ENGR 383 Fluid Mechanics (LAB)	4		
	ENGR 221 Mechanics of Materials – LAT	1	ENGR 322 Dynamics – LAT	1		
	ENGR 255 Fabrication Skills (Lab Certification)	0	CORE Requirement	4		
	CORE Requirement	4				
	Total Credits	12	Total Credits	17	Total Credits	4
2 nd Yr	ENGR 480 Engineering Design Clinic I	4	ENGR 481 Engineering Design Clinic II	4		
	ENGR 410 Control Systems and Automation (LAB)	4	ENGR 384 Heat Transfer (LAB)	4		
	ENGR 361 Engineering Materials (LAB)	4	ENGR XXX Engineering Elective	4		
	CORE Requirement	4	CORE Requirement	4		
		Total Credits	16	Total Credits	16	

** ENGR 255 must be taken before ENGR 320 or concurrently in the first half of the semester with ENGR 320.

Program Credits	
Major Requirements completed at Normandale	55
Core Requirements completed at Normandale*	14-25
Major Requirements completed at University of St Thomas	45
Core Requirements completed at University of St Thomas	20
Total Credits	134 - 145

*The number of credits is dependent upon the student's proficiency in a second language upon entering the program.

This guide is accurate to the best of our knowledge and ability at the time of publication but is subject to change.