

## BS Mechanical Engineering - University of St. Thomas Inver Hills Community College Plus 2 Plan of Study

Students who complete the following courses at Inver Hills 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 Inver Hills Community College – Major Requirements			
Inver Hills Course #	Inver Hills Course Title	Cr.	St. Thomas Course Equivalence
ENGR 1000	Orientation to Engineering	1	ENGR 100
ENGR 2020	Statics	3	ENGR 220
ENGR 2024	Mechanics of Materials	3	ENGR 221 after completion of 1 cr. lab at UST
ENGR 2025	Dynamics	3	ENGR 322 after completion of 1 cr. lab at UST
ENGR 2000	Thermodynamics	3	ENGR 381 after completion of 1 cr. Lab at UST
CS 1119	Computer Programming with C++	4	CISC 130
MATH 1133	Calculus I	5	MATH 113
MATH 1134	Calculus II	5	MATH 114
MATH 2219	Multi-Variable Calculus	5	MATH 200
MATH 2222	Intro to Differential Equations	3	MATH 210
PHYS 1081	Calculus Based Physics I	5	PHYS 211
PHYS 1082	Calculus Based Physics II	5	PHYS 212
CHEM 1061	Principles of Chemistry I	5	CHEM 109
<b>Total Credits</b>		<b>50</b>	

Courses Taken at Inver Hills – UST Core Curriculum Requirements		
Core Requirement	Credits	Inver Hills Course Options
Language and Culture	0-10	To find courses that satisfy the University of St. Thomas <b>New UG Core</b> at your institution, use the “Lookup By Core Area” option in our online Transfer Credit Tool. <a href="https://www.stthomas.edu/admissions/undergraduate/transfer-credit-tool/index.html">https://www.stthomas.edu/admissions/undergraduate/transfer-credit-tool/index.html</a>
Literature and Writing	4	
Social Analysis	3	
Fine Arts	3	
Historical Studies	4	
<b>Total Credits</b>	<b>14-24</b>	

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
<b>Total Credits</b>		<b>45</b>

Courses Taken at University of St. Thomas – Core Requirements	
Core Requirement	Credits
Philosophy and Theology	12
Integrations in the Humanities	8
<b>Total Credits</b>	<b>20</b>
<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: <a href="https://www.stthomas.edu/academics/core-curriculum/courses/index.html">https://www.stthomas.edu/academics/core-curriculum/courses/index.html</a></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 <sup>st</sup> Yr	ENGR 371 Manufacturing Processes & Statistical Control	4	ENGR 320** Machine Design & Synthesis (LAB)	4	<b>CORE</b> 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		
	CORE Requirement	4	CORE Requirement	4		
	ENGR 255 Fabrication Skills (Lab Certification)	0				
	<b>Total Credits</b>		<b>12</b>	<b>Total Credits</b>	<b>17</b>	<b>Total Credits</b>
2 <sup>nd</sup> 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		
	<b>Total Credits</b>		<b>16</b>	<b>Total Credits</b>	<b>16</b>	

\*\*ENGR 255 must be taken before ENGR 320 or concurrently with ENGR 320.

Program Credits	
Major Requirements completed at Inver Hills	50
Core Requirements completed at Inver Hills*	14-24
Major Requirements completed at University of St Thomas	45
Core Requirements completed at University of St Thomas	20
<b>Total Credits</b>	<b>129-139</b>

\*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.*