

BS Electrical Engineering - University of St. Thomas Inver Hills Community College Plus 2.5 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 Electrical Engineering with 2 ½ 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 150
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	Multivariable Calculus	4	MATH 200
MATH 2222	Intro to Differential Equations	3	MATH 210
PHYS 1081	Calculus Based Physics I	5	PHYS 111
PHYS 1082	Calculus Based Physics II	5	PHYS 112
Total Credits		32	

Courses Taken at Inver Hills – Core Curriculum Requirements***		
Core Requirement	Credits	Inver Hills Course Options
Modern and Classical Language*	0-15	ASL1103, FREN2201, SPAN2201
Literature and Writing – Course 1	4	ENG1108, ENG1140
Literature and Writing – Course 2	3-4	ENG1180, ENG2235, ENG2237, ENG2238, ENG2239, ENG2240, ENG 2250, ENG2252
Social Sciences**	3	ECON1105, ECON1106, GEOG1100 ^{HD} , GEOG1115 ^{HD} , POLS1101 ^{HD} , PSYC1101, PSCY1201, SOC1100 ^{HD} , SOC1127 ^{HD}
Fine Arts**	3	ART1100, ART1106, ART1107, ART1109 ^{HD} , ART2300, MUSC1140, MUSC1141, MUSC1144, THTR1101, THTR1103, THTR1105, THTR 1107
History	4	HIST1106, HIST1107, HIST1114, HIST1115
Total Credits	17-33	
NOTES: *Students who have a strong background in a language other than English may place out of one or more semesters of St. Thomas' Modern and Classical Language requirement if they demonstrate adequate proficiency on a placement exam. **One of the courses labeled HD can be selected to simultaneously satisfy UST's Human Diversity requirement ***UST/Inver Hills Course transfer guides including UST Core Curriculum and MnTC Goal Areas are available at https://www.stthomas.edu/tr/credit/communitycollegecourseplans/		

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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 2 ½ years of full-time study. Courses are listed below, and a sample plan of study is provided on page 3.

Courses Taken at University of St. Thomas – Major Requirements		
UST Course #	University of St. Thomas Course Title	Credits
ENGR 230	Digital Design	4
ENGR 240	Circuit Analysis	4
ENGR 331	Designing with Microprocessors	4
ENGR 340	Signals & Systems	4
ENGR 342	Electromagnetic Fields and Waves	4
ENGR 345	Electronics I	4
ENGR 346	Electronics II	4
ENGR 410	Control Systems and Automation	4
XXX xxx	Technical Electives (see UST Catalog)	16
ENGR 480	Engineering Design Clinic I	4
ENGR 481	Engineering Design Clinic II	4
PHYS 225	Modern Physics	4
PHYS 341	Electricity & Magnetism	4
Total Credits		64

Courses Taken at University of St. Thomas – Core Requirements		
Core Requirement	UST Course Options	Credits
Faith and Catholic Traditions – Course 1	THEO 101	4
Faith and Catholic Traditions – Course 2	THEO 2XX or THEO 3XX	4
Faith and Catholic Traditions – Course 3	THEO 4XX	4
Moral and Philosophical Reasoning – Course 1	PHIL 115	4
Moral and Philosophical Reasoning – Course 2	PHIL 214 or PHIL 215	4
Total Credits		20

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Proposed Schedule for Final 2 ½ Years at University of St. Thomas						
	Fall	Cr	Spring	Cr	Summer / J-term	Cr
1 st Yr			ENGR 240 Circuit Analysis	4	PHIL 115 Philosophy of the Human Person	4
			PHYS 225 Modern Physics (Spring Only)	4		
			THEO 101 The Christian Theological Tradition	4		
			ENGR 230 Digital Design	4		
			Total Credits	16		
2 nd Yr	XXX Technical Elective	4	ENGR 331 Designing with Microprocessors	4		
	ENGR 345 Electronics I (Fall only)	4	ENGR 410 Control Systems and Automation	4		
	XXX Technical Elective	4	THEO 2XX or 3XX**	4		
	ENGR 340 Signals & Systems (Fall only)	4	ENGR 346 Electronics II (Spring only)	4		
		Total Credits	16	Total Credits	16	
3 rd Yr	ENGR 480 Engineering Design Clinic I	4	ENGR 481 Engineering Design Clinic II	4		
	PHYS 341 Electricity & Magnetism (Fall only)	4	ENGR 342 Electromagnetic Fields & Waves (Spring only)	4		
	XXX Technical Elective	4	XXX Technical Elective	4		
	PHIL 214 Introductory Ethics	4	THEO 4XX**	4		
		Total Credits	16	Total Credits	16	

**If human diversity requirement has not yet been fulfilled, choose a Theology course that will meet the requirement.

Program Credits	
Major Requirements completed at Inver Hills	32
Core Requirements completed at Inver Hills	17 - 33
Major Requirements completed at University of St Thomas	64
Core Requirements completed at University of St Thomas	20
Total Credits	133 – 149

The number of credits to complete a BSEE is dependent 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.