B.S. MECHANICAL ENGINEERING & B.A. GERMAN – Plan of Study

School of Engineering | UNIVERSITY OF St.Thomas

	Fall		Spring
Year 1	**FYEX 100 & LLC** or **2 TBLCs**		
	ENGR 100 (FYE) Intro to Engineering Design		**CISC 130** Intro Programming/Problem Solving in Science
	ENGR 170 Mechanical Engineering Graphics		**PHYS 211** Classical Physics I
	MATH 113 Calculus I		**MATH 114** Calculus II
	GERM 111 Elementary German I		**GERM 112** Elementary German II
	CORE requirement		
	January-term		**Summer**
	CORE requirement		**CORE** requirement
	Fall		**Spring**
Year 2	**ENGR 220** Statics		**ENGR 221** Mechanics of Materials (Lab)
	MATH 200 Multi-Variable Calculus	⟷	**CHEM 109** General Chemistry for Engineers (Lab)
	PHYS 212 Classical Physics II		**GERM 212** Intermediate German II (IH)
	GERM 211 Intermediate German I (GP)		**CORE** requirement
	January-term		**Summer**
	CORE requirement		**CORE** requirement
	Fall		**Spring**
Year 3	**ENGR 255** Fabrication Skills (Lab)		**GERM (1) 3XX or 4XX**
	ENGR 381 Thermodynamics (Lab)	⟷	**ENGR 350** Introduction to Electronics (Lab)
	ENGR 320 Machine Design & Synthesis (Lab)		**ENGR 371** Manufacturing Processes/Statistical Control
	MATH 210 Intro Differential Equations & Systems		**ENGR 322** Dynamics (Lab)
	GERM 300 Intro to German Studies (IH)		**GERM 330** IC Comp. Study/Work Abroad (2 cr.)
	January-term		**Summer**
	CORE requirement		**ENGR 305.03** LOCAL Internship (0 cr.)
	Fall – In Germany		**Spring – In Germany**
Year 4	**GERM (2) 3XX or 4XX** September language course		**ENGR 305.A03** Global Internship (0 cr.)
	GERM (3) 3XX or 4XX		
	GERM (4) 3XX or 4XX		
	ENGR 3xx/4xx Engineering Elective		
	(**CORE** requirement, **GERM**, or **ENGR**)		
	Fall		**Spring**
Year 5	**ENGR 480** Engineering Design Clinic I		**ENGR 481** Engineering Design Clinic II
	ENGR 410 Control Systems & Automation (Lab)	⟷	**ENGR 361** Engineering Materials (Lab)
	ENGR 383 Fluid Mechanics (Lab)		**ENGR 384** Heat Transfer (Lab)
	GERM (5) 3XX or 4XX		**GERM (6) 3XX or 4XX**
	GERM 475 Experiential Learning (2 cr.)		
	January-term		**Summer**
	CORE requirement		

*The plan of study illustrates an example of how all courses may be taken in 5 years without bringing in high school credits.

* Arrows indicate that the two courses can be interchanged

* Declare interest in the International Engineering Program no later than your 4th semester.

* Study Abroad semester: equivalent of 12 credit hours needed (on one transcript/in one US semester)

Engineering Courses: 60 Engineering Credits

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ENGR 100 – Introduction to Engineering (2 credits)
ENGR 170 – Mechanical Engineering Graphics (2 credits)
ENGR 220 – Statics (4 credits)
ENGR 221 – Mechanics of Materials (4 credits)
ENGR 255 – Fabrication Skills (0 credits)
ENGR 320 – Machine Design and Synthesis (4 credits)
ENGR 322 – Dynamics (4 credits)
ENGR 350 – Introduction to Electronics (4 credits)
ENGR 361 – Engineering Materials (4 credits)
ENGR 371 – Manufacturing Processes and Statistical Control (4 credits)
ENGR 381 – Thermodynamics (4 credits)
ENGR 383 – Fluid Mechanics (4 credits)
ENGR 384 – Heat Transfer (4 credits)
ENGR 410 – Control Systems and Automation (4 credits)
ENGR 480 – Engineering Design Clinic I (4 credits)
ENGR 481 – Engineering Design Clinic II (4 credits)
4 Credits of Engineering Electives – Internship in Germany

Allied Requirements: 36 Allied Requirement Credits
MATH 113 – Calculus I (4 credits), MATH 114 – Calculus II (4 credits)
MATH 200 – Multi-Variable Calculus (4 credits)
MATH 210 – Introduction to Differential Equations and Systems (4 credits)
PHYS 211 – Classical Physics I (4 credits), PHYS 212 – Classical Physics II (4 credits)
CHEM 109 – General Chemistry for Engineers (4 credits)
CISC 130 – Introduction to Programming and Problem Solving in the Sciences (4 credits)

German Requirements: 44 German Credits
GERM 111 – Elem. Germ I (4 credits), GERM 112 – Elem. Germ II (4 credits), GERM 211 – Intermediate Germ I (4 credits), GERM 212 – Intermediate German II (4 credits), GERM 300 – Introduction to German Studies (4 credits),
GERM 3XX or 4XX (24 credits)

International Engineering Requirement (IEP)
ENGR 305.03 (3-months local internship) & ENGR 305.A03 (6-months international internship) (0 credits)
Study Abroad 1 semester
One GERMAN for the Professions course and one Technical GERMAN course
GERM 475 Experiential Learning (2 credits)
GERM 330: Intercultural Competence: Prep Study/Work abroad (2 credits)

Core Curriculum Requirements: 45 Core Curriculum Credits (may be satisfied w/ classes listed above).
For info on DISJ, GP, IH, WAC, SW see class-finder, degree evaluation, and talk to the IEP director.
Global Perspectives (GP): GERM 211 and above, study abroad
Integrations in the Humanities (IH) (8 credits): e.g., through GERM 212, 300, 301, 312, 330, 341, 342, 440, or LNGS 370
FYEX Foundation for College Success (1 credit); FYE CommGood/Learning Comm: GERM 111, 211, 300
Signature Work: through ENGR Senior Design Clinic
Literature and Writing (4 credits)
Language & Culture (0-8 credits): GERM 111, GERM 112, GERM 211
Philosophy and Theology (12 credits)
Social Analysis (4 credits)
Fine Arts (4 credits)
Historical Studies (4 credits)