

## B.S. in Mechanical Engineering and B.A. in German – Plan of Study

	<b>Fall</b>	<b>Spring</b>	<b>Summer/ J-Term</b>
<b>Year 1</b>		↔ <b>ENGR 150</b> Introduction to Engineering (LAB)	
	<b>MATH 113</b> Calculus I	<b>MATH 114</b> Calculus II	<b>THEO 101</b> The Christian Theological Tradition
	<b>ENGR 171</b> Engineering Graphics and Design	↔ <b>CISC 130</b> Introduction to Programming and Problem Solving in the Sciences (LAB)	<b>HIST 1XX</b>
	<b>ENGL 121</b> Critical Thinking: Literature & Writing	<b>PHYS 111</b> Classical Physics I	
	<b>GERM 111*</b>	<b>GERM 112*</b>	
<b>Year 2</b>	<b>ENGR 220</b> Statics (LAB)	<b>ENGR 221</b> Mechanics of Materials (LAB)	
	<b>MATH 200</b> Multi-Variable Calculus	<b>ENGL 20X</b> Texts in Conversation	<b>Social Science</b>
	<b>PHYS 112</b> Classical Physics II	<b>CHEM 109</b> General Chemistry for Engineers (LAB)	<b>PHIL 115</b> Philosophy of the Human Person (Sum)
	<b>GERM 211*</b>	<b>GERM 212</b>	
<b>Year 3</b>	<b>MATH 210</b> Introduction to Differential Equations and Systems	<b>ENGR 320</b> Machine Design & Synthesis (LAB)	
	<b>ENGR 371</b> Manufacturing Processes and Statistical Control (LAB)	<b>ENGR 322</b> Dynamics (LAB)	
	<b>GERM 300</b>	<b>GERM (1) 3xx or GERM 4xx</b>	<b>PHIL 214</b> Introductory Ethics
	<b>ENGR 381</b> Thermodynamics (LAB)	<b>ENGR 350</b> Introduction to Electronics (LAB)	<b>THEO 2XX or 3XX**</b>
<b>Year 4</b>	Fine Arts Elective**		
	<b>HIST (European)***</b>	<b>Internship (ENGR XXX</b> Engineering Elective)	<b>Year 4 in Germany</b>
	<b>GERM (2) 3xx or 4xx</b>		
	<b>GERM (3) 3xx or 4xx</b>	<b>GERM (4) 477 or 478</b> Experiential Learning	
<b>Year 5</b>	<b>ENGR 480</b> Engineering Design Clinic I	<b>ENGR 481</b> Engineering Design Clinic II	
	<b>ENGR 361</b> Engineering Materials (LAB)	↔ <b>ENGR 410</b> Control Systems and Automation	<b>THEO 4XX</b>
	<b>ENGR 382</b> Heat Transfer (LAB)	<b>ENGR 383</b> Fluid Mechanics (LAB)	
	<b>GERM (5) 3xx or 4xx</b>	<b>GERM (6) 3xx or 4xx</b>	

\* May place out of one or more semesters if proficient at 3<sup>rd</sup> Level

\*\* May satisfy human diversity requirement

\*\*\* Allied with German – may be satisfied by another course; program director approval necessary

↔ denotes that the two courses can be interchanged

## B.S. in Mechanical Engineering and B.A. in German – Plan of Study

### Complete Course Listing:

#### Engineering Courses:

ENGR 150 – Introduction to Engineering (1 credit)  
ENGR 171 – Engineering Graphics and Design (4 credits)  
ENGR 220 – Statics (4 credits)  
ENGR 221 – Mechanics of Materials (4 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 382 – Heat Transfer (4 credits)  
ENGR 383 – Fluid Mechanics (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

#### **61 Engineering Credits**

#### Allied Requirements:

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 & Systems (4 credits)  
PHYS 111 – Classical Physics I (4 credits)  
PHYS 112 – 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)

#### **32 allied requirement credits**

#### German Courses:

GERM 111 – Beginning German 1 (WTL) (4 credits)  
GERM 112 – Beginning German 2 (WTL) (4 credits)  
GERM 211 – Intermediate German 1 (WTL) (4 credits)  
GERM 212 – Intermediate German 2 (WTL) (4 credits)  
GERM 300 – Introduction to German Studies (WID) (4 credits)  
GERM 311 – Conversation and Composition (may be WI) (4 credits)  
GERM 315 – Influential Ideas in Non-Fictional German (4 credits)  
GERM 320 – Contemporary Germany and Current Events (4 credits)  
GERM 341 – Highlights of German Literature I (may be WI) (4 credits)  
GERM 342 – Highlights of German Literature II (may be WI) (4 credits)  
GERM 345 – Austria: The Golden Age (4 credits)  
GERM 350 – Genre Studies in German Literature (may be taken multiple times) (4 credits)  
GERM 401 – German Poetry (4 credits)  
GERM 410 – German Opera (4 credits)  
GERM 440 – Introduction to Business German and German Business (4 credits)  
GERM 475, 476 – Experiential Learning (2 credits)  
GERM 477, 478 – Experiential Learning (4 credits)  
GERM 483, 484 – Seminar (2 credits)  
GERM 485, 486 – Seminar (4 credits)  
GERM 487, 488 – Topics (2 credits)  
GERM 489, 490 – Topics (4 credits)  
GERM 269, 389, 491 – Research (2 or 4 credits)

GERM 243, 393, 495 – Individual Study (2 or 4 credits)  
**32 GERMAN credits**

#### Allied Requirements:

HIST – European History  
**4 allied requirements credits**

#### Core Curriculum

Two courses in English (8 credits)  
Three courses in Theology\*\* (12 credits)  
Two courses in Philosophy (8 credits)  
One Fine Arts course\*\* (4 credits)  
Social Science Course (4 credits)  
\*\*One of these courses must satisfy the human diversity requirement  
**36 core curriculum credits**

**Total Credit Count: 165 credits**