

## 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>	ENGR 155 Fabrication Lab	↔ ENGR 150 Introduction to Engineering	
	MATH 113 Calculus I	MATH 114 Calculus II	THEO 101 The Christian Theological Tradition
	ENGR 171 Engineering Graphics and Design	↔ CISC 130 Introduction to Programming and Problem Solving in the Sciences (LAB)	HIST 1XX
	ENGL 121 Critical Thinking: Literature & Writing	PHYS 211 Classical Physics I	
	GERM 111*	GERM 112*	
<b>Year 2</b>	ENGR 220 Statics	ENGR 221 Mechanics of Materials (LAB)	
	MATH 200 Multi-Variable Calculus	ENGL 20X Texts in Conversation	Social Science
	PHYS 212 Classical Physics II	CHEM 109 General Chemistry for Engineers (LAB)	PHIL 115 Philosophy of the Human Person (Sum)
	GERM 211*	GERM 212	
<b>Year 3</b>	MATH 210 Introduction to Differential Equations and Systems	ENGR 320 Machine Design & Synthesis (LAB)	
	ENGR 371 Manufacturing Processes and Statistical Control	ENGR 322 Dynamics (LAB)	
	GERM 300	GERM (1) 3xx or GERM 4xx	PHIL 214 Introductory Ethics
	ENGR 381 Thermodynamics (LAB)	ENGR 350 Introduction to Electronics (LAB)	THEO 2XX or 3XX**
<b>Year 4</b>	Fine Arts Elective**		
	HIST (European)***	Internship (ENGR XXX Engineering Elective)	Year 4 in Germany
	GERM (2) 3xx or 4xx		
	GERM (3) 3xx or 4xx	GERM (4) 477 or 478 Experiential Learning	
<b>Year 5</b>	ENGR 480 Engineering Design Clinic I	ENGR 481 Engineering Design Clinic II	
	ENGR 361 Engineering Materials (LAB)	↔ ENGR 410 Control Systems and Automation	THEO 4XX
	ENGR 384 Heat Transfer (LAB)	ENGR 383 Fluid Mechanics (LAB)	
	GERM (5) 3xx or 4xx	GERM (6) 3xx or 4xx	

\* 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

### Complete Course Listing:

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

### Engineering Courses:

ENGR 150 – Introduction to Engineering (1 credit)  
ENGR 155 – Fabrication Lab (0 credits)  
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 384 – 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 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)

### **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**