

B.S. in Mechanical Engineering and Minor in Materials Science & Engr Plan of Study

	Fall	Spring	Summer/ J-Term
Year 1	ENGR 150 Intro to Engineering		
	MATH 113 Calculus I	MATH 114 Calculus II	THEO 101 The Christian Theological Tradition
	ENGR 171 Engineering Graphics and Design	CHEM 109 General Chemistry for Engineers (LAB)	
	ENGL 121 Critical Thinking: Literature & Writing	PHYS 211 Classical Physics I	
	Foreign Language 111*	Foreign Language 112*	
Year 2	ENGR 220 Statics	ENGR 221 Mechanics of Materials (LAB)	HIST 1XX
	ENGR 361 Engineering Materials (LAB)	MATH 200 Multi-Variable Calculus	Materials Elective
	PHYS 212 Classical Physics II	CISC 130 Introduction to Programming and Problem Solving	
	Foreign Language 211*	ENGL 20X Texts in Conversation	
Year 3	ENGR 255 Fabrication Lab***		
	ENGR 371 Manufacturing Processes & Stat Control	↔ ENGR 320 Machine Design & Synthesis (LAB)	PHIL 115 Philosophy of the Human Person
	ENGR 381 Thermodynamics (LAB)	ENGR 350 Introduction to Electronics (LAB)	IDSC 365 Materials Sci and Engr Practicum
	MATH 210 Introduction to Differential Equations and	ENGR 383 Fluid Mechanics (LAB)	
	THEO 2XX or 3XX**	Fine Arts Elective**	
Year 4	ENGR 480 Engineering Design Clinic I	ENGR 481 Engineering Design Clinic II	Social Sciences Elective **
	ENGR 410 Control Systems & Automation (LAB)	↔ ENGR 384 Heat Transfer (LAB)	
	ENGR 322 Dynamics (LAB)	↔ ENGR XXX Engineering/Materials Elective	
	PHIL 214 Introductory Ethics	THEO 4XX	

* May place out of one or more semesters if proficient at 3rd Level

** May satisfy human diversity requirement

*** Lab skills must be retained for ENGR 320. Recommended to be taken in semester immediately preceding ENGR 320 or (with instructor permission) in first half of semester concurrent with ENGR 320. May be taken in earlier semesters if student maintains proficiency with lab shop skills for ENGR 320.

↔ denotes that the two courses can be interchanged

Complete Course Listing:

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 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)
Technical Elective* - (4 credits)

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 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)

32 Allied Requirement Credits

MSE Minor Requirements:

Materials Electives (8 credits)
IDSC 365 – Materials Science and Engineering Practicum (0 credits)
* = Course fulfills an MSE requirement

Core Curriculum

Three courses in foreign language (12 credits)
Two courses in English (8 credits)
Three courses in Theology** (12 credits)
Two courses in Philosophy (8 credits)
One course in the Social Sciences** (4 credits)
One Fine Arts course** (4 credits)
One History course (4 credits)
**One of these courses must satisfy the human diversity requirement

52 Core Curriculum Credits

Total Credit Count: 153 (61 engineering credits + 92 non-engineering credits)