



CE 21-22 Catalog (v2 starts F'24)
Civil Engineering Program
Math Level 5: M-171Q Start

128 total credits required to graduate (42 of those 128 must be 300 level and above)

PROFESSIONAL ELECTIVE COURSES – SEE BACK OF FLOWCHART

Choose one course from the following CORE 2.0 topics:
 A = IA/RA (Inquiry Arts/Research Arts)
 H = IH (Inquiry Humanities)
 S = IS (Inquiry Social Sciences)
 D = D (Diversity)

Must Complete:
 ECIV 333 and 312 and EGEN 310R Prior to taking ECIV 499R (CE Design)

Seminar: (Choose one) US 101US, CLS 101US, COMX 111US, HONR 201US (30+ credits completed choose either CLS 201US or COMX 111US)
 2nd Writing: (Choose one) BMGT 205, WRIT 201, WRIT 221, HONR 202

Basic Science Elective: Choose one
 BIOB 160 (F,S) Princ Liv Sys (4) Pre-Req CHMY 141
 ENSC 245 (F) Soils (3)
 ERTH 101 (F,S) Earth System Sci (4)
 GPHY 284 (F,S) Intro to GIS Science & Cartography (3)
 BIOM 103IN (F,S) Unseen Universe: Microbes (3)

Engineering Science Elective: (Choose one)
 DDSN 166 (F,S) Revit I (3) (Pre-req: DDSN131)
 DDSN 245 (F,S) Civil Drafting (3) (Pre-req: DDSN131)
 EMAT 251 (F,S) Matrl Struc & Prop (3) (Pre-req: CHMY 141, Co-Req: M 171)
 EELE 250 (F,S) Circuits (4)
 EGEN 324 (F,S) Applied Thermodynamics (3) (Pre-req: PHSX 220, Co-Req: M 172)

Professional Block Courses
 Pre-Professional Block Courses (Complete w/C- or better before taking Prof. Block Courses)
 "Cultural" Core

2021-22 For planning purposes: The MSU catalog displays official degree and prerequisite Requirements. Some courses from prior catalogs have been discontinued or replaced. It is recommended that students on 2012-2020 catalogs follow this flowchart to complete their degree requirements.)

Science Content
 Communication Content
 Math Courses
 Mechanics Courses

Prerequisite →
 Co-requisite - - - - ->

Name _____
 MSU GID _____

2021-2023 Civil Engineering Professional Electives (Total of 15 cr-hrs required)

Updated 2/24

	Rubric	Number	Cr Hrs	Title	Offered	Prerequisite	
Design Courses	ECIV	414	3	Steel Design	F odd	ECIV 315 Structures II	
	ECIV	415	3	Design of Masonry Structures	S even	ECIV 315 Structures II	
	ECIV	416	3	Design of Wood and Timber Structures	S odd	ECIV 315 Structures II	
	ECIV	484	3	Reinforced Concrete Design	F even	ECIV 315 Structures II	
	ECIV	420	3	Earth and Foundation Engineering	S	ECIV 320 Geotechnical Engineering	
	ECIV	425	3	Geotechnical Structures	F	ECIV 320 Geotechnical Engineering	
	ECIV	431	3	Open Channel Hydraulics	F	ECIV 333 Water Resources Engineering	
	ECIV	435	3	Closed Conduit Hydraulics	S	ECIV 333 Water Resources Engineering	
	ECIV	452	3	Traffic Engineering and ITS	F odd	ECIV 350 Transportation Engineering	
	At least two	ECIV	454	3	Transportation Planning	S odd	ECIV 350, EGEN 350 or STAT 332
		ECIV	456	3	Highway Geometric Design	F	ECIV 350 Transportation Engineering
		ECIV	457	3	MDT Highway Design	F	Consent of Instructor
		ECIV	464	3	Lightweight Concrete Engineering	F,S	Consent of Instructor
		EENV	432	3	Advanced Engineering Hydrology	S	ECIV 333 Water Resources Engineering
		EENV	434	3	Groundwater Supply and Remediation	S	ECIV 337 CE Fluid Mechanics
		EENV	441	3	Natural Treatment Systems	S	EENV 340 Introduction to Environmental Engineering
		EENV	436	3	Storm Water Management & Eng	F	EENV 340 Introduction to Environmental Engineering
		EENV	443	3	Air Pollution Control	F	ECIV 337 and CHMY 141
		EENV	445	3	Hazardous Waste Treatment	F	EENV 340 Introduction to Environmental Engineering
		SRVY	474	3	Project Design in Surveying	S odd	SRVY 230 Surveying
	ECIV	307	3	Constr Estimating and Bidding	F,S	ECIV 202, ECIV 308	
	ECIV	311	2	Construction Project Documentation	F,S	ECIV 308 Construction Practice	
	ECIV	404	3	Heavy Const Equip and Methods	F,S	ETCC 302 or ECIV 320	
	ECIV	405	3	Const Proj Planning Scheduling	F,S	ECIV 308 Construction Practice	
	ECIV	406	3	Sustainability in Construction	S	ECIV 308 Construction Practice	
	EGEN	415	3	Advanced Mechanics of Solids	F	EGEN 205 Mechanics of Materials	
	EGEN	420	3	Ice & Snow Mechanics	S	EGEN 205 Mechanics of Materials	
	SRVY	355	3	Surveying Calculations	S even	SRVY 230 Surveying	
	SRVY	361	3	Intro to Legal Principles in Surveying	F even	SRVY 230 Surveying	
	SRVY	362	3	Public Land Survey Systems	F odd	SRVY 230 Surveying	
	SRVY	375	3	Analyt Photo/Remote Sensing	F odd	M 171 Calculus	
	DDSN	166*	3	Revit I	F,S	DDSN 131 Intro to Drafting and Design	
	DDSN	245*	3	Civil Drafting	F,S	DDSN 131 Intro to Drafting and Design	
	ECIV	490	1-4	Undergraduate Research	F,S,Su	Consent of Instructor	
	ECIV	492	1-4	Independent Study	F,S,Su	Consent of Instructor	
Max 3 cr	ECIV	498	3	Career Internship (3 cr max)	Su	Consent of Instructor	
				A petitioned course.			
				A course from a completed minor.			
				A course from a prior/concurrent BS/BA degree.			
				A course from a completed Honors program.			

*Cannot double count as Professional Electives and Engineering Science Electives