

CE 2024-25 Catalog Civil Engineering

Math Level 5: M-171Q Start

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

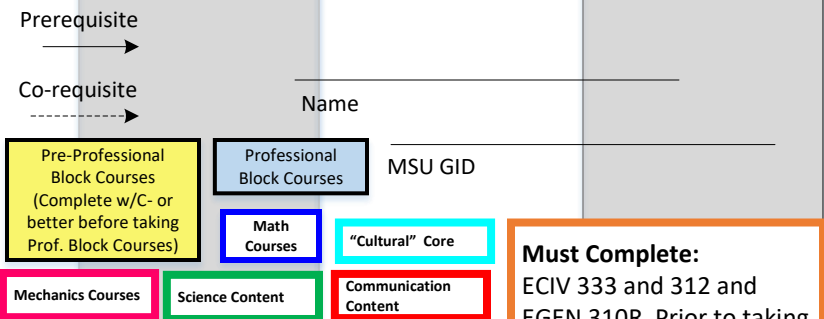
2nd Writing: (Choose one) BMGT 205, WRIT 201, WRIT 221, or HONR 202

Choose one course from each of 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)

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)

Basic Science Elective: (Choose one)
 BIOB 160 (F,S) Princ Liv Sys (4) Pre-Req CHMY 141
 ENSC 245 (F,S) Soils (3)
 EARTH 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)

2023-24
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 older catalogs follow this flowchart to complete their degree requirements.



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

PROFESSIONAL ELECTIVE COURSES – SEE BACK OF FLOWCHART

2024-2025 Civil Engineering Professional Electives (Total of 15 cr-hrs required)

Updated 2/24

	Rubric	Numl	Cr	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	
	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	
At least two of these.	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	
	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 total.	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.		