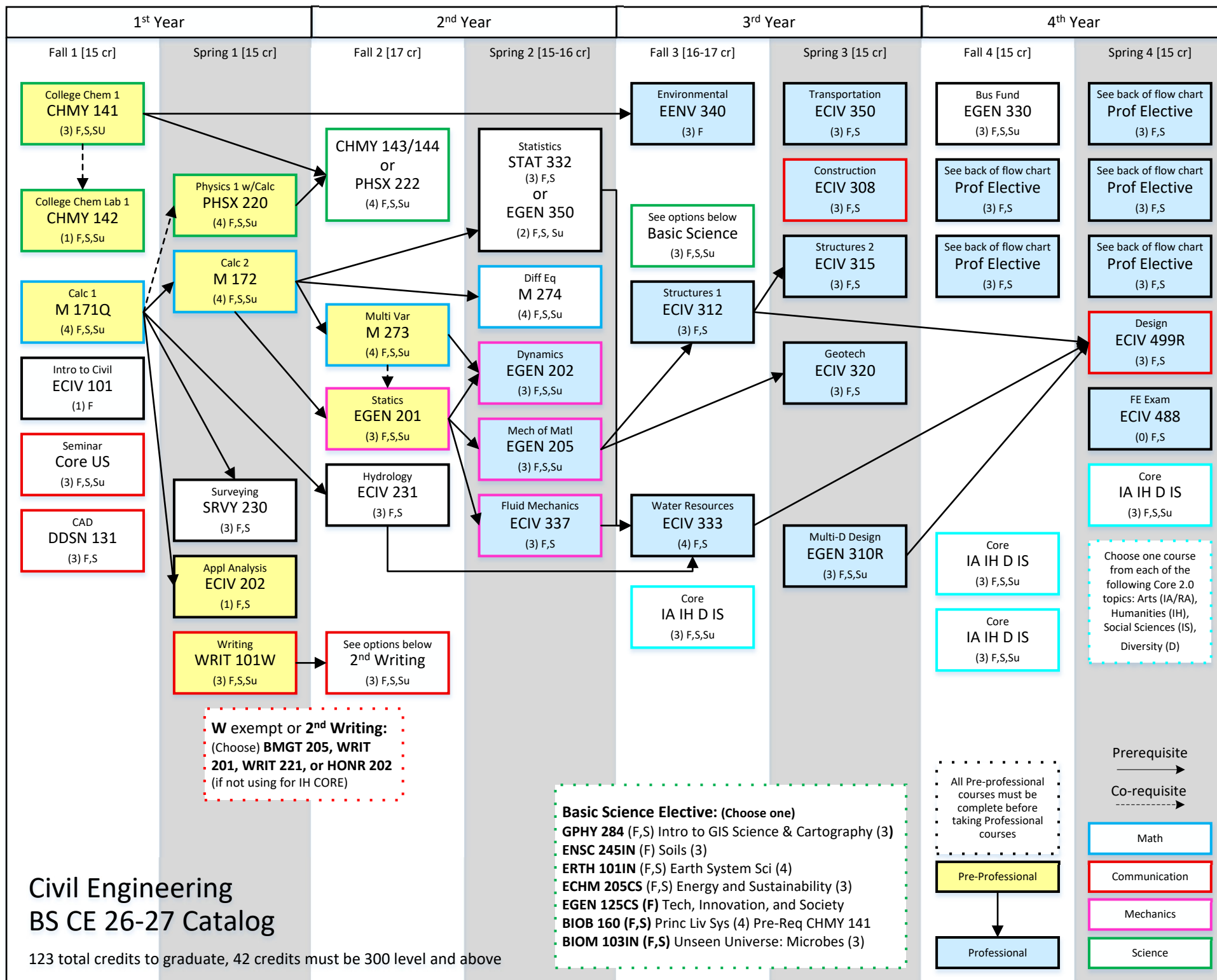




26-27 Civil Engineering Professional Electives (Total of 15 cr-hrs required)

Updated 7/26

	Rubric	Number	Cr	Title	Offered	Prerequisite	
Design Courses	At least two of these.	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	F	ECIV 333 Water Resources Engineering
		ECIV	451	3	Highway Pavements	S even	ECIV 350 and ECIV 320
		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
		ECIV	467	3	Steel Bridge Design/Build	F,S	Consent of Instructor
		EENV	432	3	Advanced Engineering Hydrology	S even	ECIV 333 Water Resources Engineering
		EENV	434	3	Groundwater Supply and Remediation	S	ECIV 337 CE Fluid Mechanics
		EENV	436	3	Storm Water Management & Eng	F	EENV 340 Introduction to Environmental Engineering
		EENV	441	3	Natural Treatment Systems	S	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 and ECIV 308	
	ECIV	334	3	Heavy Civil Construction Planning & Estimating	F		
	ECIV	360	1-2	Estimating & Bidding Fundamentals	F,S	Consent of Instructor	
	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	
	ECIV	417	3	Heavy Civil Construction Practices	S	ECIV 308 Construction Practice	
	ECIV	444	3	Civil Engineering Computations	S odd	ECIV 202 and M 273	
	ECIV	460	1-2	Advanced Estimating & Bidding	F,S	ECIV 360	
	EGEN	415	3	Advanced Mechanics of Solids	F	EGEN 205 Mechanics of Materials	
	EGEN	420	3	Ice & Snow Mechanics	F	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	
	DDSN	266	3	Revit II	S	DDSN 166	
	DDSN	245	3	Civil Drafting	F,S	DDSN 131	
Max 3 credits total		ECIV	498	3	Internship (3 cr max)	Su	Consent of Instructor
		ECIV	492	3	Independent Study	F,S,Su	Consent of Instructor
		ECIV	490R	3	Undergraduate Research	F,S,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		