

Below is the **TENTATIVE** two-year course offering plan

Course		2024 Fall	2025 Spring	2025 Fall	2026 Spring
CIVL 1100	Discovering Civil and Environmental Engineering	✓	✓	✓	✓
CIVL 1160	Civil Engineering and Modern Society	✓	✓	✓	✓
CIVL 1180	Monitoring Changing Climate from Space	✓		✓	
CIVL 1190	Climate Change, Big History and Sustainability	✓		✓	
CIVL 1210	Fundamental of Green Buildings	✓		✓	
CIVL 2020	Industrial and BIM Training		✓		✓
CIVL 2110	Statics	✓		✓	
CIVL 2120	Mechanics of Materials		✓(Spring) ✓(Summer)		✓(Spring) ✓(Summer)
CIVL 2160	Modeling Systems with Uncertainties	✓		✓	
CIVL 2170	Infrastructure Systems Engineering and Management		✓		✓
CIVL 2410	Environmental Assessment and Management		✓		✓
CIVL 2510	Fluid Mechanics		✓		✓
CIVL 2810	Construction Materials	✓		✓	
CIVL 3210	Introduction to Construction Management		✓		✓
CIVL 3310	Structural Analysis	✓		✓	
CIVL 3320	Reinforced Concrete Design		✓		✓
CIVL 3420	Water and Wastewater Engineering		✓		✓
CIVL 3510	Hydrosystems Engineering	✓		✓	
CIVL 3610	Traffic and Transportation Engineering		✓		✓
CIVL 3730	Fundamentals of Geotechnics	✓		✓	
CIVL 3740	Geotechnical Analysis and Design		✓		✓
CIVL 3910	Smart Infrastructure Sensing and Data Analytics		✓		✓
CIVL 4100P	Wave Loads on Structures	✓		✓	
CIVL 4100R	GIS for Smart City		✓		✓
CIVL 4100T	Applications of Artificial Intelligence in Remote Sensing		✓		
CIVL 4100U	Geographic Information System for Smart City	✓		✓	
CIVL 4210	Advanced Construction with AI and Robotics	✓		✓	
CIVL 4220	Scientific Machine Learning for Infrastructure Systems		✓		✓
CIVL 4270	Construction Law and Contract Administration		✓		✓
CIVL 4310 (CIVL 4100N)	Energy System Modeling for Buildings and Cities	✓		✓	
CIVL 4320	Structural Steel Design	✓		✓	
CIVL 4330	Introduction to Structural Dynamics	✓		✓	
CIVL 4340	Prestressed Concrete Design		✓		✓
CIVL 4370	Computer Methods of Structural Analysis		✓		✓
CIVL 4380	Introduction to Wind Effects on Buildings and Structures	✓		✓	
CIVL 4430	Environmental Impact Assessment		✓		✓
CIVL 4450	Carbon Footprint Analysis and Reduction		✓		✓
CIVL 4460	Process Design of Environmental Engineering Facilities	✓		✓	
CIVL 4470	Air Quality Control and Management	✓		✓	
CIVL 4480	Climate Modeling and Risk Assessment		✓		
CIVL 4610	Introduction to Data Analytics for Smart Transportation Systems	✓		✓	
CIVL 4620	Transportation System Operations	✓		✓	
CIVL 4640	Introduction to Smart City Economics		✓		✓
CIVL 4700	Engineering Geology	✓		✓	
CIVL 4710	Soil Slope Engineering		✓		✓
CIVL 4750	Numerical Solutions to Geotechnical Problems	✓		✓	
CIVL 4810	Construction Materials Technology		✓		
CIVL 4950	Civil Engineering Capstone Design Project	✓		✓	
CIVL 5110	Engineering Risk, Reliability and Decision		✓		
CIVL 5210	Principles of Project Finance				✓
CIVL 5220	BIM and Digital Construction	✓		✓	
CIVL 5230	Finance and Operations in Civil Engineering		✓		
CIVL 5321 (CIVL 6100P)	Structural Sensing and Health Monitoring	✓			
CIVL 5370	Wind Effects on Buildings and Structures			✓	
CIVL 5390	Finite Element Methods			✓	
CIVL 5410	Physical-Chemical Water/Wastewater Treatment			✓	
CIVL 5420	Biological Waste Treatment				✓
CIVL 5430	Aquatic Chemistry				✓
CIVL 5450	Hazardous Waste Treatment and Site Remediation	✓		✓	
CIVL 5460	Landfill Engineering and Design		✓		✓
CIVL 5510	Hydroclimate Data Analysis and Modelling		✓		
CIVL 5520	Water Resources Systems Analysis				✓
CIVL 5550	Modeling Fluid Systems		✓		
CIVL 5610	Urban Transportation Networks Analysis	✓		✓	
CIVL 5620	Travel Demand Analysis	✓			
CIVL 5640	Discrete Choice Experiments and Data Analysis		✓		✓
CIVL 5710	Advanced Soil Mechanics	✓			
CIVL 5720	Advanced Foundation Design				✓
CIVL 5730	Theoretical and Computational Soil Mechanics		✓		
CIVL 5750	Geotechnical Earthquake Engineering and Soil Dynamics	✓			
CIVL 5770	Unsaturated Soil Mechanics and Engineering			✓	
CIVL 5780	Soils and Waves			✓	
CIVL 5830	Advanced Mechanics of Materials	✓			
CIVL 5840	Advanced Concrete Technology				✓
CIVL 6100R	Climate Change and Climate Modeling				✓