Sustainable Cities, Minor

The minor in sustainable cities opens opportunities for students across the university who are interested in gaining knowledge in issues related to the urban built environment and associated engineering solutions, with a focus on sustainability. Cities are complex systems and the minor explores some of these complexities: transportation, environmental planning, climate change, food systems, resilience, smart construction, etc. The minor connects civil and environmental engineering with other disciplines such as environmental science, urban design and planning, economics, public policy, etc.

A total of 15 semester hours is required to complete this minor. Students interested in this minor must contact the civil and environmental engineering academic advisor in order to declare the minor. This minor is open to engineering and nonengineering students.

Students are permitted to double count a maximum of 50% of the credits required for a minor from their major.

Minor Requirements

Complete four courses, minimum 15 semester hours, from the lists below. Also complete any corequisite labs and recitations courses where specified.

Required Courses

Code	Title	Hours
Complete 15-16 semester hours from the following:		15-16
CIVE 1200	How Cities Work: Experiencing Urban Infrastructure	
CIVE 2334	Environmental Engineering: Principles, Technology, and Sustainability	
CIVE 4540	Resource Recovery and Waste Treatment Technologies Abroad	
CIVE 4541	Waste Management and Policy Abroad	
CIVE 4566	Design for Sustainable Transportation: Netherlands	
CIVE 4567	Planning and Policy for Sustainable Urban Transportation: Netherlands	
CIVE 4575	Construction Management	
CIVE 4777	Climate Hazards and Resilient Cities Abroad	
CIVE 4778	Climate Adaptation and Policy Abroad	
CIVE 5261	Dynamic Modeling for Environmental Investment and Policymaking	
CIVE 5271	Solid and Hazardous Waste Management	
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
CIVE 5363	Climate Science, Engineering Adaptation, and Policy	
CIVE 5365	Climate Technologies for Decarbonization, Mitigation, and Adaptation	
CIVE 5368	Air Quality Management	
CIVE 5373	Transportation Systems: Analysis and Planning	
CIVE 5376	Traffic Engineering and Sustainable Urban Street Design	
GE 3300	Energy Systems: Science, Technology, and Sustainability	
SBSY 5100	Sustainable Design and Technologies in Construction	
SBSY 5200	Sustainable Engineering Systems for Buildings	
SBSY 5500	Deep Energy Retrofitting for Commercial Buildings	
A maximum of 4 semester hours from the following may count toward this minor:		
ARCH 2355	Architecture Conservation: Intervention, Transformation, and Reuse	
CHEM 5643	Plastics Sustainability and Circular Economy: A Chemical Perspective	
ECON 1711	Economics of Sustainability	
ECON 3423	Environmental Economics	
ECON 3425	Energy Economics	
ENVR 2515	Sustainable Development	
ENVR 5350	Sustainable Energy and Climate Solutions	
ENVR 5600	Coastal Processes, Adaptation, and Resilience	
ENVR 5800	Climate Adaptation and Nature-Based Solutions	
FINA 2720	Sustainability in the Business Environment	
HIST 2220	History of Technology	
HIST 3400	The Making of the Modern City	
INTL 3200	Cities in a Global Context	
LARC 2230	Introduction to Sustainable Site Planning and Design	
LARC 2340	Cities, Landscape, and Contemporary Culture	

LARC 5310	Urban Landscape Seminar
POLS 2358	Current Issues in Cities and Suburbs
PPUA 5234	Land Use and Urban Growth Policy
PPUA 5249	Sustainable Urban Coastal Policy
PPUA 5262	Big Data for Cities
PPUA 5268	International Environmental Policy
SUST 1100	Problem Solving for a Sustainable Future

GPA Requirement

2.000 GPA required in the minor