

# SUSTAINABILITY IN THE BUILT ENVIRONMENT, MINOR

## College of Engineering

The built environment plays an integral role in meeting society's most basic needs of shelter, security, mobility, community, and water & waste treatment, but it also contributes significantly to the sustainability challenges of climate change, pollution, resource consumption, and land use. As society and government policy increase pressure to reduce the environmental impacts of our everyday activities, individuals must increasingly understand how the built environment they design and maintain fits into the complex environmental and human system in which we live. The minor provides a guiding framework for educating individuals who will design and maintain our future built environment in the challenges and potential solutions for improved sustainability.

The minor is designed to develop students' awareness in the three core themes of sustainability: Engineering & Science, Social Context, and Policy & Economics. The aim is both to foster the social context of engineering and to attract students from a range of departments and programs across campus to grow trans-disciplinary interactions. Students are required to take ECI 123, as well as electives as specified in the three core themes.

The minor is designed to attract students from a range of departments and programs across campus, including, Environmental Science & Policy, Plant Sciences, Landscape Architecture, Design, Engineering, Community & Regional Development, Anthropology, Agriculture & Resource Economics, Atmospheric Science, Environmental Toxicology, Applied Biological Systems Technology, Geology, Hydrology and all disciplines of Engineering. Students enrolled in the minor will acquire fundamental skills and knowledge of the elements and integrated processes necessary for a sustainable built environment.

Successful completion of the minor requires both a minimum overall UC GPA of 2.000 and a minimum 2.000 GPA for the coursework completed for the minor, with no grade lower than a C- for any course used for the minor. All courses must be taken for a letter grade. Up to 4 units can be lower division, all other units must be upper division. Substitute courses in the thematic areas may be proposed by students for the minor and are considered on a case-by-case basis.

Please refer to your college's policies regarding course overlap rules.

The Minor Declaration form is available via the Online Advising Student Information System (OASIS) (<https://students.ucdavis.edu/>). For more information, please email the undergraduate advisors ([civiladvising@ucdavis.edu](mailto:civiladvising@ucdavis.edu)) in the Department of Civil & Environmental Engineering.

Transcript notation must be requested no later than the quarter preceding graduation and will appear as a minor in Sustainability in the Built Environment.

## Minor Advisors

H.N. Bischel, C.E. Bronner, A.L. Forrest, F.J. Loge, A. Kendall, S.A. Miller

Code	Title	Units
ECI 123	Urban Systems & Sustainability	4
Complete at least 14 units of coursework from the three core thematic areas, below. <sup>1</sup>		14
<i>Engineering &amp; Science</i>		
Choose at least one, 3 or 4 unit course:		
ATM 116	Modern Climate Change	
DES 127A or DES 127AV	Sustainable Design	
DES 127B	Studio Practice in Sustainable Design	
DES 156	Graphitecture: Architecture in the Age of New Media	
ECI 040	Introduction to Environmental Engineering	
ECI 140A	Environmental Analysis of Aqueous Systems	
ECI 149/ ATM 149 DISCONTINUED FOR WINTER 2024 **	(Discontinued for winter 2024) **	
ECI 155	Water Resources Engineering Planning	
ECI/ESP 163	Energy & Environmental Aspects of Transportation	
ECI 165	Transportation Policy	
ENG 188	Science & Technology of Sustainable Power Generation	
ETX 101	Principles of Environmental Toxicology	
GEL 130	Non-Renewable Natural Resources (Discontinued for winter 2026) **	
LED 140 or LDA 140 DISC	Green Building, Design, & Materials	
<i>Social Context</i>		
Choose at least one, 3 or 4 unit course:		
ANT/ESP 101	Ecology, Nature, & Society	
ANT 104N	Cultural Politics of the Environment	
CRD 142	Rural Change in the Industrialized World	
CRD 149	Community Development Perspectives on Environmental Justice	
CRD 154	Social Theory & Community Change	
CRD 158	Community Governance	
CRD 172	Social Inequality: Issues & Innovations	
LED 003 or LDA 003 DISC	Sustainable Development: Theory & Practice	
PLS 162	Urban Ecology	
<i>Policy &amp; Economics</i>		
Choose at least one, 4 unit course:		
ARE/ESP 175	Natural Resource Economics	
ARE 176	Environmental Economics	
ESP 161	Environmental Law	
ESP 162	Environmental Policy	
ESP 171	Urban & Regional Planning	
ESP 173	Land Use & Growth Controls	
PLS 150	Sustainability & Agroecosystem Management	
<b>Total Units</b>		<b>18</b>

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May include 1-3 units of ECI 198, by approval of advisor.

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Course(s) discontinued; see your advisor for course options.