

ENVIRONMENTAL POLICY ANALYSIS & PLANNING, BACHELOR OF SCIENCE

College of Agricultural & Environmental Sciences

The Major Program

The major in Environmental Policy Analysis & Planning develops skills for designing and assessing sustainable policies for environmental quality and natural resource management.

Any student in good standing is eligible to transfer to the major; to do so, please see the staff advisor, Melissa Whaley, in 2134 Wickson Hall, or the lead faculty advisor, Prof. G. Arnold, in 2144 Wickson Hall.

The Program

This major provides students with a strong background in policy analysis, including the evaluation of policy alternatives and the study of factors affecting policy formulation and implementation. Key components of this interdisciplinary training include a general background in the natural sciences relevant to environmental policy, economics, political science, statistics, and research methodology to quantitatively analyze environmental problems and policy options. In addition, students are encouraged to develop substantive knowledge in a specific field of environmental policy, such as urban and regional planning, water policy, transportation and energy, climate policy, or conservation management.

Careers

Environmental policy analysis and planning graduates are prepared for employment in environmental, natural resource, energy, and transportation focused public agencies, consulting firms, non-governmental organizations, and businesses, or as legislative aides for elected representatives. The major is also excellent preparation for students who want to go on to graduate work in law, planning, public policy, political science, economics, or business.

Major Advisor

G. Arnold (Environmental Science & Policy)

Code	Title	Units
English Composition & Communication Requirement		
Choose one:		0-4
UWP 101	Advanced Composition	
or UWP 101V	Advanced Composition	
or UWP 101Y	Advanced Composition	
OR any course from the UWP 102 or UWP 104 series. (https://catalog.ucdavis.edu/courses-subject-code/uwp/)		
UWP 102G or UWP 104A or UWP 104AV or UWP 104AY or UWP 104B recommended		
Passing the Upper Division English Composition exam.		
Communication		4
Choose one:		
CMN 001	Introduction to Public Speaking	
CMN 003	Interpersonal Communication Competence	
or CMN 003V	Interpersonal Communication Competence	
or CMN 003Y	Interpersonal Communication Competence	

DRA 010	Introduction to Acting	
English Composition & Communication Requirement Subtotal		4-8
Preparatory Subject Matter		
<i>Biological Science</i>		
Choose one:		4-5
BIS 002A	Introduction to Biology: Essentials of Life on Earth	
BIS 002B	Introduction to Biology: Principles of Ecology & Evolution	
BIS 010	Everyday Biology	
<i>Chemistry</i>		
CHE 002A	General Chemistry	4-5
or CHE 010	Concept of Chemistry	
<i>Physics</i>		
PHY 001A	Principles of Physics	3
<i>Second Quarter Natural Science</i>		
Choose one:		3-5
BIS 002B	Introduction to Biology: Principles of Ecology & Evolution	
BIS 002C	Introduction to Biology: Biodiversity & the Tree of Life	
CHE 002B	General Chemistry	
PHY 001B	Principles of Physics	
Cannot use BIS 002B to fulfill both the biological sciences requirement and the second quarter natural science requirement at the same time		
<i>Introduction to Data Analytics</i>		
Choose one:		3-4
CMN/SOC/POL/PSC 012Y	Data Visualization in the Social Sciences	
PLS 021	Application of Computers in Technology	
or PLS 021V	Application of Computers in Technology	
<i>Economics</i>		
ECN 001A	Principles of Microeconomics	4
or ECN 001AV	Principles of Microeconomics	
or ECN 001AY	Principles of Microeconomics	
ECN 001B	Principles of Macroeconomics	4
or ECN 001BV	Principles of Macroeconomics	
<i>Environmental Science</i>		
Choose one:		3-4
ANS 001	Domestic Animals & People	
ATM 060	Introduction to Atmospheric Science	
ESM 100	Principles of Hydrologic Science	
GEL 001	The Earth	
GEL 134	Environmental Geology & Land Use Planning	
PLS/SAS 012	Plants & Society	
WFC 051	Introduction to Conservation Biology	
<i>Environmental Science & Policy</i>		
ESP 001	Environmental Analysis	4
<i>Mathematics</i>		
Choose one:		3-4
MAT 016A	Short Calculus	

MAT 017A	Calculus for Biology & Medicine	
MAT 021A	Calculus	
Choose one:		3-4
MAT 016B	Short Calculus	
MAT 017B	Calculus for Biology & Medicine	
MAT 021B	Calculus	
<i>Political Science</i>		
POL 001 or POL 001Y	American National Government	4
<i>Statistics</i>		
STA 013 or STA 013Y or STA 032	Elementary Statistics Elementary Statistics Gateway to Statistical Data Science	4
Preparatory Subject Matter Subtotal		46-54
Depth Subject Matter		
Students must take these units on a letter grade basis, and must attain an overall grade point average of 2.000 or higher in the Depth Subject Matter courses.		
<i>Environmental Science & Policy</i>		29
ESP 110	Principles of Environmental Science	
ESP 160	The Policy Process	
ESP 161	Environmental Law	
ESP 168A	Methods of Environmental Policy Analysis	
ESP 168B	Methods of Environmental Policy Evaluation	
ESP 178	Applied Research Methods	
ESP 179	Environmental Impact Assessment	
<i>Statistics</i>		
Choose one:		4-5
ESP 106	Environmental Data Science	
SOC 106	Intermediate Social Statistics	
STA 100	Applied Statistics for Biological Sciences	
STA 103	Applied Statistics for Business & Economics	
STA 108	Applied Statistical Methods: Regression Analysis	
<i>Microeconomics</i>		
ARE 100A or ECN 100A	Intermediate Microeconomics: Theory of Production & Consumption Intermediate Micro Theory: Consumer & Producer Theory	4
<i>Applied Biological Systems Technology</i>		
ABT/LDA 150	Introduction to Geographic Information Systems	4
<i>Resource Economics</i>		
Choose one:		4
ARE 176	Environmental Economics	
ECN 125	Energy Economics	
ESP/ARE 175	Natural Resource Economics	
<i>Recommended, Not Required</i>		
ABT 181N	Concepts & Methods in Geographic Information Systems	
ABT/HYD 182	Environmental Analysis Using GIS	

ESM 185	Aerial Photo Interpretation & Remote Sensing	
ESM 186	Environmental Remote Sensing	
Depth Subject Matter Subtotal		45-46
Areas of Specialization		
Students must choose courses in the Areas of Specialization that have not been taken in the Depth Subject Matter.		
Choose one:		12-17
City & Regional Planning (p. 2)		
Climate Change Policy (p. 2)		
Conservation Management (p. 3)		
Energy & Transportation Planning (p. 3)		
Environmental Policy & Politics (p. 3)		
Integrative Policy (p. 3)		
Water Management (p. 4)		
Areas of Specialization Subtotal		12-17
Total Units		107-125

City & Regional Planning Specialization

Code	Title	Units
Environmental Science & Policy		
ESP 171	Urban & Regional Planning	4
ESP 172	Public Lands Management	4
<i>Choose one</i>		
ECI 165	Transportation Policy	
ESP/ECI 163	Energy & Environmental Aspects of Transportation	
Choose one:		2-5
AHI 168	Great Cities	
CRD 149	Community Development Perspectives on Environmental Justice	
CRD 152	Community Development	
CRD 156	Community Economic Development	
CRD 171	Housing & Social Policy	
ETX 110	Toxic Tragedies & Their Impact on Society	
ESP 173	Land Use & Growth Controls	
POL 100	Local Government & Politics	
Total Units		10-13

Climate Change Policy Specialization

Code	Title	Units
Environmental Science & Policy		
ESP 165	Climate Policy	3
Choose one:		4
ARE 176	Environmental Economics	
ECN 125	Energy Economics	
ESP/ECI 163	Energy & Environmental Aspects of Transportation	
ESP 167	Energy Policy	
ESP 171	Urban & Regional Planning	
Choose two:		6-8
ATM 116	Modern Climate Change	

ATM 133	Biometeorology
ATM 160	Introduction to Atmospheric Chemistry
ESM 131	Air as a Resource
ESP/GEL 116N	Oceanography
SAS 025	Global Climate Change: Convergence of Biological, Geophysical, & Social Sciences
or SAS 025V	Global Climate Change: Convergence of Biological, Geophysical, & Social Sciences
Total Units	13-15

Conservation Management Specialization

Code	Title	Units
Choose two:		6-8
ESP 166	Ocean & Coastal Policy	
ESP 169	Water Policy & Politics	
ESP 170	Conservation Biology Policy	
ESP 172	Public Lands Management	
Choose one:		3-5
ENH 160	Restoration Ecology	
ESM 141	Role of Fire in Natural Ecosystems	
ESP 100	General Ecology	
ESP 121	Population Ecology	
ESP 127	Plant Conservation Biology	
EVE 115	Marine Ecology	
EVE 138	Ecology of Tropical Latitudes	
WFC 154	Conservation Biology	
WFC 155	Wildlife Space Use & Habitat Conservation	
Choose one:		4
AAS 176	The Politics of Resources	
AAS 177	Politics of Life in Africa	
ARE/ECN 115A	Economic Development	
ANT 103	Indigenous Peoples & Natural Resource Conservation	
ASA 114	Asian Diasporas	
CHI 112	Globalization, Transnational Migration, & Chicana/o & Latina/o Communities	
CRD 153A	International Community Development: Asia	
CRD 153B	International Community Development: Europe	
CRD 153C	International Community Development: Africa	
IRE/SOC 104	The Political Economy of International Migration	
SOC 145A	Sociology of Third World Development	
Total Units		13-17

Energy & Transportation Planning Specialization

Code	Title	Units
Choose one:		3-4
ECN 125	Energy Economics	
ENG 106	Engineering Economics	

ESP/ARE 175	Natural Resource Economics	
Choose two:		7-8
ECI 165	Transportation Policy	
ESP/ECI 163	Energy & Environmental Aspects of Transportation	
ESP 167	Energy Policy	
ESP 172	Public Lands Management	
Choose one:		3-4
ATM 116	Modern Climate Change	
ECI 123	Urban Systems & Sustainability	
ENG/PHY 160	Environmental Physics & Society	
ESM 131	Air as a Resource	
GEL 130	Non-Renewable Natural Resources	
Total Units		13-16

Environmental Policy & Politics Specialization

Code	Title	Units
Choose one:		4
POL 100	Local Government & Politics	
POL 104	California State Government & Politics	
POL 105	The Legislative Process	
POL 107	Environmental Politics & Administration	
POL 109	Public Policy & the Governmental Process	
Choose one:		4
POL 162	Elections & Voting Behavior	
POL 164	Public Opinion	
POL 165	Mass Media & Politics	
POL 170	Political Psychology	
Choose one:		3-4
ECI 165	Transportation Policy	
ESP 165	Climate Policy	
ESP 166	Ocean & Coastal Policy	
ESP 167	Energy Policy	
ESP 169	Water Policy & Politics	
ESP 170	Conservation Biology Policy	
ESP 171	Urban & Regional Planning	
ESP 172	Public Lands Management	
Choose one:		4
ARE 106	Econometric Theory & Applications	
ARE 176	Environmental Economics	
ECI 153	Deterministic Optimization & Design	
ECN 130	Public Microeconomics	
ESP/ARE 175	Natural Resource Economics	

Total Units 15-16

Integrative Policy Specialization

Students choosing this individualized track must consult with a faculty advisor to identify an area of emphasis within this track and to select four upper division courses with a common theme. Possible areas of emphasis are marine policy, pollutants in the environment, planning in the presence of environmental hazards, sustainable development, or

environmental and natural resource economics. If you are considering this track, please contact the major advisor as soon as possible.

Total Units: 12-16

Water Management Specialization

Code	Title	Units
Choose two:		6
ESP 166	Ocean & Coastal Policy	
ESP 169	Water Policy & Politics	
HYD 150	Water Law	
Choose two:		6-10
ESM 100	Principles of Hydrologic Science	
ESM 121	Water Science & Management	
ESP 151	Limnology	
ESP 155	Wetland Ecology	
GEL 134	Environmental Geology & Land Use Planning	
HYD 141	Physical Hydrology	
HYD 143	Ecohydrology	
SSC 118	Soils in Land Use & the Environment	
WFC 120	Biology & Conservation of Fishes	
BIS 124	Coastal Marine Research	
ESP/GEL 116N	Oceanography	
ESP 124	Marine & Coastal Field Ecology	
ESP/GEL 150C	Biological Oceanography	
ESP 152	Coastal Oceanography	
Total Units		12-16