



Water Management

Preparatory Subject Matter Requirements

Preparatory Subject Matter		Quarter(s) Offered	Units	Completed	Notes
Written and Oral Expression					
UWP 101, or any 102 or 104	Upper Division Writing	I, II, III, IV	4	_____	<u>May test out of requirement</u>
CMN 1, 3V, 3Y, or DRA 10	Communication	I, II, III, IV	4	_____	_____
Biological/Physical Science (<i>complete all</i>)					
BIS 2A or 2B or BIS 10	Essentials of Life on Earth or General Biology	I, II, III, IV	4-5	_____	<u>Can't use BIS 2B both here and below</u>
CHE 2A or CHE 10	General Chemistry or Concepts of Chemistry	I, II, IV	4-5	_____	<u>CHE 10 offered in fall only</u>
PHY 1A	Principles of Physics	I, II, IV	3	_____	_____
Biological/Physical Science (<i>select one</i>)					
BIS 2B or 2C	Principles of Ecology & Evolution	I, II, III, IV	5	_____	<u>Can't use BIS 2B both here and above</u>
CHE 2B	General Chemistry	II, III, IV	5	_____	_____
PHY 1B	Principles of Physics	II, III	3	_____	_____
Computer Science (<i>select one</i>)					
CMN 12Y	Data Visualization	I, II, III	4	_____	_____
PLS 21 or PLS 21V	Applications of Computers in Technology	I, II, III	3	_____	_____
Economics					
ECN 1A, 1AV, or 1AY	Principles of Microeconomics	I, II, III, IV	4	_____	<u>Need C- or better</u>
ECN 1B or 1BV	Principles of Macroeconomics	I, II, III, IV	4	_____	<u>Need C- or better</u>
Environmental Science (<i>select one</i>)					
ANS 1	Domestic Animals and People	I	4	_____	_____
ATM 60	Introduction to Atmospheric Science	I	4	_____	_____
AVS 13	Birds, Humans, & the Environment	I	3	_____	_____
GEL 1	The Earth	I, II, III	4	_____	_____
HYD/SAS 10	Water, Power, Society	III	3	_____	_____
PLS/SAS 12	Plants and Society	I, II, III	4	_____	_____
SSC 10	Soils in Our Environment	I	3	_____	_____
Environmental Studies					
ESP 1	Environmental Analysis	I, IV	4	_____	_____
Mathematics					
MAT 16A, 17A, 19A, or 21A	Calculus	I, II, III, IV	3-4	_____	<u>Need C- or better</u>
MAT 16B, 17B, 19B, or 21B	Calculus	I, II, III, IV	3-4	_____	<u>Need C- or better</u>
Political Science					
POL 1 or 1Y	American National Government	Varies	4	_____	<u>POL 1 is generally offered twice a year</u>
Statistics (<i>select one</i>)					
STA 13	Elementary Statistics	I, II, III, IV	4	_____	_____
STA 32	Statistical Analysis through Computers	II, III	3	_____	_____

I = fall quarter, II = winter quarter, III = spring quarter, IV = summer session

*Course is offered in odd years only (2023, 2025, etc.)

**Course is offered in even years only (2024, 2026, etc.)

Depth Subject Matter Requirements

NOTE: Students graduating with this major are required to attain at least a C average (2.0 GPA) in all courses taken at the university in Depth Subject Matter *and* pass all coursework. See requirements of the College of Agriculture & Environmental Science in the UC Davis General Catalog.

Depth Subject Matter	Prerequisites	Qtr(s)	Units	Completed	
Evaluation and Analysis					
ESP 110	Principles of Environmental Science	PHY 1A or 7A; MAT 16B, 17B, or 21B; BIS 2A or 10 recommended	II	4	_____
ESP 160	The Policy Process	POL 1; ECN 1A and STA 13 recommended	III	4	_____
ESP 168A	Methods of Environmental Policy Analysis	ESP 1 or 10; STA 13 or 100; ECN 1A; ECN 100A recommended	I	5	_____
ESP 168B	Methods of Environmental Policy Evaluation	ESP 168A	III	4	_____
Environmental Law					
ESP 161	Environmental Law	Upper division standing and one course in env science; POL 1 and UWP 1 recommended	I, III	4	_____
Environmental Impact Assessment					
ESP 179	Environmental Impact Assessment	ESP 1 or the equivalent	II, IV	4	_____
Research Design					
ESP 178	Applied Research Methods	ARE 106 or SOC 106 or STA 100 or 103 or 108 or equivalent	II	4	_____
Select one Quantitative Methods Course					
SOC 106	Intermediate Social Statistics	SOC 46B or SOC 56 or consent of instructor	I, III	5	_____
STA 100	Applied Statistics for Biological Sciences	MAT 16B or 17B or 21B with a C- or better	I, II, III, IV	4	_____
STA 103	Applied Statistics for Business & Economics	STA 13, 32, or 100; MAT 16B or 17B or 21B with a C- or better	I, II, III, IV	4	_____
STA 108	Applied Stat Methods: Regression Analysis	STA 13, 32, or 100 with a C- or better	I, II, III, IV	4	_____
Select one Microeconomics Course					
ARE 100A	Intermediate Microeconomics	ECN 1A-B; MAT 16C or 17B or 21B; All with C- or better	I, II, III, IV	4	_____
ECN 100A	Intermediate Micro Theory	ECN 1A-B; MAT 16B or 17B or 21B; All with C- or better	I, II, III, IV	4	_____
Select one Resource Economics Course					
ARE/ESP 175	Natural Resource Economics	ARE 100A or ECN 100A or ECN 100 with a C- or better	III	4	_____
ARE 176	Environmental Economics	ARE 100A or ECN 100A or ECN 100 with a C- or better	I	4	_____
ECN 125	Energy Economics	ARE 100A or ECN 100A or ECN 100	Varies	4	_____
Select one Environmental Data Science Course					
ABT/LDA 150	Introduction to GIS	None	I, II, III	4	_____
ESP 106	Environmental Data Science	STA 13, 32, or 100 (can be concurrent)	II	4	_____
Recommended but not required: One advanced GIS or remote sensing course					
ABT 181N*	Concepts & Methods in GIS	LDA 150 or consent of instructor	II	4	_____
ABT/HYD 182**	Environmental Analysis with GIS	LDA 150 or equiv GIS exp, bio and/or ecology courses rec.	II	4	_____
ESM 185	Aerial Photo Interpretation & Rmt Sensing	Upper division standing	I	4	_____
ESM 186	Environmental Remote Sensing	MAT 16B; PHY 7C or 9B; LDA 150 recommended	II	5	_____

I = fall quarter, II = winter quarter, III = spring quarter, IV = summer session

*Course is offered in odd years only (2023, 2025, etc.)

**Course is offered in even years only (2024, 2026, etc.)

Water Management

Track Courses	Prerequisites	Qtr(s)	Units	Completed	
Note: The same course cannot be used to meet both a depth requirement and a track requirement at the same time.					
Select two policy courses					
ESP 166	Ocean & Coastal Policy	ESP 1 or consent of instructor	I	3	_____
ESP 169**	Water Policy and Politics	ECN 1A or POL 1 recommended	III	3	_____
ESP 174	Environmental Justice Policy & Practice	ESP 1 or equivalent recommended	III	4	_____
HYD 150	Water Law	Upper division standing or consent of instructor	II	3	_____
Select any two courses from below					
Freshwater/General Water Science					
ESM 100	Principles of Hydrologic Science	CHE 2B; Math 16B; PHY 7A or 9A	I	4	_____
ESM 121	Water Science & Management	PHY 10 or GEL 1	III	3	_____
ESP 151	Limnology	BIS 2A and 2B; BIS 2C and ESP 100 or EVE 101 recommended	III	4	_____
ESP 155	Wetland Ecology	BIS 2A or equivalent; ESP 100 or EVE 101 recommended		4	_____
HYD 141	Physical Hydrology	PHY 9B; MAT 21B; HYD 100 recommended		4	_____
HYD 143**	Ecohydrology	HYD 10 or 141 or ESP 1 or ESM 100 or 108 or 120 or GEL 1 or 50 or SSC 100	II	3	_____
SSC 118	Soils in Land Use & the Environment	SSC 100 or equivalent recommended or consent of instructor	III	4	_____
WFC 120	Biology & Conservation of Fishes	BIS 2A-C; upper division ecology course recommended	I	3	_____
GEL 134*	Env Geology & Land Use Planning	GEL 1 or 50; consent of instructor	II	3	_____
Coastal					
BIS 124	Coastal Marine Research	Acceptance into the Bodega Marine Lab summer program	IV	6	_____
ESP 116N	Oceanography	GEL 1, 2, 16, or 50	III	3	_____
ESP 124	Marine and Coastal Field Ecology	Acceptance into the Bodega Marine Lab summer program	IV	3	_____
ESP 150C	Biological Oceanography	Acceptance into the Bodega Marine Lab summer program	IV	3	_____
ESP 152	Coastal Oceanography	Acceptance into the Bodega Marine Lab summer program	IV	3	_____

I = fall quarter, II = winter quarter, III = spring quarter, IV = summer session

*Course is offered in odd years only (2023, 2025, etc.)

**Course is offered in even years only (2024, 2026, etc.)