

<p>Composition Requirements: (3-6 Units)</p> <p>ENGL 101/107 – English 1st semester Composition 3 _____</p> <p>ENGL 102/108 – English 2nd semester Composition 3 _____</p> <p>Or ENGL 109H – Advanced First Year Composition 3 _____</p>	<p>Computer Skills Requirements: (4 Units)</p> <p>AREC 297 – Excel Applc. for Econ. Analy (Sp) 1 _____</p> <p>BE 120 or MIS 111 (Sp) Microcomputing Applctns 3 _____</p>
<p>Math requirements: (MATH100 --> MATH 112 & AREC 197c, --> MATH113/116 & AREC 239) (11 Units)</p> <ul style="list-style-type: none"> College Algebra, MATH112 or transfer equivalent course, C or better final grade required. 3 _____ Marginal Analysis for Economists, AREC197c, (F), (pre-req MATH112 placement or completion) 1 _____ Introductory Statistics & Data Analysis, AREC 239,(Sp) 4 _____ Calculus: 1 course from MATH 113 or MATH 116- (pre-req MIS11 or BE120), 122A/B, 125 or 129. 3 _____ 	<p>Economics Requirements: (6 Units)</p> <p>ECON 200 – Basic Economic Issues 3 _____</p> <p>(Transfer crs: ECON201A[micro]/ECON201B[macro])</p> <p>Intermediate Microeconomics:</p> <p>AREC304 (F) Production & Consumption Anlys 3 _____</p>
<p>Second Language: 2nd semester must be 'C' or better (0-8 Units)</p> <p>Complete <u>one</u> of the following or CLEP exam:</p> <p>A. Pass a language proficiency exam at 2nd semester level _____</p> <p>B. Complete courses through 2nd semester proficiency _____</p>	<p>EWRE Required Core Courses: (21 Units)</p> <ul style="list-style-type: none"> AREC 217 – Econ. Food & Ag., Sustn. Soltns for Chg World 3 _____ AREC 339 – Economic Statistics (F) *** 3 _____ AREC 360 – Poverty & Development of Nations (Sp) 3 _____ AREC 403 – Analysis of Economic Data ***& AREC339 3 _____ AREC 464 – Economics of Policy Analysis (F) **** 3 _____ AREC 479 – Econ. Anlys. of Water, Food & Env Pol. (Sp)**** 3 _____ Environmental Economics related course 3 _____ <p>***pre-req calculus OR ****pre-req calc & interm. microeco</p>
<p>General Education:</p> <p>UNIV 101, intro portfolio, 1 unit required</p> <p>Building Connections 9 units required. 3 courses</p> <p>Exploring Perspectives 12 units required. 4 courses</p> <p>Artist</p> <p>Humanist</p> <p>Natural Scientist</p> <p>AREC217, required course & EP Social Scientist</p> <p>UNIV 301, intro portfolio, 1 unit required</p>	<p>Focus Area Courses/Units (FA): (21 units)</p> <p>1.) _____ 5.) _____</p> <p>2.) _____ 6.) _____</p> <p>3.) _____ 7.) _____</p> <p>4.) _____</p>
<p>Mid-Career Writing Assessment (MCWA): Satisfied by a grade of A or B in 2nd semester English Comp or from one of: AED301, ALC422, AREC360, AREC450, AREC464, AREC479, ENGL307, ENGL308 and ENGL340.</p>	<p>Currently:</p> <ul style="list-style-type: none"> Total Units Required for Degree = 120 _____/120 Total Upper Division (UD) Units Req'd = 42 _____/42 Remaining to be completed: _____ All units / _____ UD 2.0 GPA required for all GPAs to graduate: major, minor & cumulative 17 units of electives needed (103 total units from major and foundation courses), less electives needed if a minor is declared.
<p>Communication Skills Courses, choose 2 courses (5-6 Units)</p> <p>_____ <input type="checkbox"/> AED 301 Youth Leadership</p> <p>_____ <input type="checkbox"/> ALC 309 Leadership Principles & Practice</p> <p>_____ <input type="checkbox"/> AED 311 Professional Leadership Concepts</p> <p>_____ <input type="checkbox"/> ALC 409 Team & Organization Leadership</p> <p>_____ <input type="checkbox"/> ALC 410 Entrepreneurial Leadership in Ag & Life Sci.</p> <p>_____ <input type="checkbox"/> ALC 411 Principles & Appl. Of Org. Innovation</p> <p>_____ <input type="checkbox"/> ALC 422 Comm. Knowledge in Ag & Life Sci.</p> <p>_____ <input type="checkbox"/> COMM 101 Into to the Study of Communication</p> <p>_____ <input type="checkbox"/> COMM 119 Public Speaking</p> <p>_____ <input type="checkbox"/> ENGL 307 Business Writing</p> <p>_____ <input type="checkbox"/> ENGL 308 Technical Writing</p> <p>_____ <input type="checkbox"/> ENGL 340 Topics in Professional & Technical Writing</p> <p>_____ <input type="checkbox"/> ENVS 408 Scientific Writing for Env, Agric & Life Sciences*</p> <p>_____ <input type="checkbox"/> ENVS 415 Translating Environmental Science *</p> <p>_____ <input type="checkbox"/> HED 201 Foundations of Leadership</p> <p>_____ <input type="checkbox"/> HED 397b Project SOAR (2 units)</p> <p>_____ <input type="checkbox"/> SBE 202 Professional Communication & Presentations (Sp)</p> <p>* ENVS 408 and 415 will not count as both a Comm Skills course & focus area course.</p>	<p>Elective courses in AREC, not required with this major: Units</p> <p>AREC 150C-Sustaining Life: Global Economy of Food (F, BC) 3</p> <p>AREC 210-Understanding World of Commerce (Sp, EP Soc Sci) 3</p> <p>AREC 313-Economics of Futures Markets (F, can be FA course) 3</p> <p>AREC 315-Agribusiness Econ & Mgmt (F, can be FA course) 3</p> <p>AREC 365-Food Economy -Efficiencies, Gaps & Pols (BC, FA) 3</p> <p>AREC 397-Preparing for Career & Life Success (F) 1</p> <p>AREC 450-Financ. Mgmt for Agribus. (Sp, can be FA course) 3</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

**Bachelor of Science in
Environmental & Water Resource
Economics**

**2023+ EWRE
General 4 year
plan**



Fall, Semester 1	
MATH 112, College Algebra	3
ENGL 1st semester composition	3
1st semester 2nd language	4
AREC 197c, Marginal Anlys for Economists	1
GE Core: EP or BC (BC: AREC150C)	3
GE Core: EP or BC	3
Total semester units:	17

Spring, Semester 2	
ENGL 2nd semester composition	3
2nd semester 2nd language	4
AREC217, EP Soc. Sci, EWRE reqmt	3
MIS 111-(Sp only) or BE 120	3
GE Core: EP or BC	3
UNIV 101, req'd	1
Total semester units:	17

Fall, Semester 3	
MATH 113/116, calculus, req'd	3
ECON 200, req'd	3
GE Core: EP or BC (BC: AREC365)	3
GE Core: EP or BC	3
GE Core: EP or BC	3
Total semester units:	15

Spring, Semester 4	
AREC 239, Sp only, Intro Statistics & Data Analysis, req'd	4
AREC 297, req'd, Spring only	1
Focus Area course 1 of 7	3
Communication skills course 1	3
UNIV 301, req'd	1
Minor or Elective, to reach 120 total units	2
Total semester units:	14

Fall, Semester 5	
AREC 304, req'd, Fall only	3
AREC 339, req'd, Fall only	3
Environmental Econ course, UD	3
Focus Area course 2 of 7	3
UD minor course or UD elective	3
Total semester units:	15

Spring, Semester 6	
AREC 360, req'd, Spring only	3
Communication skills course 2	3
Focus Area course 3 of 7, UD	3
Focus Area course 4 of 7, UD	3
UD minor course or UD elective	3
Total semester units:	15

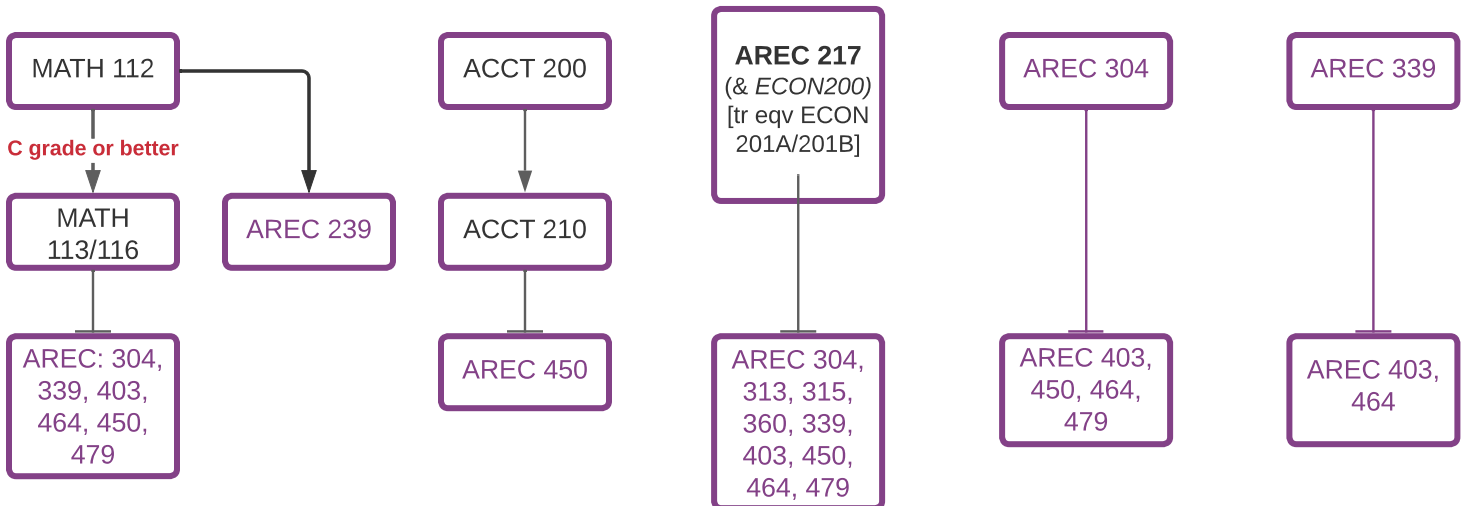
Fall, Semester 7	
AREC 464, req'd, Fall only	3
Focus Area course 5 of 7, UD	3
Focus Area course 6 of 7, UD	3
UD minor course or UD elective	3
Minor or Elective, to reach 120 total units	3
Total semester units:	15

Spring, Semester 8	
AREC 403, req'd, Spring only	3
AREC 479, req'd, Spring only	3
Minor or Elective, to reach 120 total units	3
Focus Area course 7 of 7	3
Total semester units:	12

Bachelor of Science in: Agribusiness Economics & Management (ABEM) emphasis options

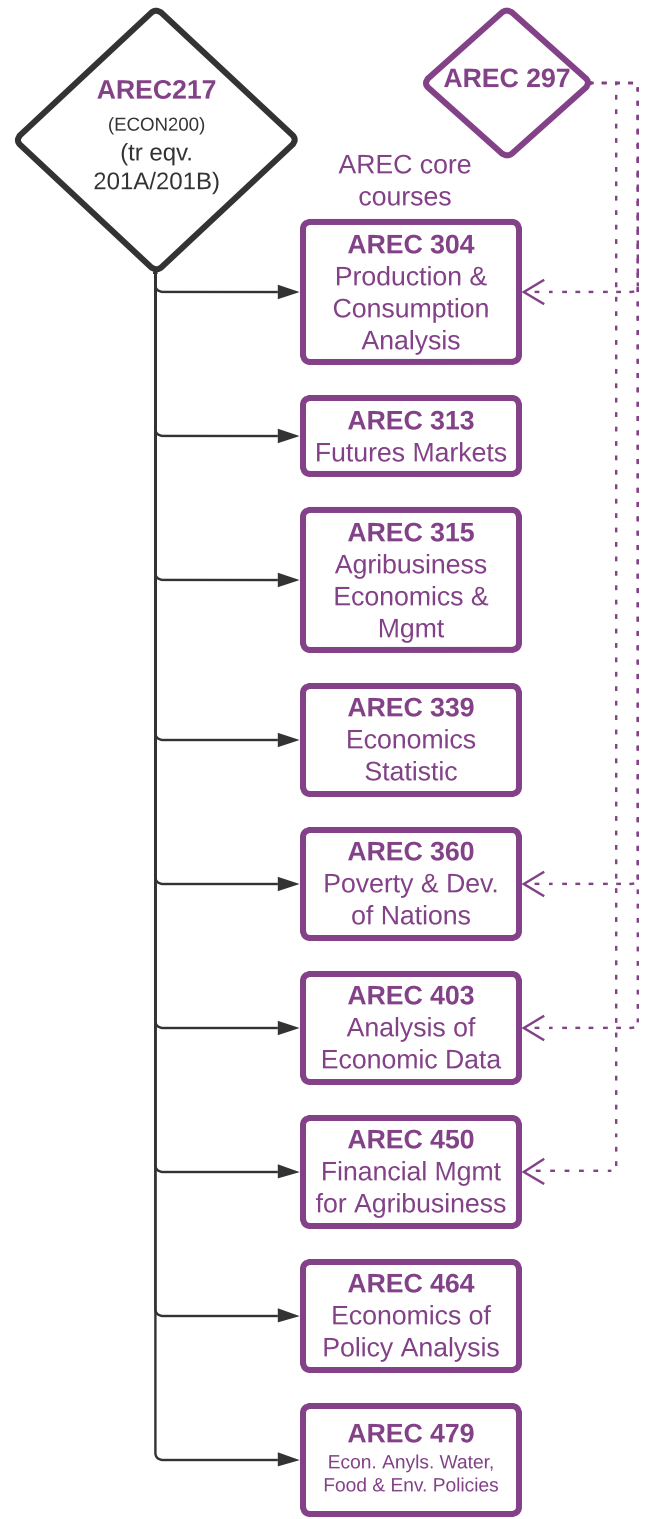
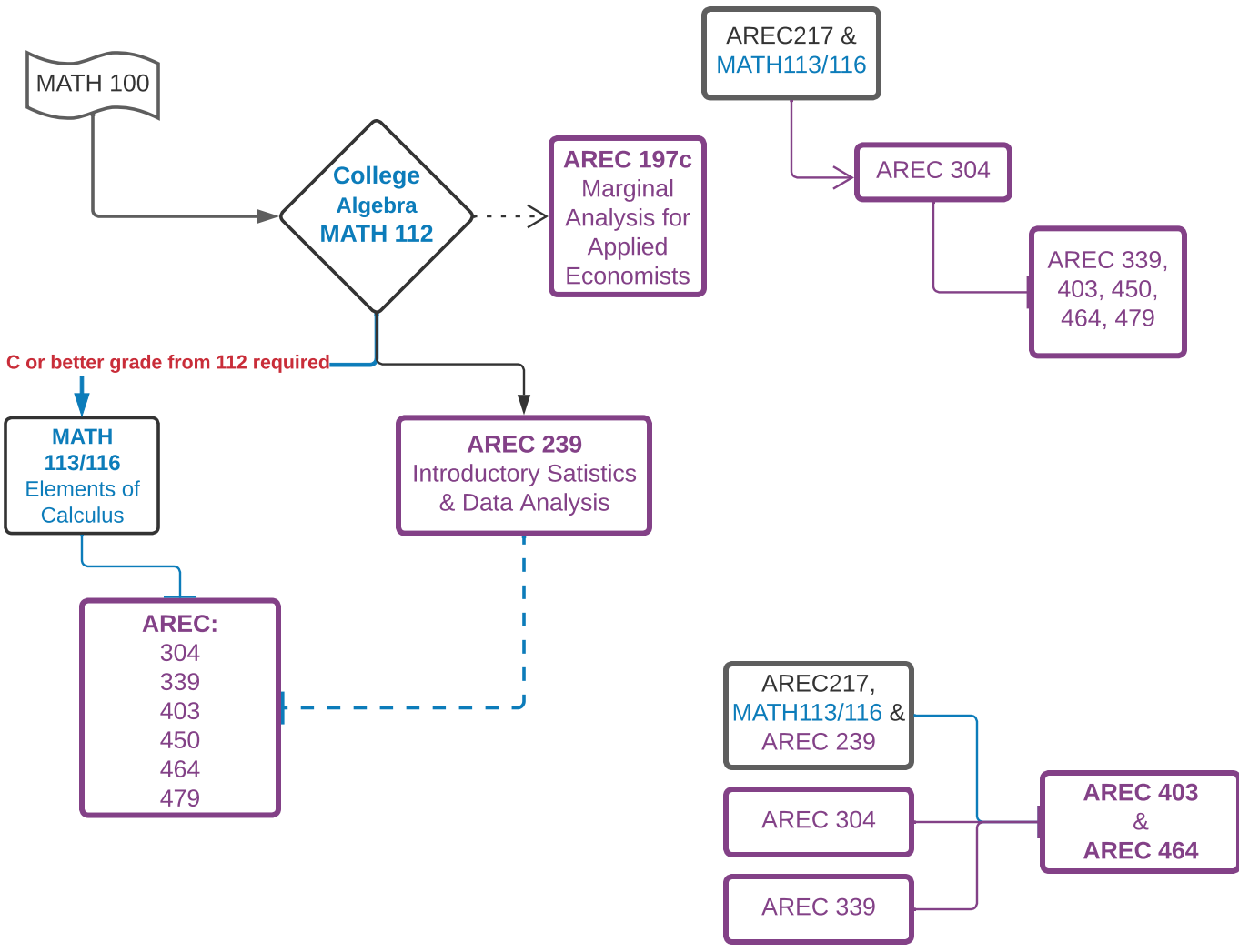
Bachelor of Science in: Environmental & Water Resource Economics (EWRE)

Agribusiness Management emphasis (ABEM-MGMT) (57 units + 9 BNAD minor units, & 20 elective units to each 120)		Agricultural Economics (ABEM-ECON) emphasis (57 units, minor optional/suggested, 29 additional elective units to reach 120)		Environmental & Water Resource Economics (EWRE) (68 units, minor suggested, 18 elective units to reach 120)	
Required: AREC 297: Excel Applications for Economic Analysis (1 unit)	Required: AREC 217 Economics of Food & Agriculture: Sustainable Solutions for a Changing World (EP: Social Scientist)	Required: AREC 297: Excel Applications for Economic Analysis (1 unit)	Required: AREC 217 Economics of Food & Agriculture: Sustainable Solutions for a Changing World (EP: Social Scientist)	Required: AREC 297: Excel Applications for Economic Analysis (1 unit)	Required: AREC 217 Economics of Food and Agriculture: Sustainable Solutions for a Changing World (EP: Social Scientist)
Required Supporting coursework (3): ECON200, MIS111, ACCT200		Supporting coursework (3): ECON200, & BE120 or MIS111, & ACCT200		Required pre-reqs (2): ECON 200, & BE 120 or MIS 111	
Required Math (3): MATH112 & MATH113/116 & AREC 239- "Intro Statistics & Data Analysis" AREC197 suggested 1 unit, Marginal Anyls Applied Econ.	Required Communication Skills (2): Variety of course options from which to choose.	Required Math (3): MATH112 & MATH113/116 & AREC 239- "Intro Statistics & Data Analysis" AREC197 suggested 1 unit, Marginal Anyls Applied Econ.	Required Communication Skills (2): Variety of course options from which to choose.	Required Math (3): MATH112 & MATH113/116 & AREC 239- "Intro Statistics & Data Analysis" AREC197 suggested 1 unit, Marginal Anyls Applied Econ.	Required Math (3): MATH112 & MATH113/116 & AREC 239- "Intro Statistics & Data Analysis" AREC197 suggested 1 unit, Marginal Anyls Applied Econ.
ABEM-MGMT Core Required (8): Fall: AREC 304, AREC 313, AREC 315, AREC 339, & AREC 464 Spring: AREC 360, AREC 403, & AREC 450		ABEM-ECON required core (6): Fall: AREC 304, AREC 315, AREC 339, AREC 464 & Spring: AREC 403, AREC 479		EWRE core & concentration (7): Fall: AREC 304, AREC 339, AREC 464 Spring: AREC 360, AREC 403, AREC 479 Variable: concentration course	
BNAD minor is required with this emphasis		Concentration courses (2): 1 of 2 must be from AREC course subject: AREC313, AREC360, AREC365 & AREC450, the 2nd course may come from an alternate course list provided by ABEM academic advisor.		Focus Area (FA) Required: 21 units, from variety of course options	
+ ACCT 200, ECON 200 & MIS 111 BNAD 301, 302 & 303				+	



For diagram purposes only, not all degree requirements shown here. upd: 4/2023

AREC flowchart of standard pre-reqs & core requirements for ABEM & EWRE
 • - - - - = suggested to take prior to AREC course
 • _____ = required pre-requisite/course sequence



Focus Area (FA) course options: this list is not exhaustive, some courses have pre-reqs, please seek EWRE advisor approval prior to taking courses not listed below.

- AREC 365 Food Econ&Efficiencies (Fall)
- ARC 461E - Sustainable Design and the LEED Initiative
- BE 483 - Controlled Environment Sys.
- EHS 418 - Introduction to Human Health Risk Assessment
- ECOL/WFSC 454 - Water Harvesting
- ENVS 310 - Ecosystem Health Sys & Justice
- ENVS 305 - Pollution Science
- ENVS 316 - Soil Fertility & Plant Nutrition
- ENVS 450 - Green Infrastructure
- ENVS 462 - Env Soil & Water Chemistry
- ENVS 408 Scientific Writing for Env, Ag & Life Sciences (S) (Cannot share w/ comm skills)
- ENVS 415 Translating Environmental Science (S) (Cannot share w/ comm skills)
- ENVS/RNR 417 - Geog Inform Sys for Natural Resources (F, S)
- ENVS 418 - Intro to Human Health Risk Assessment (S)
- ENVS 444 Applied Env Law (F)
- ENVS 483 - Remote Sens. of the Env (S)
- EVS 260 - Environmental Studies: Ideas & Institutions
- GEOG 302 - Intro to Sustainable Dev.
- GEOG 303 - Field Study in Env. Geog.
- GEOG 304 - Water, Envmt & Society
- GEOG 330 - Intro to Remote Sensing (F)
- GEOG 362 - Environment & Developmt.
- GEOG 368 - The Green Economy
- GEOG 371 - Principles & Prct Reg Dev
- GEOG 379 - Urban Growth & Devlpmt
- GEOG 468 - Water & Sustainability
- GEOG 416f - GIS for Social Sciences (S)
- GEOG/AREC - 471 Problems in Reg Dev
- GEOS/ENVS - 412A - Ocean Sciences
- HIST 355 - U.S. Env. History (S)
- HIST 356 - Global Env History
- HWRS 415 - Intro Water Res Policy (S)
- HWRS 417A - Fundamentals of Water Quality
- HWRS 443A - Risk Assessment for Environmental Systems
- HWRS 460A - Watershed Hydrology
- PA 481 - Environmental Policy (S)
- PA 484 - Environmental Mgmt.
- PLG/GEOG 476 - The Land Development Process
- RNR 440 - Climate Change Adaptn.
- RNR 448 - Conservation Plng. & Wildland Recreation
- RNR 473 - Spatial Anlys. & Modeling
- RNR 496G - Climate Assessment: Explorations in Decision Support
- RNR 256 - Sustainable Cities & Soc.
- RNR 316 - Natural Res. Ecology
- RNR 321 - Natural Res. Measrmt (S)
- RNR 384 - Natural Res Mgmt Prcts.
- RNR 403 - Applications of Geographic Information Systems (F, S)
- RNR 480 - Natural Res Policy & Law
- RNR 485a - Natural Res Econ & Plng (S)
- SCI 396A- Lab to Capitol Hill: Science & Law (Sp)
- SCI 401 - Science Communication

Alternate concentration course options for EWRE & Ag-Econ emphasis ABEM majors. Any not taken for the concentration area in the major can also be used as focus area courses for EWRE majors. Confirm offerings in schedule of classes.

- **ACBS 411** Agriculture, Environmental and Legal Issues
- **ARC 461A** Water Efficiency in Buildings
- **AREC 365** Food Economy & Efficiencies (Fall only)
- **ENVS 450** Green Infrastructure
- **ENVS 482** Reclamation and Redevelopment of Impacted Lands
- **GEOG 302** Introduction to Sustainable Development
- **GEOG 304** Water, Environment, and Society
- **GEOG 305** Economic Geography
- **GEOG 330** Intro to Remote Sensing
- **GEOG 368** The Green Economy
- **GEOG 370** Geography of International Development
- **GEOG 371** Principles and Practices of Regional Development
- **GEOG 379** Urban Growth and Development
- **GEOG 497S** Sustainable Urban Development and Design
- **GEOG/RNR 403** Applications of Geographic Information Systems
- **GEOG 416F** GIS for the Social Sciences
- **GEOG/GIST/RNR 417** Geographic Information Systems for Natural & Social Sciences
- **GEOG/RNR 422** Resource Mapping Using Unmanned Aircraft Systems
- **GEOG 430** The Climate System (Pre-requisites are GEOG 230 OR ATMO 336)
- **GEOG 471** Problems in Regional Development
- **GEOG 476** The Land Development Process
- **GEOG 497F** Community and School Garden Workshop (2-6 units)
- **HIST 442** Natural Res & the Law in the Spanish Borderlands of N.A.
- **PHIL/PA 323** Environmental Ethics
- **PA 484** Environmental Mgmt. (*if* offered & if seats available after Nov. 30, enrollment is allowed per P.A. dept.)
- **RNR 316** Natural Res. Ecology (pre-reqs ECOL 182R/L & RNR230)
- **RNR 321** Ecological Surveys and Sampling (pre-req intro stats)
- **RNR 340** Conservation and Agriculture in the Southwest
- **RNR 384** Natural Resources Management Practices
- **RNR 429** Ecological Climatology
- **RNR 440** Perspectives Nexus of Science, Society, & Res. Mgmt.
- **RNR 441A** Natural Resource Management in Native Communities
- **RNR 448** Conservation Planning & Wildland Recreation
- **RNR 458** Ecosystem Ecology & Sustainable Future (pre-req RNR 316 or ECOL 302)
- **RNR 473** Spatial Analysis & Modeling (pre-reqs RNR 417 & stats course)
- **RNR 480** Natural Resources Policy and Law
- **RNR 485** The Economics & Social Connections to Natural Resources
- **WSM 468** Wildland Water Quality