

## SUSTAINABILITY MINOR (18 Credits)

### REQUIRED COURSES (9 Credits)

SUST 1103	Foundations of Sustainability
SUST 2103	Applications of Sustainability
SUST 4103	Capstone in Sustainability

### REQUIRED ELECTIVE COURSES (9 Credits)

TIER 1 Elective  
TIER 1 Elective  
TIER 1 or TIER 2 Elective

## STUDENT INFORMATION AND SIGNATURES

### STUDENT INFORMATION

STUDENT NAME  
STUDENT MAJOR  
STUDENT ID NUMBER

### SIGNATURES

Student  
Major Advisor  
SUST Coordinator

return form to Rachel Fletcher ([rachelf@uark.edu](mailto:rachelf@uark.edu)) and Ken McCown ([kennethm@uark.edu](mailto:kennethm@uark.edu))

Students must earn a grade of 'C' or better for all courses to fulfill the requirements of the Minor. Students may take courses from any systems area and from any combination of areas. **Tier 1** courses focus upon content directly applicable to sustainability. **Tier 2** courses provide foundational knowledge needed to understand sustainability principles.

## TIER 1 - NATURAL SYSTEMS (use 1 to 3)

BENG 4933	Sustainable Watershed Engineering (Fa) 3 hrs
BIOL 3861L	General Ecology Laboratory (Fa) 1 hr
BIOL 3863	General Ecology (Sp, Fa) 3 hrs
BIOL 4154	Biology of Global Change (Sp) 4 hrs (BIOL 4154H also can be used)
BIOL 4174	Conservation Genetics (Sp) 4 hrs
CHEM 4283	Energy Conversion and Storage (Even years, Fa) 3 hrs
CSES 3214	Soil Resources and Nutrient Cycles (Odd years, Sp) 3 hrs
ENSC 3003	Introduction to Water Science (Sp) 3 hrs
ENSC 3103	Plants and Environmental Restoration (Odd years, Fa) 3 hrs
ENSC 3223	Ecosystems Assessment (Even years, Fa) 3 hrs (+ENSC 3221L)
ENSC 3263	Environmental Soil and Water Conservation (Even yrs, Fa) 3 hrs
ENSC 4023	Water Quality (Fa) 3 hrs
ENSC 4263	Environmental Soil Science (Even years, Sp) 3 hrs
GEOS 3043	Sustaining Earth (Sp, Su, Fa) 3 Hrs.
GEOS 4933	Ancient Forests: Science and Sustainability (Sp) 3 Hrs

## TIER 2 - NATURAL SYSTEMS (use 1)

BIOL 1543	Principles of Biology (ACTS Equivalency = BIOL 1014 Lect.) (Sp, Su, Fa) 3 hrs
CHEM 1103	University Chemistry I (Su, Fa) 3 hrs
CHEM 1123	University Chemistry II (ACTS Equivalency = CHEM 1004 Lect.) (Sp, Su, Fa) 3 hrs
CHEM 3603	Organic Chemistry I (Su, Fa) 3 hrs.
CHEM 3703	Organic Chemistry I Lecture for Majors (Fa) 3 hrs
CSES 2201L	Soil Science Laboratory (Fa). 1 Hour.
CSES 2203	Soil Science (Fa). 3 Hours.
ENSC 1003	Environmental Science (Fa). 3 Hours.
GEOS 1111L	General Geology Laboratory (ACTS Equivalency = GEOL 1114 Lab) (Sp, Su, Fa) 1 hr
GEOS 1113	General Geology (ACTS Equivalency = GEOL 1114 Lect.) (Sp, Su, Fa) 3 hrs
GEOS 1131L	Environmental Geology Laboratory (ACTS Equivalency = GEOL 1124 Lab) (Sp) 1 hr
GEOS 1133	Earth Science (ACTS Equivalency = GEOL 1124 Lect.) (Sp) 3 hrs
GEOS 2003	World Regional Geography (ACTS Equivalency = GEOG 2103) (Sp, Fa) 3 hrs
GEOS 3333	Oceanography (Even years, Sp) 3 hrs
GEOS 3383	Principles of Landscape Evolution (Fa) 3 hrs
GEOS 4033	Hydrogeology (Sp) 3 hrs
GEOS 4053	Geomorphology (Sp) 3 hrs
GEOS 4063	Principles of Geochemistry (Fa) 3 hrs
GEOS 4353	Meteorology (Fa) 3 hrs
GEOS 4363	Climatology (Sp) 3 hrs
GEOS 4413	Principles of Remote Sensing (Fa) 3 hrs
MATH 4163	Dynamic Models in Biology (Irregular) 3 hrs
PHYS 2054	University Physics I (ACTS Equivalency = PHYS 2034) (Sp, Su, Fa) 4 hrs
PHYS 2074	University Physics II (ACTS Equivalency = PHYS 2044 Lect) (Sp, Su, Fa) 4 hrs

### **TIER 1 - MANAGED SYSTEMS** *(use 1 to 3)*

AGEC 3413	Principles of Environmental Economics <i>(Sp)</i> 3 hrs
AGEC 3413H	Honors Principles of Environmental Economics <i>(Sp)</i> 3 hrs
AGEC 3523	Environmental and Natural Resources Law <i>(Even years, Sp)</i> 3 hrs
AGED 4003	Issues in Agriculture <i>(Fa)</i> 3 hrs
AGED 4443	Principles of Technological Change <i>(Odd years, Fa)</i> 3 hrs
BENG 3603	Metrics for Sustainable Agricultural Systems <i>(Fa)</i> 3 hrs
CSES 3214	Soil Resources and Nutrient Cycles <i>(Odd years, Sp)</i> 4 hrs
ECON 3843	Economic Development, Poverty, and the Role of the World Bank and IMF in Low-Income Countries <i>(Fa)</i> 3 hrs
ENSC 3103	Plants and Environmental Restoration <i>(Odd years, Fa)</i> 3 hrs
ENSC 3223	Ecosystems Assessment <i>(Even years, Fa)</i> 3 hrs
ENSC 3263	Environmental Soil and Water Conservation <i>(Even years, Fa)</i> 3 hrs
ENSC 404V	Soils and Civilization <i>(Irregular)</i> 3 hrs
ENSC 4023	Water Quality <i>(Fa)</i> 3 hrs
ENSC 4263	Environmental Soil Science <i>(Even years, Sp)</i> 3 hrs
HORT 3503	Sustainable and Organic Horticulture <i>(Even years, Fa)</i> 3 hrs
MGMT 4243	Ethics and Corporate Responsibility <i>(Sp, Fa)</i> 3 hrs
SCMT 4123	Sustainable Logistics and Supply Chain Management <i>(Irregular)</i> 3 hrs
SCMT 4853	Cross-Sector Collaboration for Sustainability <i>(Sp)</i> 3 hrs
WCOB 3023	Sustainability in Business <i>(Irregular)</i> 3 hrs

### **TIER 2 - MANAGED SYSTEMS** *(use 1)*

AGME 1613	Fundamentals of Agricultural Systems Technology <i>(Fa)</i> 3 hrs
CSES 2012	Introduction to Organic Crop Production <i>(Odd years, Sp)</i> 2 hrs
CSES 2201L	Soil Science Laboratory <i>(Fa)</i> 1 hr
CSES 2203	Soil Science <i>(Fa)</i> 3 hrs
ENSC 1003	Environmental Science <i>(Fa)</i> 3 hrs

### **TIER 1 - BUILT SYSTEMS** (use 1 to 3)

BENG 3653	Global Bio-Energy Engineering (Fa) 3 hrs
BENG 4663	Sustainable Biosystems Designs (Sp) 3 hrs
CVEG 3243	Environmental Engineering (Sp, Fa) 3 hrs
CVEG 4243	Environmental Engineering Design (Sp, Fa) 3 hrs
CVEG 4863	Sustainability in Civil Engineering (Irregular) 3 hrs
GEOS 4383	Hazard and Disaster Assessment, Mitigation, Risk and Policy (Sp) 3 hrs
LARC 4753	Incremental Sprawl Repair (Irregular) 3 hrs
LARC 5043	Housing as if the Future Matters (Irregular) 3 hrs
LARC 5493	Environmental Land Use Planning (Sp) 3 hrs
MEEG 4453	Industrial Waste and Energy Management (Irregular) 3 hrs
MEEG 4473	Indoor Environmental Design (Irregular) 3 hrs

### **TIER 2 - BUILT SYSTEMS** (use 1)

ARCH 2113	Architectural Structures I (Fa) 3 hrs
ARCH 2132	Environmental Technology I (Fa) 2 hrs
ARCH 3143	Building Materials and Assemblies (Fa) 3 hrs
ARCH 4152	Building Systems Integration (Sp, Fa) 2 hrs
CSCE 4233	Low Power Digital Systems (Irregular) 3 hrs
CVEG 4323	Design of Structural Systems (Sp) 3 hrs
GEOS 4073	Urban Geography (Sp) 3 hrs
GEOS 3543	Geospatial Applications and Information Science (Fa) 3 hrs
IDES 3833	Interior Building Systems (Fa) 3 hrs
LARC 4743	Public Participation in Design and Planning (Irregular) 3 hrs
TEED 2103	Technology and Society (Fa) 3 hrs

### **TIER 1 - SOCIAL SYSTEMS** (use 1 to 3)

AGEC 3523	Environmental and Natural Resources Law ( <i>Even years, Sp</i> ) 3 hrs
AGEC 4163	Agricultural and Rural Development ( <i>Fa</i> ) 3 hrs
ANTH 4143	Ecological Anthropology ( <i>Irregular</i> ) 3 hrs
CHLP 4553	Environmental Health ( <i>Sp</i> ) 3 hrs
COMM 4643	Environmental Communication ( <i>Irregular</i> ) 3 hrs
ENGL 4133	Writing Nature ( <i>Sp</i> ) 3 hrs.
ENSC 3933	Environmental Ethics ( <i>Odd years, Sp</i> ) 3 hrs
PHIL 3113	Environmental Ethics ( <i>Odd years, Sp</i> ) 3 hrs (crosslisted with ENSC 3933)
GDES 4363	Design for Complexity ( <i>Odd years, Sp</i> ) 3 hrs
GEOS 4693	Environmental Justice ( <i>Sp</i> ) 3 hrs
GEOS 4693H	Honors Environmental Justice ( <i>Sp</i> ) 3 hrs
HIST 4473	Environmental History ( <i>Irregular</i> ) 3 hrs
RESM 1023	Recreation and Natural Resources ( <i>Sp, Su, Fa</i> ) 3 hrs
RESM 4023	Outdoor Adventure Leadership ( <i>Su</i> ) 3 hrs
RSOC 4603	Environmental Sociology ( <i>Sp</i> ) 3 hrs

### **TIER 2 - SOCIAL SYSTEMS** (use 1)

CHLP 4643	Multicultural Health ( <i>Sp</i> ) 3 hrs
GDES 4353	Human-Centered Design ( <i>Fa</i> ) 3 hrs
HIST 3273	Agricultural and Rural History of the United States ( <i>Irregular</i> ) 3 hrs
HIST 3323	The West of the Imagination ( <i>Irregular</i> ) 3 hrs
HIST 4463	The American Frontier ( <i>Odd years, Fa</i> ) 3 hrs
SCWK 3193	Human Diversity and Social Work ( <i>Sp, Su, Fa</i> ) 3 hrs
SCWK 4093	Human Behavior and the Social Environment I ( <i>Sp, Fa</i> ) 3 hrs
SCWK 4103	Human Behavior and the Social Environment II ( <i>Sp, Fa</i> ) 3 hrs
SOCI 2033	Social Problems (ACTS Equivalency = SOCI 2013) ( <i>Sp, Su, Fa</i> ) 3 hrs
SOCI 3193	Race, Class, and Gender in America ( <i>Fa</i> ) 3 hrs
SOCI 3303	Social Data and Analysis ( <i>Sp, Fa</i> ) 3 hrs