ENVIRONMENTAL STUDIES AND AGRISCIENCE

Department of Community, Agriculture, Recreation and Resource Studies

College of Agriculture and Natural Resources

124 Introduction to Sustainable Agriculture and Food Systems
Fall, Spring. 1(0-2) Interdepartmental with Crop and Soil Sciences and Horticulture. Administered by Crop and Soil Sciences. Impact of agricultural and social sciences on our food system. Contemporary research and movements involving agricultural and food system sustainability.

191 Introductory Special Topics in Environmental Studies and Agriscience
Fall. Spring. 3(3-0) SA: RD 200 Interdisciplinary nature of environmental, natural resource, and agricultural issues.

200 Introduction to Environmental Studies and Agriscience
Fall, Spring. 3(3-0) SA: RD 200 Natural resource management. Concepts, principles and objectives of management and planning. Demand, supply and impacts of natural resources. Suitability assessment for sustainable development and land use planning.

201 Environmental and Natural Resources
Fall, Spring. 3(3-0) SA: RD 201 Physical, economic, and institutional aspects of natural resource and environmental policy. US doctrines for land, water, mineral, and environmental resource management.

207 Great Lakes: Biology and Management
Fall. 3(3-0) Interdepartmental with Fisheries and Wildlife. Administered by Fisheries and Wildlife. Living aquatic resources of the Great Lakes, environmental history, and biological resources and their management. Policy issues.

211 Introduction to Gender and Environmental Issues
Spring. 3(3-0) Interdepartmental with Environmental Economics and Policy and Forestry and Fisheries and Wildlife and Women's Studies. Administered by Fisheries and Wildlife. R: Not open to freshmen.

302 Natural Resource Issues
Spring. 3(3-0) P: (EC 201 or EC 202) RB: RD 200 R: Open to sophomores or juniors or seniors in the Environmental Economics and Policy major or in the Environmental Studies and Applications major. SA: RD 302 Analytical frameworks and concepts in resource development and use. Property rights. Market and non-market allocations. Stakeholder perspectives. Role of scholar-practitioner.

312 Principles of Leadership for Environmental and Agriscience Professionals
Fall. 3(3-0) Leadership theory, practice, and reflection. Individual and team leadership.

320 Environmental Planning and Management
Fall. 3(3-0) RB: ESA 200 SA: RD 320 Concepts, principles and objectives of management and planning. Demand, supply and impacts of natural resources. Suitability assessment for sustainable development and land use planning.

324 Water Resource Management
Spring. 3(3-0) P: (BS 110) SA: RD 324 Biophysical, community, and institutional components of comprehensive water resources management. Biophysical and social processes that control the quality and quantity of aquatic resources at the watershed level.

335 Engaged Learning and Teaching
Spring. 3(3-0) R: Open to juniors or seniors or graduate students. Engaged teaching and learning within communities in non-formal settings.

343 Community Food and Agricultural Systems
Spring. 3(3-0) P: Completion of Tier I Writing Requirement R: Open to juniors or seniors in the College of Agriculture and Natural Resources or in the College of Communication Arts and Sciences. SA: AEE 410, AEE 401 Food and agricultural systems. Inputs, production, processing, distribution, consumption and disposal. Industrialization, globalization and centralization of power. Community goals including ecological sustainability, social justice, economic viability and democracy.

401 Communications Campaigns for Agricultural and Environmental Issues (W)
Fall, Spring, Summer. 3(3-0) P: Completion of Tier I Writing Requirement R: Open to juniors or seniors in the College of Agriculture and Natural Resources. Planning and execution of agricultural, natural resource and environmental communication campaigns. Theories, strategies and techniques using mass and controlled media channels.

412 Special Topics in Leadership and Education
Spring. 3(3-0) P: ESA 312 or approval of department R: Open to juniors or seniors or graduate students. Current issues, problems and debates in leadership and education. Theory and practice.

413 Grantwriting and Fund Development (W)
Fall. 3(3-0) P: Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students. SA: RD 313 Theoretical and practical background for proposal writing. Program and strategic planning. Fundraising and institutional advancement.

415 Environmental Impact Assessment
Fall. 4(3-2) P: ZOL 355 and ESA 320 RB: An introductory course or experience in GIS (Geographic Information Systems) SA: RD 415 Environmental impact assessment of proposed projects and plans. Regulatory frameworks and project management. Multi-disciplinary project-based laboratory including field work.

420 Risk and Decision Science for Environmental and Natural Resources Management (W)
Fall. 3(3-0) Interdepartmental with Environmental Economics and Policy. Administered by Environmental Studies and Agriscience. P: ESA 200 or EEP 255 or approval of department R: Open to juniors or seniors or graduate students. SA: RD 430 Influential theories and approaches in risk and decision sciences. Environmental, human health, and natural resources management.

430 Environmental and Natural Resource Law
Fall. 3(3-0) Interdepartmental with Environmental Economics and Policy and Forestry. Administered by Environmental Studies and Agriscience. P: ESA 200 or EEP 255 or approval of department R: Open to juniors or seniors or graduate students. SA: RD 430 Legal principles applied to the environment and natural resources. Sovereignty, property rights, land and water use, jurisdiction, public trust doctrine, wetland law, and eminent domain. Case and statutory law analysis.

433 Law and Social Change
Spring. 3(3-0) Interdepartmental with Environmental Economics and Policy and Sociology. Administered by Environmental Studies and Agriscience. P: ESA 200 or (STT 200 or STT 201 or FW 324 or PSY 295 or COM 200) R: Open to juniors or seniors or graduate students. SA: RD 433 Function of law in a modern society. Concepts of power, public regulation, civil rights, and property rights. Limits on freedom.

434 Professional Skills for Nonformal Educators
Fall. 3(2-2) P: ACR 205 or approval of department R: Oral and written communication for nonformal educators. Verbal, graphic, written and electronic forms. Working with the media. Facilitating principles and practice. Working with antagonistic audiences. Grant writing.

435 Conservation Education
Fall. 3(2-2) P: ZOL 355 R: Open to juniors or seniors or graduate students. Methods, materials and theory for teaching conservation and environmental education in formal and nonformal educational settings. Field trips required.

436 Conservation Education Practice
Fall. Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. P: ESA 435 or concurrently Professional training for certification in conservation education curricula.
Environmental Studies and Agriscience—ESA

440 Environmental and Natural Resource Policy in Michigan
Spring. 3(3-0) Interdepartmental with Environmental Economics and Policy. Administered by Environmental Studies and Agriscience, P: ESA 200 or EEP 255 or approval of department SA: RD 440

State legislative process and its role in environmental and natural resource policy formulation. Influence of lobbying, grass roots environmental movements, and economic factors.

444 Pesticides, People and Politics
Fall, 3(3-0) P: Completion of Tier I Writing Requirement RB: Completion of at least one ISS course. SA: RD 444

Comparative state, national, and international policy issues and politics related to pesticide regulations and use in industrialized and non-industrialized countries.

446 Environmental Issues and Public Policy
Fall, Spring. 3(3-0) Interdepartmental with Zoology. Administered by Zoology. R: Not open to freshmen or sophomores.

Interrelationship of science and public policy in resolving environmental issues. Technical, social, economic, and legal influences. Case study approach.

450 Smart Growth and Strategic Land Use Decision Making
Fall, Spring. 3(3-0) Interdepartmental with Environmental Economics and Policy and Geography and Urban Planning. Administered by Environmental Studies and Agriscience. RB: EC 201 or UP 201 or GEO 113 R: Not open to freshmen or sophomores.

Theories and models of smart growth and strategic land use planning and decision making. Intergovernmental coordination, regional socioeconomic development and environmental sustainability. Land use research and leadership development.

452 Watershed Concepts
Fall, Spring. 3(3-0) Interdepartmental with Biosystems Engineering and Crop and Soil Sciences and Forestry and Fisheries and Wildlife. Administered by Environmental Studies and Agriscience. P: ESA 324 and ZOL 355 RB: organic chemistry SA: RD 452

Watershed hydrology and management. The hydrologic cycle, water quality, aquatic ecosystems, and social systems. Laws and institutions for managing water resources.

460 Natural Resource Economics
Spring, 3(3-0) Interdepartmental with Biosystems Engineering and Environmental Economics and Policy and Park, Recreation and Tourism Resources. Administered by Environmental Studies and Applications. P: EC 201 and (ESA 302 or EEP 255) SA: RD 460

Economic framework for analyzing natural resource management decisions. Spatial and inter-temporal allocation of renewable and nonrenewable resources. Special emphasis on institutions, externalities, and public interests in resource management.

470 Theory and Practice in Community and Economic Development
Spring. 3(3-0) Interdepartmental with Environmental Economics and Policy and Sociology. Administered by Environmental Studies and Agriscience. P: EC 201 or EC 202 SA: RD 470

Concepts, principles, models, and skills for community and economic development. Community participation in local development initiatives.

475 Agriscience and Natural Resources Study Abroad
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department; application required. SA: AEE 475

Study and travel experience emphasizing contemporary problems affecting Agriculture and Natural Resources in world, national, and local communities.

480 Environmental Studies Abroad
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Not open to freshmen. Approval of department; application required. SA: RD 480

Contemporary problems affecting natural resource management outside the United States. Ecological, socio-dynamic, and cultural influences on environmental management. Study-travel experience.

490 Independent Study
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department; application required. SA: RD 490

Individual supervised study of selected topics.

491 Special Topics in Environmental Studies and Agriscience
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to juniors or seniors. SA: RD 491

Selected issues in environmental, natural resource or agricultural studies derived from current resource policy changes, or other emerging topics of interest.

493 Professional Internship
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 6 credits in all enrollments for any or all of these courses: ABM 493, ANR 493, ANS 493, CSS 493, EEP 493, ESA 493, FIM 493, FW 493, HRT 493, PKG 493, PLP 493, and PRR 493. R: Open to juniors or seniors in the Department of Community, Agriculture, Recreation and Resource Studies. Approval of department; application required. SA: RD 493

Supervised professional experiences in agencies, organizations and businesses related to environmental and agricultural fields.

495 Senior Seminar
Spring. 2(2-0) R: Open to seniors in the Environmental Studies and Applications major. SA: RD 495

Examples and practice in directing change and resolving issues by anticipating resource problems. Analysis and application of policy alternatives. Preparation of position papers.

499 Senior Thesis Research
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to seniors in the Environmental Studies and Applications major. SA: RD 499

Supervised research option for satisfying capstone experience requirement.

558 Gender, Justice and Environmental Change : Issues and Concepts
Fall. 3(3-0) Interdepartmental with Anthropology and Forestry and Fisheries and Wildlife and Geography and Sociology. Administered by Fisheries and Wildlife. RB: Background in social science, environmental science, or natural resources.

Issues and concepts related to gender, ecology, and environmental studies. Key debates and theoretical approaches to addressing environmental issues from a gender and social justice perspective. Gender and environment issues and processes from a global perspective.