ENVIRONMENTAL STUDIES AND AGRISCIENCE ESA

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, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to freshmen or sophomores.
Selected introductory topics concerning issues in agriculture or natural resources.

200 Introduction to Environmental Studies and Agriscience
Fall, Spring. 3(3-0) SA: RD 200
Interdisciplinary nature of environmental, natural resource, and agricultural issues.

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.
The concept of gender. Overview of environment and habitat. Historical gender roles in environmental management. Gender-based theoretical perspectives. Case studies on developing and developed countries. Environmental management with emphasis on fisheries, wildlife and wetlands. Women environmental professionals.

225 Land and Environmental Issues in Law and Policy
Fall. 3(3-0) Fall: Traverse City.
Michigan environmental and land use law. Regulatory programs. Land development and preservation processes. Common law. Private property rights and balance among local, state and federal governance.

300 Environmental and Natural Resource Conflict Management
Fall. 3(3-0) P: ESA 200 or PRR 213 SA: RD 300
Alternative dispute resolution and conflict management for environmental and natural resource professionals.

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
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 or in the College of Communication Arts and Sciences. SA: AEE 410, AEE 401
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.
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 Applications. P: Completion of Tier I Writing Requirement and (STT 200 or STT 201 or FW 324 or PSY 295 or COM 200) R: Open to juniors or seniors or graduate students.
Influential theories and approaches in risk and decision sciences. Environmental, human health, and natural resources management.

424 Sustainable Agriculture and Food Systems: Integration and Synthesis
Fall. 3(3-0) Interdepartmental with Crop and Soil Sciences and Horticulture. Administered by Crop and Soil Sciences. P: CSS 124 RB: (CSS 101 or CSS 360 or CSS 431 or ENT 479 or HRT 203 or HRT 251 or HRT 341 or EEP 255 or EEP 260 or ESA 343) or (ESA 444 or GEO 410) R: Open to juniors or seniors or graduate students.
Biogeochemical and socio-economic aspects of food, fiber, and fuel production. Environmental impacts and social context. Experiential learning projects.

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 Applications. R: Open to juniors or seniors. 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
Oral and written communication for nonformal educators. Verbal, graphic, written and electronic forms. Working with the media. Facilitation 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.

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. 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, Summer. 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.