

Required and Elective Courses
Master's Degree (M.Ed.) in Environmental Education
Required Courses in the College of Education

Environmental Education:

SCE 6345 *Perspectives of Environmental Education* (3 credits, prerequisite bachelor's degree, all majors): This course provides an overview of the historical and conceptual frameworks that define the field of environmental education. Requirements include: readings, discussions, reflection journals, service learning, presentations, field trip, and final project linking course content to individual career goals (*Teaching & Learning/Pine Jog*).

SCE 6344 *Advanced Methods of Environmental Education* (3 credits, prerequisite SCE 6345): This course focuses on strong collaboration among formal and non-formal educators by integrating environmental education into a variety of content areas. Requirements include: readings, discussions, short papers, outdoor education field trip, service learning, and project linking course content to lesson and unit plans (*Teaching & Learning/Pine Jog*).

SCE 6644 *Trends and Issues in Environmental Education* (3 credits, prerequisite SCE 6344, co-requisite EDF 6481 or EDF 6918): This course analyzes trends and issues impacting the field of environmental education, with an emphasis on research preparation. Requirements include: readings, discussions, service learning, and project linking course content to proposed research project in the capstone course (*Teaching & Learning/Pine Jog*).

SCE 6196 *Capstone Study in Environmental Education* (3 credits, permission of instructor required): Course content is individualized according to student goals and professional interests. Requirements include: readings, directed independent research study, research paper including interview, and final poster/media presentation. This course is completed during the last or next to last semester of the Master's Degree in Environmental Education (*Teaching & Learning/Pine Jog*).

Global Education:

EDG 6625 *Global Perspectives of Curricular Trends* (3 credits): Comparison, analysis, and evaluation of curricular trends, issues, pedagogy, and resources in education systems in developing and industrialized nations, and implications for national and global citizenship for the 21st century (*Curriculum, Culture & Educational Inquiry*), or

EDF 6800 *Foundations of Global Education* (3 credits): Addresses the nature and scope of global education, multiple national cultures, and their impact on educational practice, international responses to common educational issues, and the representation of global social problems in curricula (*Curriculum, Culture & Educational Inquiry*).

Research Preparation:

STA 6113 *Educational Statistics* (3 credits, 1st research course): Provides a broad knowledge of standard concepts and techniques necessary for the critical consumption of educational research (*Educational Leadership & Research Methodology*).

EDG 6285 *Program Evaluation in Curriculum and Instruction* (3 credits, permission of instructor required, 2nd research course): Emphasis on surveying program evaluation strategies, analyzing and interpreting evaluation literature in specific areas, examining national and state trends in program evaluation (*Curriculum, Culture & Educational Inquiry*).

EDF 6481 *Educational Research* (3 credits, prerequisite STA 6113, 3rd research course, co-requisite SCE 6644): Provides skills necessary to locate, interpret, and analyze educational research. Emphasis is on the concepts involved in the critical consumption of educational research (*Educational Leadership & Research Methodology*).

Elective Tracks

Master's Degree (M.Ed.) in Environmental Education

- I. *Environmental Education plus Middle Grades General Science for Certified Elementary Teachers*: Provides currently certified elementary teachers with the opportunity to enhance classroom science knowledge and skills.
- II. *Environmental Education for Certified Middle and High School Teachers (all subject areas)*: Provides advanced study opportunities for currently certified middle and high school teachers interested in environmental education's multidisciplinary content.
- III. *Environmental Education for Center Educators and Non-Profit Center and Camp Administrators*: Provides advanced study for students interested in non-profit environmental center and camp administration and education.
- IV. *Environmental Education for Sustainable Planning Educators*: Provides advanced study in sustainability planning for students interested in employment in public and private settings.

Elective Courses by College

Master's Degree (M.Ed.) in Environmental Education

College of Education:

EDA 6300 *Community School Partnerships and Diversity* (3 credits, permission of instructor required): Philosophy, practices, agencies and organizations influencing school community programs and initiatives. Course identifies and utilizes community resources and linkages, family engagement partnerships, and collaborative efforts to serve students and citizens in a multicultural community (*Educational Leadership & Research Methodology*).

EDF 6918 *Action Research in Schools and Communities* (3 credits, permission of instructor required): Collaborative planning for action research based on an inquiry question grounded in practice. Readings provide historical, critical, conceptual frameworks for research locally, nationally, internationally (*Curriculum, Culture & Educational Inquiry*).

EDG 5931 *Climate Change Education* (3 credits): Factors that affect weather and climate; methods for studying climate change; natural and human-related causes of climate change; global and local environmental, ethical, societal, and economic impacts; renewable energy and sustainable development; and curricular and instructional methods for teaching global climate change education (*Teaching & Learning*).

EME 6458 *Distance Education in Theory and Practice* (3 credits, permission of instructor required): Provides skills and knowledge to plan, develop, and deliver (EE) instruction using distance learning education technology. Students will be exposed to knowledge, skills, and tools useful in creating and maintaining an online learning environment. Topics covered include interactivity, communication, curriculum design, instructional design, website design, and distance education software (*Teaching & Learning*).

EME 6209 *Self-Regulated Learning Systems* (3 credits, permission of instructor required): An in-depth examination of the development of (EE) instructional materials and the design of instruction systems based on contemporary learning theories and the evolving view of a technological future (*Teaching & Learning*).

SCE 6151 *Science: Elementary and Middle School* (3 credits, approved for elementary majors or in-service teachers only): Contemporary thinking, practices, and research for elementary and middle school educators (*Teaching & Learning*).

SSE 6151 *Social Studies: Elementary and Middle School* (3 credits, approved for elementary majors or in-service teachers only): Studies and analyzes social studies research and includes selection and organization of learning designs (*Teaching & Learning*).

College of Science:

CHS 6611 *Chemistry for Environmental Scientists* (3 credits, prerequisites: two semesters of general chemistry + lab or permission of instructor required): Introductory chemical basics provide a foundation for content, including atmospheric chemistry (global warming, ozone layers). Emphasis is on aquatic chemistry and effects on biotic communities and humans (*Chemistry and Biochemistry*).

EVR 6070 *Ecological Modeling* (3 credits, permission of instructor required): Overview of modeling and simulation techniques, with an emphasis on applications in environmental science. Discussions include: model formulation and validation, hypothesis testing, nonlinear phenomena and forecasting. Course involves programming in appropriate language (*Physics*).

EVR 6334 *Environmental Restoration* (3 credits, prerequisite: biogeography or ecology or permission of instructor required): Introduces students to the rapidly expanding practice of restoring degraded ecosystems and landforms through lecture, discussion, field visits, and individual research projects (*Geosciences/Biological Sciences*).

GEA 6277 *Human-Environmental Interactions* (3 credits): Multidisciplinary approaches to exploring diverse aspects of human-environment interactions in specific regions (*Geosci*).

GEO 6317 *Plants and People* (3 credits, permission of instructor required): Explores interactions between humans and plants in terms of traditional rural resource use and modern urban use. Topics include: medicine, food, gardens, agriculture, religion, construction, ornamentation and fuel (*Geosciences*).

GEO 6337 *Culture, Conservation and Land Use* (3 credits): The relationship between humans and the environment. Emphasis is on cultural practices and ideologies concerning preservation and consumption from local and global perspectives. Reflects on personal roles in relation to the ecosystems in which we live (*Geosciences*).

GIS 5051C *Principles of Geographic Information Systems* (3 credits, prerequisite: intro to mapping and GIS): Basic concepts of geographic information systems. Course includes evaluation of hardware and software components, examination of data structures and fundamental GIS functions, application potential and laboratory experience with GIS systems, and basic GIS project design and implementation (*Geosciences*).

GIS 5038C *Remote Sensing of the Environment* (3 credits, prerequisite: intro to mapping and GIS): Principles and concepts of remote sensing, aerial photograph and satellite image interpretation and analysis. Course includes: survey of remote sensing data sources, hands-on lab projects in a GIS environment, and an introductory research project (*Geosciences*).

GLY 5575C *Shore Erosion and Protection* (3 credits) : Study of geomorphology and use of coasts, sediment budgets and dune-beach interaction, effects of engineering structures, coastal hydraulics, tides and currents, waves and structures, coastal water level fluctuations, shore erosion control, beach replenishment, coastal protection and restoration, fate of replenished beaches (*Geosciences*).

GLY 5736 *Marine Geology* (3 credits): Theoretical and applied earth science in the marine environment. Introduction to the history of marine geology, structure and evolution of continental margins and world basins in terms of modern plate tectonic theory, ocean sediments and sedimentary regimes, geologic effects of waves and currents, dynamics of coastal environmental processes, fluctuations of mean sea level through time, ocean mineral resources (*Geosciences*).

GLY 6737 *Coastal Environments* (3 credits): Examination of the biophysical framework and biogeography (zonation) of world coastal environments. Consideration of areal (spatial) distribution of major coastal ecosystems and natural processes and littoral materials that make up beaches, dunes, wetlands, tidal flats, rocky shores, and other coastal landforms (*Geosciences*).

GLY 6888 *Coastal Hazards* (3 credits): A global review of natural and human-induced hazards affecting coastal zones, including site specific and regional hazards. Mitigation and management related to individual and community hazard perceptions, risk assessment and response. Emphasis on susceptibility of the SE Florida region to oil (chemical) spills, coastal floods due to extreme events, and to potential impacts of global sea level rise (*Geosciences*).

GLY 6934 *History of Hydrology* (3 credits): Seminar examines how human views and understanding of groundwater have progressed through time, beginning with ancient use of groundwater and continuing to the present. The course concludes with discussion about the future of the field of hydrogeology. By studying the history of hydrogeology, students develop a broader understanding of the history and philosophy of science (*Geosciences*).

OCB 6810 *Natural History of the Indian River Lagoon* (3 credits, permission of instructor required): Overview of marine plants and animals, habitats, and environmental conditions in the Indian River Lagoon, including human impacts. Field trips to local habitats complement lecture and labs (*Biological Sciences/Harbor Branch*).

OCE 6019 *Marine Global Change* (3 credits, permission of instructor required): Introduction to long-term and global scale changes in terrestrial and marine environments and the impact those changes have in marine settings, especially the coastal ocean. Topics include: invasions, extinctions, climate change, food web modifications and fresh water issues in the coastal zone (*Biological Sciences/Harbor Branch*).

PCB 6045 ***Conservation Biology*** (3 credits, permission of instructor required): A study of the principles and practice of conservation biology. Emphasis is on primary threats to biodiversity and the application of contemporary tools to solve conservation problems (*Biological Sciences*).

PCB 6046 ***Advanced Ecology*** (4 credits, prerequisite: ecology): A background in the development of ecology as a science, current ecological theory, and the application of ecology for ecosystem management (*Biological Sciences/Harbor Branch*).

STA 6206 ***Statistical Methods in Environmental Sciences*** (3 credits, permission of instructor required): Reviews statistical distributions and inference, issues in experimental design, data analysis of treatment versus control differences and control multiple comparisons, trend testing, regression modeling and data analysis, gen linear models and analysis of cross-classified tabular/categorical data (*Mathematical Sciences*).

College of Business:

ECP 4302 ***Environmental Economics*** (3 credits, permission of instructor required): Application of basic economic principles and techniques to analysis of cost-benefit trade-offs of public policy decisions that affect the quality of the environment (*Economics*).

MAN 6931 ***Sustainability Leadership for Entrepreneurs*** (3 credits): A comprehensive overview of the field of sustainability leadership and best practices of starting and growing successful triple-bottom line (TBL) for-profit and nonprofit ventures (*Mgt Programs*).

College of Design and Social Inquiry:

PAD 6142 ***Management of Nonprofit Organizations*** (3 credits): The role of the nonprofit sector in a democracy and market economy; examination of historical, political, legal, ethical, and social environments in which nonprofit organizations operate; analysis of both theoretical and practical issues and problems faced by managers of nonprofit organizations (*Public Admin*).

PAD 6143 ***Public Policy and Nonprofit Organizations*** (3 credits): Acquaints students with theoretical and practical issues confronting nonprofit organizations. Systematically examines ways in which the public policy process supports and regulates activities of nonprofits, and ways in which nonprofits seek to affect public policy governing their behavior (*Public Admin*).

PAD 6149 ***Governance in Nonprofit Organizations*** (3 credits): Nonprofits are controlled by boards of directors. This course discusses the legal foundations for boards, their conventional roles and responsibilities, and the strategic planning processes to strengthen board leadership (*Public Administration*).

PAD 6165 ***Legal and Ethical Issues in Nonprofit Organizations*** (3 credits): Course is designed to examine in detail the legal issues confronting nonprofit corporations. Emphasis is on a review of the laws pertaining to nonprofits, focusing on structure, management, behavior, and accountability (*Public Administration*).

PAD 6233 ***Seminar in Grants Writing*** (3 credits): Practical considerations in obtaining funds for delivery of services to client groups, covering local, national, foundation, corporate, and state funding environments. Course explores funding in the social, human, and justice services (*Public Administration*).

URP 6421 ***Environmental Planning and Society*** (3 credits): Overview of environmental planning systems, including basic terminology, tools, policy issues (*Urban Regional Plan*).

URP 6425 ***Environmental Analysis in Planning*** (3 credits): Analysis of natural and urban environments, and the application of planning systems (*Urban Regional Planning*).

URP 6429 ***Environmental Policy Planning*** (3 credits): Policy and analytic perspectives on major issues in environmental planning systems (*Urban Regional Planning*).

College of Arts and Letters:

JOU 4314 ***Environmental Journalism*** (3 credits, prerequisite: one courses in journalism or permission of instructor required): Introduction to environmental reporting, with emphasis on the Everglades and the rest of South Florida's ecosystem. Topics include writing about nature, dealing with public agencies and private activist groups, and obtaining and using government data (*Communications*).

LIT 4434 ***Literature and the Environment*** (3 credits): Exploration of the various ways in which American and/or British writers have engaged with the natural and/or "constructed" environment in their work. Genres may include fiction, nonfiction prose, and poetry (*English*).

PHI 6326 ***Technology, Environment, and Values*** (3 credits): Utilizes the perspectives of social, political, economic, and environmental philosophy, as well as ethics and metaphysics. Analyzes and evaluates the impact of different technologies on individuals and their physical, economic, social, and cultural environments, and their values and belief systems (*Philosophy*).

PUP 6208 ***Urban Environmental Politics*** (3 credits, permission of instructor required): Review of environmental politics and policies at the urban level, with a focus on the politics of development and environmental justice (*Political Science*).

WST 6348 *Women, Environment, Ecofeminism and Environmental Justice* (3 credits, permission of instructor required): Examines the history and evolution of ecofeminist and environmental justice, thought, and practice through its major womanist/feminist activities, theorists, and core issues (*Women's Studies*).

College of Biomedical Science:

BSC 4833 *Introduction to Radiation Biology* (3 credits, prerequisites: biology and physics): Overview of effects of ionizing radiation on humans and other biological systems. Course includes cell survival after exposure to ionizing radiations, repair of radiation damage, doses and risks in diagnostic radiology, cardiology, nuclear medicine, and safety issues (*Biomedical Science*).

College of Engineering and Computer Science:

EGN 4070 *Green Engineering* (3 credits): Introduces the concept of sustainable design as a necessary tool for producing places, products, and services in a way that reduces the use of non-renewable resources, minimizes environmental impact, and relates people to the natural environment (*Engineering Dean*).

Honors College:

PUP 4212 *Honors Environmental Conflict* (3 credits, permission of instructor required): Explores key issues in local, national and international environmental conflicts, emphasizing power relations among stakeholders and inequities in the distribution of costs and benefits of environmental problems (*Environmental Studies*).

College of Nursing:

NGR 6162 *Women, Witches and Healing* (3 credits): Wholeness, health, and healing from philosophical, historical, cultural, ecological, and feminist perspectives. Course analyzes the role of healer in relation to contemporary and future professional nursing. Past and current misconceptions are identified and explored (*Nursing*).

NOTE: All electives must be approved. Please submit requests for approval to meltzer@fau.edu.