

B.A. in Environmental Resource Management (60-62 hrs)

PROGRAM CODE — ENVRESMGT

Program Coordinator: Dr. Dennis Dahms, Geography, ITTC #215

The Environmental Resource Management (ERM) major is aimed at students searching for career options in the broadly-defined 'outdoor environment' that are related to natural resources, environmental systems, and sustainable development. This program will prepare students for careers in the environmental and human management of public and private spaces across differing categories of environmental systems - from public parks and lands to conservancy units managed by governmental and other non-profit agencies and organizations. This program aims to serve those students who do not wish to pursue careers as environmental scientists *per se* from more tightly focused 'environmental science' programs.

- *STUDENTS ARE REQUIRED TO TAKE THE CORE REQUIREMENTS (30 HRS) AND MAY CHOOSE ONLY ONE OF THE FOUR SPECIALIZATION TRACKS (30-32 HRS).*
- *Each track is composed of clusters of courses with a specific concentration, each of which has a separate hourly requirement.*
- *For purposes of this degree program, those prerequisite courses required by BIOL, EARTHSCI, GEOG, and KAHHS for mid/upper-level courses in each Track THAT ARE NOT INCLUDED IN THE CORE REQUIREMENTS will normally be waived by the appropriate departments.*
- *The separate tracks allow students to specialize in the area of most general interest while the primary & secondary foci within each track make sure students expose themselves to a wide range of important auxiliary coursework.*
- *By permission of the Provost's Office, students enrolled the ENVMGT BA program will be considered majors in all four of the participating departments.*

CORE REQUIREMENTS (30 hrs)

For students pursuing the Environmental Resource Management B.A. degree, the Department of Biology will waive the Cell Structure and Function (BIOL 2052) and Chemistry II (CHEM 1120) prerequisites for enrollment into BIOL 3100 – Evolution, Ecology, and the Nature of Science.

BIOL 2051	General Biology: Organismal Diversity (4)
BIOL 3100	Evolution, Ecology & the Nature of Science (3)
CHEM 1110	General Chemistry I (4)
EARTHSCI 1300	Introduction to Geology (4)
	or
GEOG 1210 + 1211	Physical Geography (3) + Lab (1)
EARTHSCI 3330	Geomorphology (3)
GEOG 3310	GIS I (3)
GEOG 4260	Introduction to Environmental Resource Management (3)
HISUS 4170	U.S. Environmental History (3)
RTCS 4320	Financial Resources Management for RTCS (3)

Certificate programs that are appropriate for students to combine with the ERM major to help expand specific, relevant experiences.

- GIS & Cartography (Dept. of Geography)
- Sustainability (Interdisciplinary)
- Outdoor Recreation (School of Health, Physical Education & Leisure Services)
- Tourism (School of Health, Physical Education & Leisure Services)
- Nonprofit Management Certificate (School of Health, Physical Education & Leisure Services)
- Environmental Health Certificate (School of Health, Physical Education & Leisure Services)
- Public History (Dept. of History)

ECOSYSTEMS TRACK (Track coordinator: Theresa Spradling, 144 McCollum Science)

The Department of Biology will waive Cell Structure and Function (BIOL 2052) and Chemistry II (CHEM 1120) for BIOL 3000 level courses listed in Categories A and B. For the required course Ecology and other BIOL 4000 level courses listed in Categories A and B, the Department of Biology will waive Genetics (BIOL 3140) as a prerequisite.

*For courses not given by the ERM participating departments (BIOL, EARTHSCI, GEOG, KAHHS), students should check with the appropriate department concerning their prerequisite waiver policy for non-majors.

A total of 32 hours are required for this track. There are 12 hours of required courses. In addition, student select courses from all three elective categories (A, B, & C) to accumulate to a minimum of 20 hours. At least one course must be taken from each elective category.

Required (12 hours)

CHEM 1120	Chemistry II (4)
MATH 1140	Precalculus (4)
BIOL 4168	Ecology (4)

Electives (20 hours)

Category A – Content Management Related Courses (pick at least 1 course)

BIOL 4105	Wildlife Ecology & Management (4)
BIOL 4108	Biodiversity Conservation Policy (3)
BIOL 4167	Conservation Biology (3)
BIOL 4180	Restoration Ecology (4)

Category B – Content Related Courses (pick at least 1 course)

BIOL 3112	Invertebrate Zoology (4)
BIOL 3118	Marine Biology (3)
BIOL 3170	Entomology (3)
BIOL 4154	Aquatic Ecology (4)
BIOL 4157	Biostatistics (3)
BIOL 4164	Mammalogy (4)
BIOL 4166	Plant Systematics (4)
GEOG 4310	GIS Applications (3)
GEOG 4320	GIS II (3)

Category C – Cognates (pick at least 1 course)

EARTHSCI 1200	Elements of Weather (3)
ENGL 4785	Applied Writing: Projects, Grants, and Careers (3)
GEOG 2210	Recent Climate Change (3)
GEOG 3210	Natural Hazards & Disasters (3)
GEOG 3220	Environmental Geography (3)
GEOG 3230	Natural Regions of North America (3)
GEOG 4210	Climatology (3)
GEOG 4220	Soils & Landscapes (3)
GEOG 4240	Reconstructing Ice-Age Environments (3)
GEOG 4250	Lab Methods for Environmental Geography (3)
GEOG 4370	Remote Sensing of the Environment (3)
RTCS /HIST4159	History of Outdoor Recreation (3)
RTCS 2120	Principles of Tourism (3)
RTCS 4553	Trends in Outdoor Recreation (3)
MGMT 3183*	Leadership Skills (3)
MGMT 3185*	Project Management (3)
INTERNSHIP (3)	[BIOL 3179; GEOG 3179; EARTHSCI 3430; RTCS 4510; HPE 4768]

GEOSYSTEMS TRACK (Track coordinator: Dennis Dahms, ITTC 215)

For students pursuing the Geosystems Track, the Geography Department will accept GEOG 1210 + 1211 or EARTHSCI 1300 as prerequisite for enrollment into all listed Geography courses except GEOG 4310 and 4320. The Biology Department will waive Genetics (BIOL 3140) as a prerequisite for BIOL 4105 and 4180. The Earth and Environmental Sciences department will accept GEOG 1210 and GEOG 1211 as substitutes for courses that require EARTHSCI 1300 and waive the requirement of EARTHSCI 1320 for EARTHSCI 3325.

*For courses not given by the ERM participating departments (BIOL, EARTHSCI, GEOG, KAHHS), students should check with the appropriate department concerning their prerequisite waiver policy for non-majors.

A total of 30 hours are required for this track, with a minimum of 21 hours from the Primary Focus group and 9 hours from the Secondary Focus group.

ELECTIVES

Primary Focus – Content Related Courses (21 hrs)

EARTHSCI 3322	Earth Materials (4)
EARTHSCI 3350	Environmental Hydrology (3)
GEOG 2210	Recent Climate Change (3)
GEOG 3210	Natural Hazards & Disasters (3)
GEOG 3220 or EARTHSCI 3345	Environmental Geography (3) / Environmental Geology (3)
GEOG 4220	Soils & Landscapes (3)
GEOG 4230	Rivers (3)
GEOG 4210 or EARTHSCI 1200	Climatology (3) / Elements of Weather (3)
GEOG 4250	Lab Methods for Environmental Geography (3)
GEOG 4370	Remote Sensing of the Environment (3)
RTCS 4553	Trends and Issues in Outdoor Recreation (3)
RTCS 4554	Managing Recreation Impacts on the Natural Environment (3)
RTCS 2130	Foundations of the Non-Profit Sector (3)

Secondary Focus - Management Cognates (9 Hrs)

BIOL 4105	Wildlife Ecology & Management (4)
BIOL 4180	Restoration Ecology (4)
EARTHSCI 3325	Sedimentary Geology (4)
EARTHSCI 3360	Field & Lab Methods in Hydrology (3)
ECON 3225*	Environmental Economics (3)
ENGL 4785*	Applied Writing: Projects, Grants & Careers (3)
GEOG 3230	Natural Regions of North America (3)
GEOG 4170	Regional Analysis & Planning (3)
GEOG 4240	Reconstructing Ice-Age Environments (3)
GEOG 4310	GIS Applications (3)
GEOG 4320	GIS II (3)
RTCS /USHIST 4556	History of Outdoor Recreation (3)
RTCS 2120	Principles of Tourism (3)
RTCS 4776	Eco, Adventure & Sports Tourism (3)
MGMT 3185*	Project Management (3)
POL AMER 3172*	Public Budgeting (3)
INTERNSHIP (3)	[BIOL 3179; GEOG 3179; EARTHSCI 3430; RTCS 4510; HPE 4768]
Other courses: as approved by advisors and program director	

RESOURCE ADMINISTRATION TRACK (Track coordinator: Kathy Scholl, WRC 203)

For students pursuing the Resource Administration Track, The Biology Department will waive Genetics (BIOL 3140) as a prerequisite for Conservation Biology (BIO 4167).

*For courses not given by the ERM participating departments (BIOL, EARTHSCI, GEOG, KAHHS), students should check with the appropriate department concerning their prerequisite waiver policy for non-majors.

A total of 30 hours are required for this track, with a minimum of 21 hours from the Primary Focus group and 9 hours from the Secondary Focus group.

Primary Focus – Content Related Courses (21 Hrs)

GEOG 2210	Recent Climate Change (3)
GEOG 4170	Regional Analysis & Planning (3)
GEOG 3210	Natural Hazards & Disasters (3)
HPE 4666	Environmental and Occupational Health Regulations (3)
RTCS 2120	Principles of Tourism (3)
RTCS 2130	Foundations of the Non-Profit Sector (3)
RTCS 3060	Programming for RTCS (3)
RTCS 3337	Human Resources Development of Non-Profit Agencies (3)
RTCS 4310	Areas and Facilities for RTCS (3) (Prereq: RTCS 3060)
RTCS 4554	Managing Recreation Impacts on the Natural Environment (3)
RTCS /USHIST 4556	History of Outdoor Recreation (3)
RTCS 4776	Eco, Adventure & Sports Tourism (3) (Prereq: RTCS 2120)

Secondary Focus – Cognates (9 Hrs)

BIOL 4167	Conservation Biology (3)
GEOG 3230	Natural Regions of North America (3)
GEOG 4220	Soils & Landscapes (3)
GEOG 4230	Rivers (3)
GEOG 4210	Climatology (3)
GEOG 4250	Lab Methods in Environmental Geography (3)
GEOG 4310	GIS Applications (3)
GEOG 4320	GIS II (3)
GEOG 4370	Remote Sensing of the Environment (3)
ENGL 4775* or 4785*	Applied Writing: Technical Comm. (3) / Projects, Grants & Careers (3)
HPE 4665	Environmental Health Science (3)
RTCS 4552	Theory & Practice of Outdoor Education (3)
RTCS 4553	Trends and Issues in Outdoor Recreation (3)
RTCS 4779	Community Workshop Planning (3)
MGMT 3185*	Project Management (3)
POL AMER 3172*	Public Budgeting (3)
INTERNSHIP (3)	[BIOL 3179; GEOG 3179; EARTHSCI 3430; RTCS 4510; HPE 4768]
Other courses as approved by advisors and program director	

ENVIRONMENTAL COMPLIANCE TRACK (Track coordinator: Siobahn Morgan, Latham 121)

For students pursuing the Environmental Compliance Track, the Earth and Environmental Sciences Department will waive EARTHSCI 3230 as prerequisite for enrollment into EARTHSCI 3240 and EARTHSCI 3250, and will waive the requirement for EARTHSCI 1320 in EARTHSCI 3325, and will accept credit in GEOG 1210 and GEOG 1211 as a substitute for courses that require EARTHSCI 1300.

*For courses not given by the ERM participating departments (BIOL, EARTHSCI, GEOG, KAHHS), students should check with the appropriate department concerning their prerequisite waiver policy for non-majors.

A total of 32 hours are required for this track, with 15 hours of required courses, a minimum of 10 hours from the Primary Focus group and 5 hours from the Secondary Focus group.

Required (15 hrs)

ECON 1041	Principles of Macroeconomics (3)
ECON 1051	Principles of Microeconomics (3)
ECON 3225/5225	Environmental Economics (3)
HPE 4666 (fall)	Environmental and Occupational Health Regulations (3)
PHIL 2550	Environmental Ethics (3)

Primary Focus – Content Related Courses (10 hrs)

EARTHSCI 1200	Elements of Weather (3)
EARTHSCI 1400	Introduction to Environmental Earth Science (3)
EARTHSCI 3230	Air Quality (4)
EARTHSCI 3345 or GEOG 3220	Environmental Geology (3) or Environmental Geog (3)
EARTHSCI 3350	Environmental Hydrology (3)

Secondary Focus - Cognates (7 hrs)

EARTHSCI 3240	Air Quality Modeling (4)
EARTHSCI 3250	Measurement and Analysis of Air Quality (4)
EARTHSCI 3325	Sedimentary Geology (4)
EARTHSCI 3355	Hydrogeology (3)
GEOG 4220	Soils and Landscapes (3)
GEOG 4230	Rivers (3)
GEOG 4370/5370	Remote Sensing of the Environment (3)
HPE 4665	Environmental Health Science (3)
RTCS 4554	Managing Recreation Impacts on the Natural Environment (3)
MGMT 3153*	Organizational Management (3)
MGMT 3185*	Project Management (3)
POL AMER 1048	Intro to Public Administration (3)
INTERNSHIP (3)	[BIOL 3179; GEOG 3179; EARTHSCI 3430; RTCS 4510; HPE 4768]
Other courses as approved by advisors and program director	