



RE-SHAPING A CURRICULUM: ENVIRONMENTAL SCIENCE IN THE URBAN ENVIRONMENT

Award No. 2009-38422-19922
Amount: \$287,707



Institutions Involved



Objectives

- ◆ Create Urban Natural Resources Conservation (UNRC) curriculum w/ focus on urban natural resources enhancement & mgmt as educational & career opportunity
- ◆ Increase the number & diversity of Environmental Sciences majors/minors
- ◆ Increase graduation rate of Environmental Science majors/minors
- ◆ Improve educational quality via high STEM learning outcomes and student satisfaction
- ◆ Provide student intern/research opportunities & one competitive graduate scholarship

UNRC CURRICULUM

- Research and redesign Environmental Sciences with UNRC focus
- Pilot curriculum: 1 Introductory & 3 advanced courses w/ workshops, field trips, guest lectures

Course Code	Title	Credits
ENSC 101	Introduction to Environmental Science	3
ENSC 201	Environmental Chemistry	3
ENSC 202	Environmental Biology	3
ENSC 203	Environmental Geology	3
ENSC 204	Environmental Policy & Management	3
ENSC 205	Environmental Health	3
ENSC 206	Environmental Law	3
ENSC 207	Environmental Economics	3
ENSC 208	Environmental Ethics	3
ENSC 209	Environmental Communication	3
ENSC 210	Environmental Planning	3
ENSC 211	Environmental Assessment	3
ENSC 212	Environmental Impact Statement	3
ENSC 213	Environmental Policy Analysis	3
ENSC 214	Environmental Law and Policy	3
ENSC 215	Environmental Economics and Policy	3
ENSC 216	Environmental Ethics and Policy	3
ENSC 217	Environmental Communication and Policy	3
ENSC 218	Environmental Planning and Policy	3
ENSC 219	Environmental Assessment and Policy	3
ENSC 220	Environmental Policy Analysis and Policy	3
ENSC 221	Environmental Law and Policy	3
ENSC 222	Environmental Economics and Policy	3
ENSC 223	Environmental Ethics and Policy	3
ENSC 224	Environmental Communication and Policy	3
ENSC 225	Environmental Planning and Policy	3
ENSC 226	Environmental Assessment and Policy	3
ENSC 227	Environmental Policy Analysis and Policy	3
ENSC 228	Environmental Law and Policy	3
ENSC 229	Environmental Economics and Policy	3
ENSC 230	Environmental Ethics and Policy	3
ENSC 231	Environmental Communication and Policy	3
ENSC 232	Environmental Planning and Policy	3
ENSC 233	Environmental Assessment and Policy	3
ENSC 234	Environmental Policy Analysis and Policy	3
ENSC 235	Environmental Law and Policy	3
ENSC 236	Environmental Economics and Policy	3
ENSC 237	Environmental Ethics and Policy	3
ENSC 238	Environmental Communication and Policy	3
ENSC 239	Environmental Planning and Policy	3
ENSC 240	Environmental Assessment and Policy	3
ENSC 241	Environmental Policy Analysis and Policy	3
ENSC 242	Environmental Law and Policy	3
ENSC 243	Environmental Economics and Policy	3
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ENSC 295	Environmental Planning and Policy	3
ENSC 296	Environmental Assessment and Policy	3
ENSC 297	Environmental Policy Analysis and Policy	3
ENSC 298	Environmental Law and Policy	3
ENSC 299	Environmental Economics and Policy	3
ENSC 300	Environmental Ethics and Policy	3



Mission Area

CSREES Strategic Goal 6:

- ◆ Protect and enhance the nation's natural resource base and environment

Priority Need Areas

- ◆ Strengthen institutional educational capacity;
- ◆ Attract and support students from underrepresented groups;
- ◆ Facilitate cooperative initiative between HSI, not-for-profit, and State government unit

Educational Need Areas

- ◆ Curricula design, materials development & library resources
- ◆ Student experiential learning
- ◆ Faculty preparation & enhancement for teaching
- ◆ Instruction delivery systems
- ◆ Student recruitment, retention & educational quality

Products/Activities

FACULTY TRAINING & DEV

- Provide guidance on Natural Resources Conservation needs
- Provide access to urban natural resources



STUDENT INTERNSHIPS & RESEARCH

- Identify and develop career-focused internships and research opportunities
- Identify seasonal positions with link to urban natural resources conservation.



USDA Collaborator



Project Team

New Jersey City University

Ruddys Andrade, Assistant Vice President for Academic Affairs/Grants & Sponsored Programs
William Montgomery, Geoscience Chair
Kenneth Yamaguchi, Chemistry Chair
Laine Giovanetto, Assistant Prof. of Biology

Conserve Wildlife Foundation of NJ

Margaret O'Gorman, Executive Director

Evaluation

- ◆ Formative and summative evaluation will be conducted for all activities & objectives.
- ◆ NJCU's Dr. Brian Hurwitz with external evaluator will assess student learning outcomes & satisfaction. Dr. Arthur Kramer of NJCU Institutional Research will provide baseline data and demographics on student majors & monitor recruitment, retention, and graduation rates..

Beneficiaries

- ◆ Underrepresented minority students at NJCU
- ◆ State, federal and non-profit partners
- ◆ NJCU faculty
- ◆ New Jersey urban communities

Expected Impact

- ◆ 25% increase in declared Environmental Science majors and minors
- ◆ 25% increase in diversity of Environmental Science majors and minors
- ◆ Increase in graduation rate of Environmental Science majors and minors
- ◆ Achieve 80% proficiency in student STEM learning outcomes & satisfaction ratings