

NATURAL RESOURCES

<http://www.uvm.edu/rsenr/>

OVERVIEW

Graduate students in the Rubenstein School work closely with faculty who are dedicated to applied environmental research in service of society and have very active research programs. Faculty take an integrated approach to their research projects, work with other faculty teams in the School, and collaborate nationally and internationally with other researchers.

DEGREES

- Natural Resources AMP (<http://catalogue.uvm.edu/graduate/naturalresources/naturalresourcesamp/>)
- Natural Resources M.S. (<http://catalogue.uvm.edu/graduate/naturalresources/naturalresourcesms/>)
- Natural Resources: Leadership for Sustainability M.P.S. (<http://catalogue.uvm.edu/graduate/naturalresources/leadershipforsustainabilitymps/>)
- Natural Resources: Master of Environmental Law and Policy/ Master of Science in Natural Resources (MELP/MSNR) (<http://catalogue.uvm.edu/graduate/naturalresources/naturalresourcesmasterofenvironmentallawandpolicymasterofscienceinnaturalresourcesmelpmsnr/>)
- Natural Resources Ph.D. (<http://catalogue.uvm.edu/graduate/naturalresources/naturalresourcesphd/>)

FACULTY

Adair, Elizabeth Carol; Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, Colorado State University

Bierman, Paul Robert; Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Washington

Bowden, William Breck; Professor Emeritus and Interim Associate Dean; Rubenstein School of Environment and Natural Resources; PHD, North Carolina State University Raleigh

Chase, Lisa Cheryl; Extension Professor and Associate Professor; Department of Ext - Programming and Faculty Support; PHD, Cornell University

Coghill-Wemple, Beverly; Professor, Department of Geography; PHD, Oregon State University

D'Amato, Anthony; Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Massachusetts Amherst

Danks, Cecilia Marie; Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, University of California Berkeley

Dimov, Luben D.; Senior Lecturer, Rubenstein School of Environment and Natural Resources; PHD, Louisiana State University

Donovan, Therese M.; Research Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, University of Missouri Columbia

Dupigny-Giroux, Lesley-Ann; Professor, Department of Geography; PHD, McGill University

Erickson, Jon; Professor; Rubenstein School of Environmental and Natural Resources; PHD, Cornell University

Farley, Joshua; Professor, Department of Community Development and Applied Economics; PHD, Cornell University

Fisher, Brendan; Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Vermont

Galford, Gillian Laura; Research Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, Brown University

Ginger, Clare A.; Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, University of Michigan Ann Arbor

Gould, Rachele; Assistant Professor, Rubenstein School of Environment and Natural Resources; PHD, Stanford University

Hill, Jason M.; Adjunct Assistant Professor, Rubenstein School of Environment and Natural Resources; PHD, Pennsylvania State University

Hughes, Jeffrey Winston; Professor Emeritus; Department of Plant Biology; PHD, Cornell University

Ivakhiv, Adrian J.; Professor, Rubenstein School of Environment and Natural Resources; PHD, York University

Keeton, William Scott; Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Washington

Kolan, Matthew Peter; Senior Lecturer; Rubenstein School of Environment and Natural Resources; PHD, University of Vermont

Kuentzel, Walter Frederick; Professor Emeritus; Rubenstein School of Environment and Natural Resources; PHD, University of Wisconsin-Madison

Lawson, Steven R.; Adjunct Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, University of Vermont

Lloyd, John D.; Adjunct Associate Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Montana

Marsden, J. Ellen; Professor; Rubenstein School of Environment and Natural Resources; PHD, Cornell University

Mathews, Nancy; Professor and Dean, Rubenstein School of Environment and Natural Resources; PHD, State University of New York College of Environmental Science & Forestry

Mitchell, Brian; Adjunct Assistant Professor; Rubenstein School of Environment and Natural Resources; PHD, University of California Berkeley

Morales, Ana Melinda; Assistant Professor, Rubenstein School of Environment and Natural Resources; DPHIL, Iowa State University

Mosher, Brittany; Assistant Professor, Rubenstein School of Environment and Natural Resources, Ph.D., Colorado State University

Murdoch, James D.; Associate Professor; Rubenstein School of Environment and Natural Resources; DPHIL, University of Oxford

Nelson, Ingrid L.; Assistant Professor, Department of Geography; PHD, University of Oregon

Parrish, Donna; Professor Emeritus; Rubenstein School of Environment and Natural Resources; PHD, Ohio State University

Poleman, Walter Mallery; Senior Lecturer; Rubenstein School of Environment and Natural Resources; MS, University of Vermont
Pontius, Jennifer A.; Research Assistant Professor and Interim Associate Dean; Rubenstein School of Environment and Natural Resources; PHD, University of New Hampshire

Renfrew, Rosalind Brent; Adjunct Associate Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Wisconsin - Madison

Ricketts, Taylor H.; Professor; Rubenstein School of Environment and Natural Resources; PHD, Stanford University

Rodriguez-Cabal, Mariano; Research Assistant Professor, Rubenstein School of Environmental and Natural Resources; PHD, University of Tennessee

Roman, Joe; Non-salaried faculty; Rubenstein School of Environment and Natural Resources; PHD, Harvard University

Roy, Eric; Assistant Professor, Rubenstein School of Environment and Natural Resources; PHD, Louisiana State University

Schaberg, Paul ; Adjunct Associate Professor; Rubenstein School of Environment and Natural Resources; PHD, University of Vermont

Schattman, Rachel E.; Rubenstein School of Environment and Natural Resources; PHD, University of Vermont

Stepenuck, Kristine F.; Extension Assistant Professor, Rubenstein School of Environment and Natural Resources; PHD; University of Wisconsin-Madison

Stephens, Jennie; Adjunct Associate Professor, Rubenstein School of Environment and Natural Resources; PHD, California Institute of Technology

Stockwell, Jason Dana; Professor, Rubenstein School of Environmental and Natural Resources; PHD, University of Toronto

Stokowski, Patricia A.; Professor; Rubenstein School of Environment and Natural Resources; PHD, University of Washington

Strong, Allan Matthew; Professor; Rubenstein School of Environment and Natural Resources; PHD, Tulane University

Vatovec, Christine M.; Lecturer; Rubenstein School of Environment and Natural Resources; PHD, University of Wisconsin Madison

Voigt, Brian G.; Lecturer and Research Professor; Rubenstein School of Environment and Natural Resources; PHD, University of Vermont

Yamamoto, Britt; Adjunct Associate Professor, Rubenstein School of Environment and Natural Resources; PHD, University of Washington Seattle

Courses

NR 220. Landscape Ecology. 3 Credits.

The course examines the critical role of landscape pattern in determining ecological process and dynamics, as well as human-ecological interactions. Includes field labs. Prerequisites: NR 103 or BCOR 102; Senior/Graduate standing.

NR 228. Ecosystems Ecology. 3 Credits.

Examination of the structure and function of terrestrial ecosystems focusing on carbon and nutrient cycles. Laboratory sessions involve spatial modeling and data analysis. Prerequisites: NR 103, BCOR 102, PSS 161, or Graduate student standing. Cross-listed with: FOR 228.

NR 242. Adv Geospatial Techniques. 1-3 Credits.

Advanced course encompassing a wide range of topics in GIS, remote sensing, GPS, modeling, and visualization designed to provide technical expertise in geospatial techniques. Topics vary by offering; periodic offering at intervals that may exceed four years. Prerequisite: NR 143, GEOG 184, NR 343, NR 146, NR 346, or GEOG 185.

NR 243. GIS Practicum. 3 Credits.

An applied course in geospatial technology with a focus on ESRI's ArcGIS software suite. Prerequisite: NR 143 or NR 343.

NR 250. Limnology. 0 or 4 Credits.

Ecology of lakes and reservoirs, including their origin, physics, chemistry and biology, and the effects of anthropogenic perturbations. Field and laboratory experience. Prerequisites: BIOL 001 and BIOL 002 or BCOR 011 and BCOR 012, and CHEM 023 and CHEM 026 or CHEM 031 and CHEM 032, and NR 103 or BCOR 102.

NR 268. Soil Ecology. 0 or 4 Credits.

Underlying concepts and theory of modern soil ecology will be reviewed including spatial and temporal distributions, sampling methods, biogeochemical cycles, and ecological functions of soil. Prerequisites: BCOR 102 or NR 103, Prerequisites: BCOR 102 or NR 103, and PSS 161. Cross-listed with: PSS 268.

NR 280. Stream Ecology. 0 or 4 Credits.

Ecology of streams including hydrodynamics, morphology, sediment transport, chemistry, biology and human impacts. Field and laboratory experience. Prerequisites: BIOL 001 and BIOL 002 or BCOR 011 and BCOR 012, and CHEM 023 and CHEM 026 or CHEM 031 and CHEM 032, and NR 103 or BCOR 102.

NR 288. Ecol Design & Living Technol. 0 or 3 Credits.

The course explores the potential for ecological design to shape a sustainable future. It analyzes living technologies for food production, waste management and environmental restoration. Prerequisite: Junior standing.

NR 289. Advanced Ecological Design. 3 Credits.

A problem-based, cross-disciplinary design course in which existing conditions are integrated with the redesign of place and system in alignment with ecological design principles. Prerequisite: NR 288.

NR 306. Envisioning a Sust Future. 2 Credits.

Seminar orienting graduate students to RSENR and providing frameworks for collaborative leadership, whole systems thinking, and intercultural competency.

NR 311. Leadership for Sustainability. 3 Credits.

Provides an experiential and theoretical orientation to foundational practices, principles, and skills of sustainability leadership with an emphasis on ecological/systems thinking, sustainability, and leadership.

NR 312. Power Privilege & Catalyz Change. 3 Credits.

Focuses on leadership skills and systems frameworks for engaging with issues of diversity, power, and privilege and the implications of these topics on leaders' capacity. Designed to meet the RSENR graduate diversity requirement. Prerequisite: NR 311.

NR 333. Professional Writing Essential. 1 Credit.

Basics of good writing, essay and report writing, as published in both popular and professional journals in the environment and natural resources. Prerequisite: Graduate standing. Cross-listed with: PBIO 333.

NR 334. Professional Writing AdvTopics. 1 Credit.

Writing workshop that explores essay and report writing, as published in both popular and professional journals that examine the natural world and its resources. Prerequisite: Graduate standing. Cross-listed with: PBIO 334.

NR 341. Ecological Economic Theory. 3 Credits.

A transdisciplinary study of the economic system as embedded and interdependent on social institutions and environmental systems. Prerequisite: Graduate standing.

NR 342. Ecosystem Services. 3 Credits.

Examines the economic and other benefits nature provides to people. Covers the ecological foundations of quantifying ecosystem services, the economics of valuing them, and the practical issues involved with putting them to work for conservation. Prerequisites: Graduate standing; Instructor permission.

NR 343. Fndmntls of Geog Info Systems. 0 or 3 Credits.

Concepts and methods in Geographic Information Systems (GIS) presented at an accelerated pace for Graduate students using ArcGIS software. Prerequisite: Graduate standing.

NR 372. Transdisc Leadshp & Creatvty. 3 Credits.

Explores the theoretical and practice-based fields and lineages associated with transdisciplinary leadership and creativity while providing a solid structural and relational grounding for students in the Transdisciplinary Leadership, Creativity and Sustainability PhD Program.

NR 373. Transdisc Mthds&Modes of Inqry. 3 Credits.

Focuses on practices for engaging with inquiry, methods, and practice as students develop more clarity about the research questions, practices, structure, methods, and lineages that will inform their dissertation proposal and research.

NR 376. Graduate Teaching Practicum. 2 Credits.

Natural Resource teaching practicum for doctoral students in the Rubenstein School. Course is required if students are following the academic option. Should be taken concurrently or one semester in advance of completion of the doctoral teaching requirement. Prerequisite: Doctoral standing.

NR 384. Independent Study in NR. 1-18 Credits.

Readings, with conferences, to provide graduate students with backgrounds and specialized knowledge relating to an area in which an appropriate course is not offered.

NR 388. Ecological Leadership Seminar. 3 Credits.

Explores emerging topics and themes related to the theory and practice of ecological leadership. Can be taken in successive semesters (up to 2 times), as learning module topics will change.

NR 389. Ecological Leadership Practicum. 3 Credits.

An advanced exploration of ecological/systems thinking, sustainability, leadership skills, and leveraging change; offering students the opportunity to integrate these concepts and skills through an applied leadership practicum. Prerequisite: NR 388.

NR 390. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

NR 391. Master's Thesis Research. 1-18 Credits.**NR 392. Master's Project Research. 1-12 Credits.****NR 394. Independent Graduate Research. 1-18 Credits.**

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

NR 395. Advanced Special Topics. 1-18 Credits.

Graduate topics and material that may eventually develop into a regular course offering.

NR 474. Creative Practice & Dissertatn. 3 Credits.

For PhD students nearing the end of dissertation research and beginning the integration, diffraction, synthesis, and meaning-making process essential to their dissertation. Provides structure, support and feedback in the creative act of crafting a dissertation. Prerequisites: NR 372, NR 373.

NR 490. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

NR 491. Doctoral Dissertation Research. 1-18 Credits.**NR 494. Independent Graduate Research. 1-18 Credits.**

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

NR 496. Advanced Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.