

Nature Journaling: Discovering Biodiversity and Nature in Everyday Life Syllabus

BASIC INFORMATION

Course Number: 11:374:210 (Human Ecology) / 11:216:210 (Ecology, Evolution, & Natural Resources) [cross-listed]

Prerequisites: None. Open to all Rutgers undergraduate students.

Meeting times: Wednesdays 8:30-11:30 am.

Instructors:

Dr. Mary Nucci, 214 Cook Office Building, Cook Campus, Rutgers University, office phone: 908-963-9842. Office Hours: By appointment.

Email: mnucci@sebs.rutgers.edu

Dr. Lena Struwe, 237 Foran Hall, Cook Campus, Rutgers University, office phone: 848-932-6343. Office Hours: By appointment.

Email: lena.struwe@rutgers.edu

Note, this syllabus is not written in stone. It will be modified if/when necessary, and the most updated information can always be found on the course website. It is each student's responsibility to stay well-informed about class deadlines, readings, policies, and assignments.

COURSE WEBSITE, RESOURCES AND MATERIALS

All course materials and information will be available on the course Canvas website (<https://canvas.rutgers.edu/>).

Student requirements and materials: There is no textbook. Students will be provided with a blank journal, 2 pencils, eraser, mini card, and journaling handout. Optional journaling supplies you might want to use but not provided by Rutgers are markers, crayons, colored pencils, watercolors, ink, and ballpoint pens.

COURSE DESCRIPTION

Short (catalog description)

Students will explore, learn about and understand everyday biodiversity, environment, and organisms' structure through lectures, discussions, and hands-on nature journaling, developing creative, written, visual, and quantitative ways to communicate facts and observations.

Long (syllabus description)

The study of life on earth and its biodiversity presents complex, integrated issues and knowledge that spans many disciplines. This intro level class for majors from any curriculum focuses on

how to explore, learn to see, describe, and identify, and gain understanding of living organisms and nature present in our everyday lives. We will utilize nature journaling methods (including visual, written, and quantitative data gathering) outdoors and indoors, hands-on exploratory methods, lectures, and readings to provide students with both the fundamentals of natural sciences, its biodiversity, conservation, and structure and function; and a basic understanding of how to communicate science. All students will explore creative representation of biodiversity, both through their own nature journals using both visual, written, and quantitative expression forms, through art and design through history, and its connection to wild living organisms.

LEARNING GOALS

Undergraduate Major Program Learning Goals

1. Describe the evolutionary origins, processes and patterns over geologic time. (EENR)
2. Communicate effectively orally and through written text and graphics (EENR).
3. Acquire the skills to use appropriate conceptual and methodological tools to structure inquiries about human-environment interactions (Human Ecology).

Additional Course-specific Learning Goals

1. Demonstrate and learn through illustration, writing and numeracy the value of observation in formulating and answering questions.
2. Discover and learn through visual and written communications about the biodiversity of everyday life, the interrelationships between humans and other living species, and the natural and manmade places we inhabit together.
3. Describe and demonstrate through visual and written communications the interrelationship and interactions of the humanities, social sciences, and life and physical sciences in long- and short- term time spans.
4. Demonstrate ability to express and synthesize observational, written, qualitative, and quantitative data.
5. Master organization of data and personal observations through development of note-taking, sketching, writing, and presentation skills.

ASSIGNMENTS, GRADING, & ASSESSMENT

Achievement of the learning goals and participation and performance on assignments will be assessed through the evaluation and grading of the following components:

Assignment	Points and due dates
Nature Journaling Assignments: make pages, post them online (independent outdoor work)	120 (10 pts/assignment; 12 weeks total), due on Sunday nights)
Nature Journaling Peer Responses: post journal pages and make responses in group discussion	48 (4 pts/week; 12 weeks total), post your own page by Sunday night, give feedback to others by Tuesday night
Reading Responses: post discussion questions before class	26 (2 pts/week; 13 weeks total), due Tuesday nights
Lecture Questions and Discussion: post commentary and questions	28 (2 pts/week; 14 weeks total), due Wednesday nights, may be done during class
Attendance (mandatory attendance on zoom for whole class time)	28 (2 pts/week; 14 weeks, affected by full and partial unexcused absences)
Capstone Project: to highlight mastering of skills and synthesis, with 4 subprojects: <u>redo a Nature Journaling page</u> based on new skills and peer and instructor feedback, provide peer response to others pages, write an <u>Accessibility Essay</u> explaining your new Nature Journaling page in words, and write a <u>Personal Learning Statement</u> describing your personal learning experiences and processes and how/if what you have learned will be useful for your future career.	30 (journal page 15 pts, essay 10 pts, personal statement 5 pts, peer response 4 pts; due Dec 18) Final exam There is no final exam for this course, instead you have to submit the Capstone Project components.
Total	252 pts (approx.)

Delayed and late hand-in of assignments will get a lowered (50% off for up to 24 h late) or zero (no submission) grade. Make-up assignments from excused absences will be graded as normal assignments, new individual due dates will be given by instructors for these. Final grades are based on grade achieved overall, with no curving or weighting of grades, and grades will be tracked in Canvas throughout the semester. There are no extra credit options in this class. The instructors reserve the right to elevate grades for students that have shown remarkable improvement throughout the semester in their participation and learning (but please do not e- mail us and ask for a higher final grade, it does not work). Make sure to read the text under Academic Plagiarism (below) regarding the use of AI for course assignment.

Grades are assigned as follows:

A 90-100%

B+ 85-89.9 %

B 80-84.9 %

C+ 75-79.9 %

C 70-74.9%

D 60-69.9 %

F less than 60%

ABSENCE POLICY (Including medical)

If you are absent due to illness or other reasons, you must to report it using the Rutgers online student absence system (<https://sims.rutgers.edu/ssra/>), which will keep track of your number of absences in class. Absences must be reported as soon as possible (preferably within 2 days).

Medical absences are automatically excused absences. If you do not report a medical absence through the Rutgers system you will not get permission to make up the work. Other reasons for absences are assessed on a case-by-case basis to determine if it is an excused absence or not (e- mail explanation to the instructors). Unexcused absences will result in no possibility to make up missed work (zero points).

Requests for makeup work have to be made via e-mail no later than 5 business days after your return to class, are decided on a case-by-case basis, and make-up work has to be finished within 5 business days after being handed out to the student. If you have extensive medical or other emergency absences, we ask you to contact the Dean of Students to provide us with a letter confirming your need for make-up work and other special considerations.

If you know in advance that you are going to be absent from class, you need to find out if your absence will be excused by e-mailing all instructors, provide reason with documentation, and do this at least 5 business days before your planned absence. Permission for make-up work will be handled on a case-by-case basis, and generally only be approved for personal emergencies, research presentations, job interviews, etc.

ACADEMIC INTEGRITY

The university's policy on Academic Integrity is mandatory and available at <https://academicintegrity.rutgers.edu/> . All students should familiarize themselves with the policy and we highly recommend that you utilize the learning resources on this website to understand plagiarism, paraphrasing, correct and incorrect citation of sources, cheating, etc. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that:

- Everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

All instances of plagiarism or other unacceptable academic conduct will be reported to the Office of Student Conduct or the Graduate School and might result in a warning, a mark on your permanent record, dismissal or suspension according to Rutgers official rules. In short, to avoid plagiarism or paraphrasing in submitted work, observe, write and draw everything by yourself, and never copy text or images from the internet or publications or other students – we are using turnitin.com to check all text handed in by students.

All work in this class is independent unless assigned as group work by the instructors. In written text, remember to cite any and all sources of information unless it is your own observations.

When you include a list of references follow a complete citation format (include author, year, title, journal, book, page numbers, etc.; see instructions on course website for various referencing styles). Non-refereed, unscientific web sites are not original, peer-reviewed sources of scientific information.

Cite all image sources properly. If images are not your own (source/photographer and copyright information; an url is not a source or copyright information, see website for further information). If you took the photograph or made digital art, list yourself (and potential collaborators) as the source and copyright holder. For Nature Journaling pages and drawings, please sign each physical page with your name or signature before photographing and submitting it as class work.

Artificial intelligence tools and methods such as ChatGPT, CoPilot, etc., are not allowed unless specifically granted for specific assignments (and if so, it will be clearly marked). Do not use AI tools to write and submit any text or images (this includes using AI to make a draft that is later edited by the student). If your handed in text or images show likely use of AI the instructors will investigate it, and you will be asked to show how you wrote your text or made your images, what sources you used, and that you have full understanding of the facts and concepts shown in the text. This is to show that you have mastered the topic, made these observations yourself, and not just trusted something made for you by an automatic tool.

However, **AI-assisted species identification apps** such as Google Lens, SEEK, iNaturalist and similar are good tools to use for species identification, and these are permissible for

some assignments. But if you use these, then you need to check the results (do your own quality control). **You will be fully responsible for fact-checking of all text and images you submit and will be graded on the factual data you include in your assignments** (i.e., you cannot blame the internet for being wrong).

COURSE SCHEDULE AND TOPICS

– see course website for dates, deadlines, and additional details.

Week 1	INTRODUCTION: What is nature journaling, why do it, how to do it? What if I 'can't draw' or write neatly by hand? (MN)	Assignment: THE SIT SPOT
Week 2	BIODIVERSITY AND SPECIES: What is biodiversity and where is it? How do I find it and see it? How do I know what species it is and how do I use iNaturalist and Seek? (LS and MN)	Assignment: STRING SAFARI.
Week 3	MN) ON A SMALLER OR BIGGER SCALE: Why is scale important? How does it make us response to nature? How do I zoom in on details, or zoom out to the big picture? How do I measure scientifically? (MN)	Assignment: ZOOM IN-ZOOM OUT
Week 4	CHANGE OVER TIME: How to understand and present time and seasons in nature in long and short time frames. How to report weather, climate, movement of and changes in living and non-living things. What are seasons, phenology, life spans, migration and life cycles? What is the human impact? (LS)	Assignment: CHANGES OVER TIME
Week 5	GEOGRAPHY AND TERRAIN IN 2D and 3D: How to do simple mapping, elevations, transects, perspectives, and other ways to create dimension and descriptions of space. How to mark a spot using GPS and latitude and longitude and know where you are. (LS and MN)	Assignment: LANDSCAPE MAPPING AND SLICING
Week 6	THE UNDERWORLD and EARTH'S BUILDING BLOCKS: The dead world we walk and build on and its fossils, sediments and bedrock. How has life evolved, species been lost or survived, what has happened? What are the elements, minerals, rocks, that form the crust we live on? How to see geology and its processes in the landscape. (LS)	Assignment: GEOLOGIC OBJECTS AND FEATURES
Week 7	NATURAL HISTORY MUSEUMS: Scientific collections from researchers, explorations and inventories, where are they, who collected them, and why? What stories and data about the past and future are hidden in these preserved specimens? (MN)	Assignment: NATURAL HISTORY COLLECTIONS
Week 8	MODULARITY AND STRUCTURE: How and why are animals so differently constructed from plants? Why are some radial, others bilateral in their symmetry, and why are we segmented? How can plants stand up, and how do animals run and fly? How humans use the fibers of organisms to create useful and beautiful things, from roofs to baskets to mittens. (LS and MN)	Assignment: MODULES AND STRUCTURES IN ORGANISMS

Week 9	LANDS AND LANDSCAPES: Wilderness and romance, fear and exploration of unknown places, big and small. A brief history of human relationships to lands, migration of humans/other species, colonization, dominance and extinction. Which landscape is 'home' and 'yours' to you? (MN)	Assignment: LANDSCAPITOS (Little Landscapes)
Week 10	THE LEFTOVERS OF THE ANTHROPOCENE: All the human-made materials in the natural world, from roads, to buildings, plastics, and new chemicals and more. The living things in the asphalt jungles - the urban environment. The influence of globalization on local biodiversity and environments. Does nature still exist in its wild form? (MN)	Assignment: HUMAN DETRITUS
Week 11	NOT HOME ALONE: All the living and post-living organisms in our houses and apartments, from edible biodiversity, pets and uninvited pests, and potted plants. The botany, microbiology, and zoology in the kitchen, basements, and backyards. (LS)	Assignment: NOT HOME ALONE
Week 12	HUMAN HEALTH AND NATURE: Biodiversity as a source of wellbeing and illness, from physical to mental impacts. Some topics we may cover: Horticultural therapy and hiking, medication, nature bathing, foraging and medicinal plants, diseases spread through other animals to us, and venomous and toxic organisms near you. (MN)	Assignment: A NATURE WALK
Week 13	PSYCHOLOGY OF NATURE: How do we feel and think about nature, what do we love and hate, how does it symbolize life and death? Why are some species charismatic and others not? How is this reflected in our everyday life, gardens, parks, pets, and zoos? (MN)	Assignment: FEAR OF NATURE
Week 14	SYNTHESIS: Bringing it all together in a capstone project, integration of quantitative and qualitative observation data in visual arts and written essay. Personal development and learning through nature journaling. (LS and MN)	Assignment: CAPSTONE PROJECT (page, essay, and personal learning statement).

STUDENT SERVICES

General student support

Through a student-centered network of departments and staff, the Offices of the Dean of Students provide integrated solutions, services, and support to enhance the student experience at Rutgers University–New Brunswick. Furthermore, please notify the professor if you are comfortable in doing so.

Contact: (848) 932-2300. <https://deanofstudents.rutgers.edu/>

Accommodations for students with disabilities

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. To begin this process, please complete the Registration form on the ODS web site. If you already have disability accommodations for this class, let us know by forwarding your accommodation letter to the instructors of the class.

Contact: (848) 445-6800. Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Counseling, ADAP & Psychiatric Services (CAPS)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professionals within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners. Contact: (848) 932-7884. 17 Senior Street, New Brunswick, NJ 08901. <http://health.rutgers.edu/medical-counseling-services/counseling/>

Violence Prevention & Victim Assistance (VPVA)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty.

Contact: (848) 932-1181. 3 Bartlett Street, New Brunswick, NJ 08901.

<https://vpva.rutgers.edu/> .

Rutgers Student Food Pantry

A 2018 survey found that 1/3 of all students at Rutgers have experienced food insecurity at some point during the semester. You are not alone and the Rutgers Student Food Pantry is here to help. Contact: (848) 932-5500. 39 Union Street, New Brunswick, NJ 08901.

<https://ruoffcampus.rutgers.edu/food-pantry>

STATEMENT OF DIVERSITY AND INCLUSION

It is our intention that students of all backgrounds will be well served by this course. We will work to create an environment of inclusion that respects and affirms the inherent dignity, value, and uniqueness of all individuals, communities, and perspectives. We are lucky to have a diverse university. Diverse voices and life experiences enhance the learning process and we welcome students to share their personal experiences. We will not tolerate disrespectful language or behavior against any individual or group. If you feel as though you have been disrespected or treated unfairly by the instructors or any other individual, please let us know.

You may speak with the instructors in person, over email or report anonymously using the feedback note box. You may also report bias to the Rutgers Diversity and Inclusion initiative using this link: <http://inclusion.rutgers.edu/report-bias-incident/>

LAND ACKNOWLEDGMENT

We acknowledge that we will be conducting class and do fieldwork on the traditional homelands of the Lenape people. Why do we recognize the land? “To recognize the land is an expression of gratitude and appreciation to those whose territory you reside on, and a way of honoring the indigenous people who have been living and working on the land from time immemorial. It is important to understand the long-standing history that has brought you to reside on the land, and to seek to understand your place within that history. Land acknowledgements do not exist in a past tense, or historical context: colonialism is a current ongoing process, and we need to build our mindfulness of our present participation. It is also worth noting that acknowledging the land is indigenous protocol.” (sourced from <http://www.lspirg.org/knowtheland/>)