

Environmental Science & Management 551

Project Management for Scientists

Tuesdays & Thursdays, 10:00 – 11:50 a.m.

Instructor: Max Nielsen-Pincus, Ph.D.

Contact information: [message me through the Canvas Inbox](#)

Office hours: Wednesdays 3:30-4:30pm via In Person or Zoom, and by appointment.

SRTC 218 or Zoom: <https://pdx.zoom.us/j/89909901383>

This course has four objectives:

1. Introduce students to resources and practices needed to facilitate the design and implementation of their graduate research or projects, including how research literacy, ethics, design & analysis, and project management are part of the process;
2. Guide students in the development of an effective project proposal that appropriately blends the conventions of project management and academic research, and facilitates clear communication among the student, their advisor(s), and/or community partner(s); and
3. Expose students to research design strategies employed in multiple disciplinary areas.
4. Support student professional development by broadening and deepening exposure to relevant professional skills.

Readings

Readings will be posted on Canvas. Additionally, you will select a book to complete a “book report” consisting of a written review and a presentation on a text you select from a list provided by the instructor or that you propose; most of these books are available through the PSU library system or fairly cheaply online.

Course Requirements

Project Proposal	The term project will be a proposal for your graduate thesis, project, or internship. You will build a draft of this document from your prospectus (e.g., ESM 509) and various homework exercises completed throughout the quarter and receive feedback from your classmates in in-class workshops. Your final proposal should reflect instructor input on prior assignments and peer comments, and feedback from your advisor or community partner. All students will present their proposals during the last three class periods.
Book Report	Each student in the class will be assigned (based on their own ranking of provided options) a trade nonfiction book on a professional skill or capacity that is important in today’s workplaces (e.g., networking, conflict management, confidence, justice and equity, leadership, communication, productivity). After reading your book, you will write a review and give an interactive presentation to the class that shares some key tools and takeaways.
Activities, Participation, & Attendance	You will be evaluated on your participation in class activities, including the support you show your peers through active engagement with their project plans and providing feedback. Poor attendance and frequent tardiness disrupt the class and will impact your grade. If you miss class, contact a classmate to get filled in and check in with the instructor.

Grading

Proposal	30 % → Includes workshop drafts and final draft
Proposal Presentation	10 % → Includes PDF of presentation and verbal in-class presentation
Homework Activities	15 % → Includes smaller task items submitted on canvas
Book Report	15 % → Includes written review and presentation
Participation	30 % → Includes in-class activities, general engagement, and attendance

This course uses the following grade scale: 93-100% (A), 90-92% (A-), 88-89% (B+), 82-87% (B), 80-81% (B-), 78-79% (C+), 72-77% (C), 70-71% (C-), 68-69% (D+), 62-67% (D), 60-61% (D-), <60% (F). Students who do not submit an adequate amount of work to assign a grade may receive an X grade on their transcript (no basis for grade).

Tentative Course Outline

This is a small group of mature and self-motivated learners, so we have some flexibility to shuffle things around when doing so allows us to spend more time on the topics and concepts that are most interesting, useful, and/or challenging to you collectively. The schedule below is a general guide to the major focus areas of the course and how the term will unfold. Readings and assignments may be adjusted. I will report on any changes to the schedule in our meetings and using the “Announcements” feature on Canvas.

Week	Date	Homework <i>(have done before this class)</i>	Topics
Unit 1: Foundations of Research and Projects in Graduate School			
1	Jan. 7	Cancelled	
	Jan. 9	Intro Survey (Canvas) (due 1/9) Draft Research Questions or Project Objectives (1/16) Ask advisor to identify good proposals for theses, dissertations, or project reports appropriate to your research (due 1/16)	<ul style="list-style-type: none"> • Course overview • Research types • Project management
2	Jan. 14	Duhigg 2016; Pentland 2012 Draft Project Team & Skills (???) Read three proposals and complete the proposal analysis worksheet (due 1/21)	What makes a good research question or project objective? <ul style="list-style-type: none"> • FINER • Original or confirmatory research • Projects How to find a research question or project objective? <ul style="list-style-type: none"> • Informational interviews • Find your team
	Jan. 16	Identify any ethical considerations for your project (due 1/21)	Ethical Perspectives <ul style="list-style-type: none"> • Ethics in working with project partners • What ethical considerations are important for your research of project? Institutional ethics <ul style="list-style-type: none"> • Human Subjects & IRB • Animals & IACUC • Field protocols
3	Jan. 21	Proposal Analysis Workshop (in-class) Assignment - Develop your core literature (due 1/28) <ul style="list-style-type: none"> • What are the most important questions? • What types of data are used and how is data collected? • What are the types of analytic techniques used in your field? 	Review Dissertations, Theses, and Project Reports <ul style="list-style-type: none"> • Structure & organization • Incorporation of literature • Questions & Objectives • Figures & Tables • References
	Jan. 23	Proposal Analysis Workshop (cont'd)	Degree goals - What is your goal for the outcomes of your degree? <ul style="list-style-type: none"> • What skills do you want to have? • What experiences will you have? • How will your degree set you up for your future career/job?

Unit 2: Research Literacy			
4	Jan. 28	Present your literature Workshop your research questions or project objectives Partial Proposal Draft (due 2/6)	Your literature & research questions Citation management
	Jan. 30	Workshop your research questions or project objectives (cont'd)	Identify research questions and research designs appropriate for your field. Invited guests to talk about important research questions.
5	Feb. 4	Develop a concept diagram that illustrates your expectations for research outcomes (due 2/11)	Workshopping conceptual relationships or hypotheses using graphical representation (a concept map or figure).
	Feb. 6	Full proposal draft (Due 2/18)	Identifying research work packages and tasks.
6	Feb. 11	Urban 2013 Draft Project Budget (due 2/25)	Budgeting Contingency Planning
	Feb. 13	Draft Project Network Diagram & Gantt Chart (due 2/25)	Time Management Guest Speakers: Grad Students
Unit 3: Research Design			
7	Feb. 18	Full Proposal Draft Book Reports	Workshop – Full Proposal Draft
	Feb. 20	Book Reports	Research Designs in Geology
8	Feb. 25	Advisor Email (<i>latest submission</i>)	Research Designs Environmental Science & Management
	Feb. 27	Book Reports	Research Designs Geography
9 – 10	Mar. 4	Book Reports	Research Designs in Anthropology
	Mar. 6, 11, 13	Prepare your presentations	Project Plan Presentations
Finals Week		Final Proposals due in Canvas by 11:59 p.m. on Wednesday, March 19.	

Other Resources & Scholarships

ESM email list. Please send an email to esmoffice@pdx.edu if you would like to be added to the ESM Graduate Student email listserve. The listserve announces ESM events, forwards information about jobs, scholarships, and grants, and sends reminders about deadlines.

ESM Webpage. Don't forget to check out the ESM webpage for all sorts of info on what the department is doing: www.pdx.edu/esm, Helpful links:

- AESS seminar webpage: <https://sites.google.com/a/pdx.edu/esm-science-seminar/>
- Jobs & Internships: <https://www.pdx.edu/environmental-science/jobs-internships>
- Co-op Program: <https://www.pdx.edu/environmental-science/esm-cooperative-education-program>
- Advising: <https://www.pdx.edu/environmental-science/undergraduate-advising>
- ESM Directory: <https://www.pdx.edu/environmental-science/facultystaff-directory>
- Office Hours: <https://www.pdx.edu/environmental-science/esm-faculty-and-staff-office-hours>

Department scholarships and other awards: <http://www.pdx.edu/esm/awards-and-scholarships>

Undergraduate students interested in the Paul Croy or Barry Commoner awards should check out their descriptions on the ESM website. Graduate and undergraduate students may apply for the ESM Bushby scholarship, and graduate students may apply for the Dunnette Travel Award. You can find out more information about ESM scholarships and awards at the weblink above.

LSAMP (Louise Stokes Alliance for Minority Participation) is dedicated to enhancing the undergraduate experience for underrepresented students in Science, Technology, Engineering, and Mathematics. Funded by the National Science Foundation, our LSAMP program focuses on: Creating a community among LSAMP scholars that values excellence, diversity, and persistence; and Expanding opportunities for LSAMP scholars through participation in undergraduate research experiences and leadership initiatives. If you're interested in finding out more, visit our LSAMP center [in 103 Epler Hall](#), talk to ESM-LSAMP faculty advisory member Cat de Rivera <derivera@pdx.edu>, SRTC 238e, or check out: <https://www.pdx.edu/alliance-minority-participation/>.

Institute for Sustainable Solutions (ISS)-LSMAP – Climate and Disaster Resilience Internship Program: The LSAMP supports several paid climate resilience, water resources, and disaster preparedness focused internships. The program supports Portland State University students who identify as members of racially underrepresented groups in STEM as identified by the National Science Foundation (African American/Black, Alaska Native, Native American, Latino/Latine, Native Hawaiian, or Pacific Islander). Check out: <https://www.pdx.edu/alliance-minority-participation/resilience-internship-program> or contact lsamp@pdx.edu.

McNair Fellows Program - for first-generation to college students as well as students from backgrounds underrepresented in the sciences: <http://www.pdx.edu/mcnair-program/>.

Emergency Support and Hardship Funds – The college has resources that may be available to you for financial emergencies and hardships. Contact Carol Gabrielli at <cg@pdx.edu> or 503-725-5902, the student support specialist in the College Dean's Office for more information.

PSU Scholarships <https://www.pdx.edu/student-finance/scholarships> – Portland State University has an array of scholarships available to undergraduate and graduate students. Check out the PSU scholarship website for detail about types of scholarships, how to apply, and deadlines.

PSU Free Food Pantry & Market – Food Pantry <https://psufp.com/>: Find us at the former Green Zebra location – 1704 SW Broadway – Across from Cramer Hall, Monday through Thursday 11:30 AM to 5:00 PM, and Friday 11:30 AM to 3:00 PM; Closed Saturday and Sunday.

Food Market <https://www.pdx.edu/student-access-center/food-assistance>: The Second Monday of each month from 9:30-11AM. in the South Park Blocks behind Shattuck Hall. The Free Food Market brings fresh produce and other food items to PSU students and the greater PSU community. This partnership is an effort to increase student access to healthy food options and to reduce student food insecurity. Please bring your own bag, box, or way to transport your food home.

Academic Resources

Canvas

This course uses Canvas as the main learning platform. If you haven't used Canvas before, I recommend you take the PSU Learning Center's remote readiness course (<https://www.pdx.edu/learning-center/online-remote-learning-support-canvas>) this week. If you've used Canvas and you just need occasional technical support, contact the OIT Helpdesk (<https://www.pdx.edu/technology/support>). If they can't help you, please let me know.

Access and Inclusion for Students with Disabilities

PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. Our goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me.

If you have, or think you may have, a disability that may affect your work in this class, please contact your instructor. You may also contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu, <https://www.pdx.edu/drc>.

Title IX Reporting

Portland State is committed to fostering a safe, productive learning environment. Title IX and our school policy prohibit discrimination on the basis of sex, which regards sexual misconduct — including harassment, domestic and dating violence, sexual assault, and stalking. We expect a culture of professionalism and mutual respect in our department and class. Please be aware that as a faculty member, I have the responsibility to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination to PSU's Title IX Coordinator, the Office of Equity and Compliance, or the Dean of Student Life and cannot keep information confidential. You may report any incident of discrimination or discriminatory harassment, including sexual harassment, to either the **Office of Equity and Compliance** (complaints against faculty or staff): <https://www.pdx.edu/diversity/file-complaint-discriminationharassment> or the **Office of the Dean of Student Life** (complaints against students): https://pdx-advocate.symplicity.com/public_report/index.php. If you would rather share information about sexual harassment or sexual violence to a confidential employee who does not have this reporting responsibility, you can contact a confidential advocate at the Women's Resource Center: 503-235-5333 or <https://psuwrc.youcanbook.me/>, or another confidential employee found on the sexual misconduct resource webpage: <https://www.pdx.edu/sexual-assault/get-help>.

Academic Integrity

In the American college and university system, scholars and students use the ideas of their peers and predecessors to build new knowledge and understandings; in interdisciplinary fields such as environmental science and management, collaboration is an essential part of problem-solving, and one we emphasize in ESM courses. Institutions that depend on the free and open exchange of ideas and information also depend on a culture of academic integrity. Consequently (and as you have probably noticed) there are formal and informal sanctions against academic misconduct in this university and in this department. I expect that all work that you submit in this class will represent an original synthesis of your own ideas and the ideas of others. That means that information generated by others and used in your work must be clearly attributed to its original source, and either paraphrased in your own words or placed in quotation marks. If you are uncertain about whether conduct constitutes a violation or not, please ask questions. If you can't ask questions early, ask them late, and err on the side of transparency. For help identifying plagiarism and learning how to avoid it, this online guide is a good starting place: <http://guides.library.ucla.edu/bruin-success/citing>.

Advising & Career Services: <https://www.pdx.edu/careers/>

The University Career Center provides resources and services to meet the career development and job search needs of students and alumni. The Center develops employer, campus, and community partnerships to support students and alumni in obtaining career positions, internships, part-time employment, and on-campus jobs. Contact the career center <503-725-4613> for assistance with career or job exploration, preparation and planning, job searching, and making career changes and transitions. Or schedule an in-person or virtual appoint by clicking the appointment tab on the Career Center's main page. You can also find out more about ESM specific careers at: and <https://www.pdx.edu/careers/what-can-i-do-degree-environmental-studiesenvironmental-sciences>.

Library Research Tutorials: <http://guides.library.pdx.edu/home/howto> and <http://guides.library.pdx.edu/esm> -

The Library research how to guides and tutorials are an opportunity to explore new research strategies and refresh your research skills. Tutorial take approximately 20 to 30 minutes to complete, and how to guides provide useful resources for everything from how to format citations, evaluating source quality to writing literature reviews. You can also reach out to Elizabeth Pickard <epickard@pdx.edu>, the ESM subject librarian for help finding sources or navigating library resources.

Health Notes

Illness, or Positive Test for COVID-19

- If you are feeling sick, do not come to campus.
- Please notify me (i.e. your instructor), should you need to miss a class period for health reasons so that we can discuss strategies to support your learning while you are away.
- If I become ill during the term, I, or another member of the ESM faculty or staff, will notify you via PSU email about my absence and how course instruction will continue.

As the instructor of this course, the University has given me the authority to ask you to leave the classroom if you are ill. If you cannot comply with this health requirement, I may make a referral to the Office of the Dean of Student Life.

Guidance May Change

Please note that the University rules, policies, and guidance regarding health requirements may change at any time at the direction of the CDC, State, or County requirements.

Center for Student Health and Counseling (SHAC)

SHAC provides accessible mental health, physical health and dental services. If needed, call the Center for Student Health and Counseling (SHAC) to discuss your needs and situation at 503-725-2800: <https://www.pdx.edu/health-counseling/>.

In addition to physical health and dental services, SHAC counseling services supports the emotional health and wellbeing of PSU students. To schedule an appointment, call 503.725.2800 or schedule online through the Patient Portal: <https://www.pdx.edu/health-counseling/patient-portal>. Resources are available for:

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| • Learning Disorders | • Coping & Healing |
| • Trauma | • Trans Health |
| • Anxiety | • Military Personnel & Veterans |
| • Greif | • And More |
| • Anti-racism | |