Description
What is the role of research in architecture and how does it impact the sustainable design profession? What methods are regularly deployed in a research-driven project and how do they differ from those we use in creative or professional practice? Finally, what is the role of peer-review and how does it help us to engage in productive criticism and rigorous dissemination? These questions find fertile ground for conversation in a department of architecture, where we train both professional architects and researchers who engage in qualitative and quantitative methods. While the final product of an architectural design project almost always results in something physical (drawn or built), the final product of a research project usually results in something written (thesis, dissertation, report, book, or article). This course will strengthen advanced skills in research design, analytical thinking, and scientific writing with a focus on peer review.

To accommodate the range of research approaches and outputs undertaken by each student, this course provides a structured environment to develop, critique, and produce an article, thesis prospectus, or dissertation chapter. This course will meet once a week, with lectures on research methods, scientific writing, and analytical representation, including guest presentations from researchers in the field of sustainable design. Throughout the term, students will complete a series of writing assignments that build towards a submission-ready article, prospectus, or thesis chapter. Students will share, discuss, and critique each other's progress through peer review.

Assignments and Evaluation
1. Attendance & Participation
2. Research Publication: research presentation, publication metrics for impact, research methods paper presentation
3. Term Paper: extended outline, draft, peer review, final paper/Chapter/Prospectus
4. Reading Reflections for various assigned articles

Learning Objectives
This course is designed to strengthen a student's understanding of research design methodology and introduce scientific writing through the production and revision of an article, chapter, or prospectus. Learning objectives include:
1) An understanding of the research methods (quantitative/qualitative/mixed mode) available in sustainable design and the ability to identify them.
2) An understanding of the process through which scientific work is disseminated.
3) The ability to write a scientific article or chapter that meets the structure and requirements for publication.
4) Skills to critique a scientific article/chapter and provide feedback through peer review.
The ability to develop analytical ideas into appropriate graphic representations (graphs, diagrams, and tables) that support your research design or research findings.

Eligibility
This course is the second in a series of two and builds on the Research Methods in Sustainable Design (ARCH 620) course offered in the fall. ARCH 678 is required for PhD students, but is also open to MS, MArc, MIARC students who seek to further develop their skills in scientific writing.

Required Text