ARCH 4/507
Assessing Sustainable Buildings I
M 8:30 – 10:20 am, 555 WSB, 2 credit hrs

Instructor: Emily Kemper, Assoc. AIA
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What makes a building sustainable? How do we evaluate the many facets of “sustainability”? And how do we use this information to design better buildings? In this course, we’ll seek to answer these questions by surveying rating systems, standards, metrics and tools used throughout the industry that claim to define sustainability by objectively evaluating building performance.

An understanding of the variety of assessment methodologies available to building professionals is critical not only to the practical application of green design strategies, but for understanding the interaction and effectiveness of the strategies themselves. Making a building “more sustainable” may involve reducing energy and water consumption, recycling materials, and improving safety and health of users. For the purposes of this course, we will consider the energy consumption of buildings as a primary metric of environmental impact and examine advanced methodologies for determining energy use during building design, construction and occupancy. We’ll consider other important factors and discuss how interactivity of building systems could make a building more or less sustainable. This two-part course sequence (2 credits each in Winter and Spring terms), students may fulfill the Advanced Technology requirement.

Course Format
- Weekly presentations & discussions
- Demonstrations and some in-class utilization of tools, enhanced by take-home projects
- Field trips to sustainable buildings (TBD)
- Term project

Course Objectives
1. Provide the students with both an academic and a professional foundation of critical understanding around the concept of evaluating sustainable buildings.
2. Expand the students’ skill sets to include the use of new tools and metrics, in order to inform and enhance their design process.
3. Explore the reality of energy consumption in buildings through a comparison of energy metrics and an introduction to energy modeling techniques.

Emily Kemper earned her B.Arch. from Univ. of Cincinnati in her hometown and a Master’s of Building Science from USC, where she sought a deeper understanding of energy efficient retrofits and net-zero energy architecture. She is an avid biker, amateur photographer, blogger and has written extensively for Archinect.com.