

Interdisciplinary Teams Collaborate To Design Green Buildings



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Teaching Strategy

The built environment is a significant source of environmental impacts and represents a major opportunity to find sustainable solutions. Andrew Hoffman teaches an interdisciplinary course on green construction and design that draws students from across campus to explore sustainability issues in residential and commercial construction.

Lectures, guest speakers, field trips and small group discussions of case studies provide students with opportunities to engage with sustainability issues through multiple disciplinary lenses. These experiences play an important role in preparing students to create their own innovative designs.

For example, students visit the Immaculate Heart of Mary Motherhouse in Monroe and the Dana Building on campus to learn firsthand about green building methods that are currently in use. During field trips, students evaluate the energy savings, water efficiency, and carbon dioxide emissions reductions of the buildings using a Leadership in Energy and Environmental Design (LEED) score sheet. LEED is an internationally recognized green building certification system for assessing environmental impacts throughout a building's lifecycle.

Guest lecturers complement the field trips by presenting the different players in the construction process. The variety of perspectives appeals to students with different academic backgrounds and also gives students a sense of professional opportunities in green building design and construction.

The course culminates with interdisciplinary student teams of architects, engineers, business people, and environmentalists collaborating to create innovative, sustainable building designs.

Faculty Perspectives

"The business school students will learn from the architects on design and rendering, the architecture students will learn from the business students on running net present value, and the environmental students will bring in the environmental component, so they teach each other over the course of the project."

"Sustainability allows this bridging to happen among all the disciplines. This issue crosses disciplines in a way that very few others do."

Student Perspectives

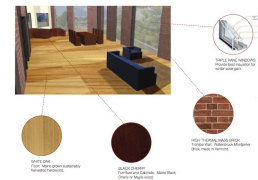
"The interdisciplinary group work was by far the most valuable aspect of the course. It was great to understand how those in other disciplines approached the issues discussed in the course."

"The multiple-perspective approach was fantastic, both in terms of group work with members of various disciplines and in terms of guest lectures by professionals from various fields."

Examples of Teaching and/or Student Artifacts



Energy Design



Material Selections



Regional Considerations