

LEED Lab sets the course for campus EB:O+M certification

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Over the past year, USGBC and GBCI have collaborated with The Catholic University of America (CUA) on a pilot interdisciplinary studio -- coined the LEED Lab. The goal of this collaboration was to test a course concept where students are engaged in and facilitating LEED for Existing Buildings: Operations & Maintenance on campus. Faculty partner Patricia Andrasik shares her thoughts on the experience.

The field of sustainable architecture is evolving, and architects, designers and owners are each measuring sustainable benefits in terms of their impact on human health, environment and cost implications. The performance of a building is becoming not only a requirement in assessing sustainable building design, but also in evaluating post-design to document the *effect* of sustainability measures (and lack thereof).

How can we teach this skill to students of higher education?

LEED Lab is a college course open to both CUA undergraduates and graduates, and is aimed at training student architects to meet current market needs while also engaging sustainability programs within the university. Students learn how to integrate sustainability into the building life cycle, while being given opportunities to apply research to practice.

Through a carefully-structured Sustainable Design curriculum, members of the faculty and administration are using LEED Lab to help achieve the first LEED EB:O&M certification for the school's home base, the Crough Center, with a future goal of continuing the process on other campus facilities. This facility is aiming to be the first in the nation to be certified completely by students as part of a studio course.

The goals of the LEED Lab benefit both students and the campus:

1. The class creates a platform for direct student collaboration with USGBC, GBCI, CUA facilities and other campus schools and departments. Most notable is that GBCI will provide feedback and access to LEED reviewers as would be provided for a genuine project. In addition, GBCI will also perform a live review of the LEED final project submission in a forum that engages the student team.
2. Experience gained from this course qualifies as a prerequisite for both the LEED Green Associate and LEED AP exams, meeting market demand for young professionals.
3. The course also creates a platform to engage national building performance benchmarking codes on existing buildings and creates a "continuous process of systematically evaluating the performance and/or effectiveness of one or more aspects of buildings in relation to issues" such as cost-effectiveness, functionality, and sustainability. [Learn more.](#)
4. The course creates a mechanism to engage students and drive campus sustainability efforts that focus on the existing built environment. As students learn to organize and serve as facilitators in charrettes, they will educate university administrators and operations staff members about policy revisions that embrace greater sustainability goals. Their work will raise an awareness of inefficiencies on campus which will assist the University in its mission of greater sustainable stewardship.

Each LEED Lab course builds upon the other; students use the previous class' work in documentation, tracking and metering until certification is met. For example, after determining through simulation and actual meter readings in our summer course that our daylighting potential was sufficient without the antiquated mercury halide fixtures in the main studio spaces, students in the fall course prompted the installation of an automatic shut-off switch from 8 am to 3 pm as the "lights off" program. This simple strategy has reduced energy use in the building by approximately 20 percent.

As LEED Lab evolves, CUA and the Center for Green Schools at USGBC are striving to create a model LEED Lab course that could be taught at other universities. CUA's School of Architecture and Planning and the facilities department will continue to develop a process for operations and maintenance tracking that will be incorporated into LEED Lab.

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