

COURSE SYLLABUS
INTR 49500: SUSTAINABLE DESIGN IN ENGINEERING AND TECHNOLOGY

Course Description: In this multidisciplinary course, students will create industrial ecological solutions within their unique disciplines. A theoretical framework on Sustainable Design, based on a global perspective and US Green Building Council “LEED” Certification System, is used to identify and apply sustainable concepts.

While working individually, students will explore Sustainability and the Integrated Interior Environment (areas such as building components, finishes, furnishings, indoor environmental quality, daylighting and lighting systems) as well as the Integrated Design Process.

Credits: 3 CR

Prerequisites: ART 22200, INTR 32500

Course Objectives:

Upon completion of the course the diligent student, who completed the study abroad trip and all the class work to acceptable standards, should be able to:

- An understanding of the social and moral responsibility the design profession has, as a part of the built-environment professional community, to help protect Planet Earth’s resources and the health, safety, and welfare of its inhabitants.
- A fundamental understanding of the global perspectives associated with sustainable development, environmental concerns, regulations, programs, and transformational principles and strategies
- Knowledge regarding the overarching principles of sustainability considerations of the built- environment, and how “sustainable” design relates to this comprehensive whole
- An understanding of how to apply sustainable design practices within the specific activities of the interior design process and to yield thoughtful and effective design solutions
- The ability to both analyze and synthesize complex issues to make reasoned decisions both as an individual and as part of a team
- Enhanced research, communication, and presentation skills

- Interface with the Indianapolis/Area Community of built-environment professionals who have achieved LEED professional accreditation (LEED AP) or are knowledge experts in their field
- Interface with the Indianapolis/Area Community projects that have been LEED certified or used sustainable building practices

IUPUI Principles of Undergraduate Learning (PUL Criteria):

Upon successful completion of this course the students who have been in attendance regularly have been taught, practiced and evaluated on:

- a. The ability to write, read, speak and listen: perform quantitative analysis; and to use resources and technology.
- b. The ability to analyze complex issues and make informed decisions from multiple perspectives.
- c. The ability to use information and concepts from studies in multiple disciplines in their intellectual, professional and personal lives.
- d. The ability to examine and organize disciplinary ways of knowing and to apply them to specific issues and problems.
- e. The ability to make judgments with respect to individual conduct, citizenship and aesthetics.

CLASS POLICIES:

- a. Most, though not all, class information will be posted on On-Course. Students are required to check email and On-Course regularly for up-to-date class information. *Attendance in class is imperative to be fully informed.*
- b. All work will be prepared using software and the resource material identified by the instructor.
- c. In-class production of work is typically required; often, class work will need to be completed outside of class, especially if the student is not proficient in the recommended software or is deficient in an understanding of construction and the application of construction materials. *Be prepared to work outside of the regular class time to complete assignments and projects.*
- d. This class is run much like an architectural office. Information that you will need to complete assignments is not always delivered by the instructor in formal lectures. Other sources of information (e.g. past projects, texts, manufacturers' literature and E-information) **MUST** be utilized as well if you expect to perform well and fully understand what you are doing.
- e. Anyone caught contributing to cheating, copying or plagiarizing work of any kind will be penalized accordingly and this will be documented in the student's personal file at the Department, School and Campus level.

Grading:

Tentative mark allocation:

Assignments:	40%
Participation	20%

Professionalism	10%
Final Project:	<u>30%</u>
	100%

Assignments:

A one page written narrative will be required for each reflection session

Students will be required to assess and implement all eligible LEED (Leadership in Energy and Environmental Design) credits. Needed LEED information will be available on OnCourse, and the reflection sessions will include discussions of the various LEED categories. One assignment per category will be required and submitted, prior to the final project submission and deadline.

Participation:

Participation includes the thoughtful and engaged participation in all orientation sessions, and all sessions and activities while abroad.

Professionalism:

Students are expected to be respectful both in the classroom, as well as abroad, and any offense in this category will be addressed immediately in the forms of both written and oral communication.

Final Project:

A final power point presentation highlighting the sustainability features of the completed project, and the summation of all LEED credits attained will be due at the debriefing session held once the students have returned from Swaziland.

A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59
(Plus and minus grades given as well)

“A” grades will be given for outstanding, exemplary and exceptional work depicting over and above what is required of the respective project or assignment. Student demonstrates the ability to evaluate, critique, and/or design work of exceptional quality.

“B” grades will be given for good work, depicting an above average understanding. Student demonstrates the ability to revise and synthesize work or tasks.

“C” grades will be given for average work or work that solely meets the project criteria without an obvious effort to exceed expectations. Student demonstrates the ability to apply and reproduce work or tasks.

Work that is lacking or deficient will receive a “D” or “F” grade.

