

Course name: GREEN ARCHITECTURE & ENVIRONMENTAL DESIGN

Course code: ARCH 471

Course hours: Credit hours 3, Contact hours 3

Course Pre-requisites: None

Course Description

This course covers the fundamental concepts of sustainable development in the built environment; the environment/ resources issues and building industry/ construction metabolism with examples. It also discusses environmental ethics and environmental justice; ecological/ environmental economics including Life Cycle Costing; building assessment and ecolabel. Additionally, this course develops basic knowledge about energy conservation.

Course Main Objective:

- Understand the concept of sustainable development or sustainability in the build environment.
- Learn about the different sustainable frameworks used worldwide, their strength and weakness.
- Learn about the fundamental resources' issues related to build environment.
- Understand concepts such as New Urbanism, passive design strategies, technologies, ecological principles, and energy conservation measures for efficient buildings.

Course Learning Outcomes

After the completion of this course, the students will be able to;

- Recognize the basics and principles of sustainability in build environment.
- Recognize the methods for evaluating building form sustainability point of view.
- Apply sustainability measures in building design

Course evaluation

- Quizzes, practical assignments
- Weekly/biweekly reviews
- Midterm examination
- Attendance
- Final examination

Course recommended books

- Charles J. Kibert. (2012). Sustainable Construction: Green Building design and Delivers. Third Edition. New York: John Wiley & Sons

Course References

- Paola Sassi. (2006). Strategies for Sustainable Architecture. Taylor & Francis.
- Michael Bauer, Peter Mosle, Michael Schwarz. (2010). Green Building - Guidebook for Sustainable Architecture. Springer
- Daniel E. Williams, FAIA. (2007). Sustainable Design - Ecology, Architecture, and Planning. John Wiley & Sons, Inc.