COURSE DETAIL

ECOLOGICAL ARCHITECTURE
Country Korea, South
Host Institution Yonsei University
Program(s) Yonsei University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Architecture
UCEAP Course Number 102
UCEAP Course Suffix
UCEAP Official Title ECOLOGICAL ARCHITECTURE
UCEAP Transcript Title ECOLOGICAL ARCHITEC
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course provides an in-depth exploration of building science topics related to sustainable buildings. Through a combination of lectures, workshops, and hands-on projects, students learn the fundamental scientific principles underlying these phenomena and gain practical experience with technologies and analytical techniques for designing comfortable and energy-efficient indoor environments. The course covers a broad range of topics, including climate analysis, solar energy, heat transfer, natural ventilation, HVAC systems, renewable energy, acoustics, biophilic design, landscape design, and water systems. Students apply these principles in real-world scenarios, learning to integrate energy, light, and sound considerations into architectural design to enhance building performance and occupant comfort. Topics include Introduction to Sustainable Buildings, Understanding Climate - Methods for Environmental Analysis, Understanding Comfort - Psychrometrics and Bioclimatic Chart, Solar Energy and Daylighting, Material and Building Heat Transfer, Wind and Natural Ventilation, Building Performance Simulation, HVAC and Renewable Energy, Indoor Environmental Quality, Acoustics and Biophilic Design, and Landscape Design and Water system.

Language(s) of Instruction
English

Host Institution Course Number
ARC3406

Host Institution Course Title
ECOLOGICAL ARCHITECTURE

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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