

Sustainable Design - Course Outline

1. Sustainability vs. Energy Consumption

- Sustainability
- Energy And Emission
- Energy Consumption of Buildings

2. Sustainable Architecture - Theory

- Natural vs. Built Environment
- Ecological Architecture / Green Building
- Performance Metrics of Sustainability
- Economical Aspects of Sustainability

3. Building Energy Efficiency

- Requirements: Standards and Directives
- Energy Efficient Architecture
- Energy Efficient MEP Systems

4. Building Energy Analysis - Theory

- Stationery Calculations
- Dynamic Energy Simulation

5. Building Energy Analysis - Practical

- Input
 - Thermal Blocks
 - Building Geometry And Material Properties
 - Additional Data
 - Performance Rating Baseline Data (Optional)
- Dynamic Energy Simulation
- Evaluation Reports

6. Green Building Rating Categories (Other Than Energy Efficiency)

- Sustainable Sites
- Water Efficiency
- Materials And Resources
- Indoor Environmental Quality (including Daylighting)
- Regional Priority

7. Sustainable Architecture - Practical

- New Buildings – Sustainable Building Models
- Green Retrofits
 - Project Evaluation
 - Solutions
 - Action Plan
 - Sustainable Design Checklist