



Designing for Greater Efficiency

An IFC EDGE Online Course to Design Resource-Efficient Architecture

I. INTRODUCTION

The online version of the Designing for Greater Efficiency course offered by the International Finance Corporation (IFC), member of the World Bank Group.

In this course, students will learn about the fundamentals of energy and resource efficiency measures in building design and construction projects.

Offering unique content with real life case studies and examples, this course aims to teach practical skills to deploy resource efficiency in building design.

II. COURSE DETAILS

This course is aimed at senior students and working professionals in the building design industry. To enable flexibility, the course does not include deadlines and may be completed in accordance to the student's schedule. All modules and activities are accessible across multiple devices, including tablet and mobile phone; it is recommended that the desktop version of a browser be used.

To successfully complete this course, it is recommended that the student have a working knowledge of a database software such as MS Excel, architectural and engineering drawings, and basic mathematics.

Course Outcomes

On completing this course, a student will be able to:

- **Develop** critical thinking skills, quantitative skills, and design approaches
- **Conceptualize** and **integrate** green features across multiple disciplines and building types
- **Quantify the impact** of design strategies on energy, water and material consumption using the EDGE building software
- **Define an outline** of a compelling business case for sustainable design
- **Communicate** design strategies and choices effectively with clients and other building stakeholders including owners, investors and other design team members
- **Demonstrate** knowledge of **improvement measures** and their relative cost-benefit implications

III. ASSESSMENT

To validate the concepts learned and evaluate your knowledge, students will be required to complete a number of assessments during this course. These will be provided as assessment exercises, and a final design assignment, which will be graded. Some knowledge checks will be dotted throughout the modules; which will not be graded. A summary of the weighting of the assessment exercises and final design assignment is outlined in the table below:

Modules	Number of exercises	Weighting
Module 1: Green Buildings in Context	1	3%
Module 2: Form, Skin and Climate	5	15%
Module 3: Engineering Architecture: HVAC & Controls	3	9%
Module 4: Lighting and Photovoltaics	3	9%
Module 5: Water and Materials	3	9%
Module 6: Making the Business Case	0	0%
Module 7: Final Design Exercise	1	55%
Total (maximum)	16	100%
Passing Grade (minimum required)		70%

Assessment Exercises

Module 1 to 5, and Module 7 each include an assessment exercise containing between 1-5 questions, which students will be required to complete before moving on to the next module. The results of these assessments will account for 45% of the final grades.

Final Design Assignment

At the end of the course, students will be required to complete a final design assignment which will constitute 55% of the final grades.

Through this assignment, students will get an opportunity to demonstrate their understanding of the principles covered in the course by designing a building that meets the guidelines for efficiency.

The assignment will be graded by the IFC EDGE team. It is likely that the grading process may take up to four weeks to complete. Once a student's assignment has been evaluated, the student will receive an email with the final grades.

IV. CERTIFICATION

Upon successful completion of this course, students will receive a certificate of completion for 'Designing for Greater Efficiency'.

If you have any questions, please contact edgelearn@ifc.org.