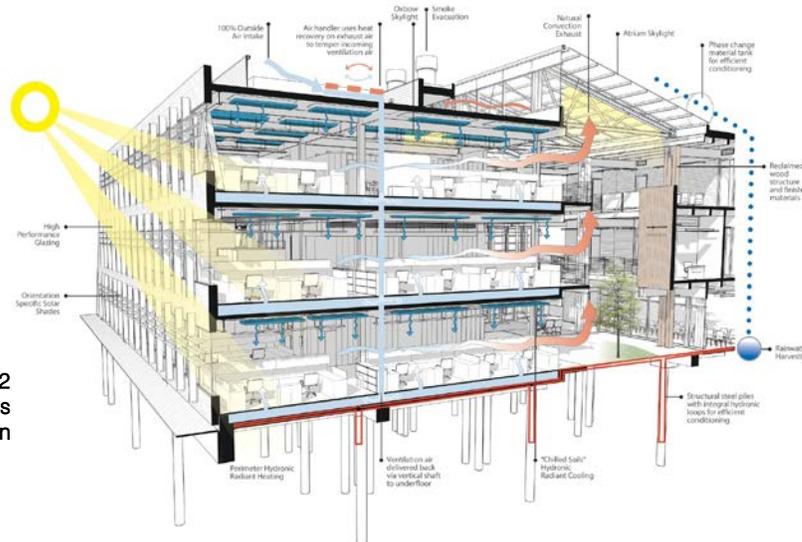


Federal Center South Building 1202
ZGF Architects
Seattle, Washington



Global Classroom

Fundamentals of Integrated Building Design

International guest lecturers from industry, the profession and academia

AE T480 CRN 34932 / AE T580 CRN 34933
Spring Term, 9:00-11:50 am, Thursdays URBN 348



Drexel University
College of Engineering
Department of Civil, Architectural & Environmental Engineering
Dr. Eugenia Victoria Ellis

Politecnico di Milano
School of Architecture Urban Planning and Construction Engineering
Prof. Giuliana Iannaccone



POLITECNICO
MILANO 1863

Fundamentals of Integrated Building Design is an introduction to the methodologies and tools used to govern energy, resources and environmental quality decisions for the design and construction of energy-effective buildings that respond to site specific environmental conditions. Techniques covered include preliminary design tools, assessment methods, protocols and good practice guides to provide a conceptual framework for the design of efficient buildings that consider both horizontal (interdisciplinary) and vertical (life cycle-related) integration. Students will work in teams on an innovative, carbon-free, resilient international competition project for Reinventing Cities <https://www.c40reinventingcities.org/en/>.

Learning Objectives

Students will demonstrate:

- the ability to understand the patterns of energy, light, air and water and their application to the design of a building through the development of integrated design skills;
- an understanding of the basic principles and appropriate application and performance of construction materials, products, components, and assemblies, including their environmental impact and reuse;
- an understanding of building assemblies and the principles of sustainability;
- the ability to assess, select, and conceptually integrate structural systems, building envelope systems, environmental systems and building service systems into building design;
- the ability to demonstrate the principles of environmental system design and the tools used for performance assessment – to include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, and solar systems.