

LUC Institute for Environmental Sustainability

FIRST PLACE

ASHRAE Excellence in Engineering Award
Chapter Level

Project Highlights and Results

- LEED Gold designation incorporating all possible Energy and Atmosphere points.
- Project incorporates an existing high-rise dormitory building with new, state-of-the-art laboratory, classroom and dormitory spaces which interact as part of an energy efficient building complex.
- Vertical closed-loop geothermal system installed underneath the building with supplemental heat from a biodiesel fuel burning boiler.
- 56% energy cost reduction achieved, exceeding predicted value of 47%.

Project Background

Owner:	Loyola University Chicago (LUC)
Location:	Chicago, IL (Lake Shore Campus)
Team/Team Lead:	Don McLauchlan, Brian Malone
Elara Role:	MEPPFIT Engineering Design
Type:	Conversion, New Construction
Construction Cost:	\$49,500,000

Project Overview

Building Type:	Higher Education
Building Attributes:	10 Story existing bldg, transparent winter garden, 6-story dormitory (216,000 SF)
Initial Construction:	1962/2011
MEPPFIT Systems:	Natural ventilation, daylight harvesting, rainwater harvesting, geothermal heating/cooling, chilled beams, fan coil units, heat recovery, cascading ventilation system, DDC

Innovation

- New building sets a new precedent that encourages a sustainable living and learning lifestyle for future generations.
- The IES complex embodies sustainability, from its site selection/positioning to its operating systems, all the way to the end user through a variety of spaces and activities all housed within the same environment.
- Within the dormitory building, student rooms are divided by neighborhoods to participate in energy competitions through the real-time monitoring of each neighborhood.
- In all aspects, building occupants are encouraged to interact with their sustainable surroundings and driven to further apply these concepts in their daily lives and the global community -- leaving a legacy of energy conservation.

