

# LUC Norville Intercollegiate Athletic Center

## Project Highlights and Results

- LEED Silver Certification
- Design utilizes existing campus chilled water for cooling and new high efficiency boiler plant for heating
- Two custom air handling units provide ventilation and space conditioning; one for first and third floor offices and public spaces, the other providing 100% outside air for second floor locker rooms and restrooms
- 100% outside air unit equipped with heat exchanger and re-heat heat exchanger

## Project Background

<b>Owner:</b>	Loyola University-Chicago (LUC)
<b>Location:</b>	Chicago, IL (Lake Shore Campus)
<b>Team/Team Lead:</b>	Don McLauchlan, Steve Maze, Claudine Harig, Bhupendra Tailor
<b>Elara Role:</b>	MEPPFIT
<b>Type:</b>	Major Addition
<b>Construction Cost:</b>	\$23,000,000

## Project Overview

**Building Type:** Higher Education; Athletic Facility (Training Rooms, Hydrotherapy Room, Weight Room, Press Room, Lounges, Locker Rooms, Offices)

**Building Attributes:** 3 Stories with Atrium; 78,000 SF

**Initial Construction:** 1996, 2011 Addition

**MEPPFIT Systems:** VAV AHUs/DOAS, Radiant, Heat Recovery, Interlocked Smoke Exhaust, DDC

## Innovation

- Norville Intercollegiate Athletic Center is a three-story addition with partial mechanical penthouse to an existing sports center constructed in 1996.
- MEPPFIT systems were designed for the addition and a new hot water boiler plant designed to serve the entire facility.
- The second floor consists of several dedicated locker rooms for each of the men's and women's sports teams. To meet the City of Chicago exhaust requirements, and increase energy savings, the exhaust from each locker room was provided and controlled with VAV boxes in addition to the traditional supply VAV boxes. The exhaust air streams were additionally outfitted with plate heat exchangers to maximize the energy recovery potential from these air streams.
- Entry lobby heating was accomplished using capillary tubing embedded within gypsum board ceiling clouds, essentially creating radiant heating panels.
- Flooring for the lobby that wraps around the arena utilizes in-slab radiant hot water tubing with radiant baseboard at the perimeter equipped with cold-rolled steel dummy panels to meet the building aesthetic requirements from the exterior.
- The large 3 story atrium is heated with in slab radiant tubing, which provides more consistent and greater comfort.
- Building systems controlled through state-of-the-art building automation system.

