

Aircuity case study

Iowa Central Community College

Centralized Demand Control Ventilation Results in Significant Energy Savings & Accolades

IOWA CENTRAL COMMUNITY COLLEGE IS LOCATED IN FORT Dodge, Iowa with two satellite locations within the nine county area that it serves. The college is focused on its vision of being a learning college of choice and meeting



the needs of the over 6,000 students they serve in a changing regional and global environment. Iowa Central Community College is also dedicated to providing programs that foster economic vitality to all members of the

“Aircuity and other energy conservation measures installed have helped to reduce energy use in the Bioscience and Health Sciences Building by 40-60%.”

Troy Brandt, Director of Physical Facilities
Iowa Central Community College

region. The college strives to be a leader in the region’s sustainability efforts and therefore wants to ensure all new construction meets green building standards including energy efficiency.

MAXIMIZING A COMMUNITY’S EDUCATION WHILE MINIMIZING THE ENVIRONMENTAL IMPACT

In 2008 Iowa Central Community College broke ground

on the new 34,000 square foot Bioscience and Health Sciences Building on the Fort Dodge campus. The building is designed to address two of the region’s most critical areas in terms of work place need—the biotechnology and healthcare sectors. It would also serve to attract

“The Aircuity system was a great fit for the Iowa Central Community College Bioscience and Health Sciences Building. The sensor suite allows for sampling multiple parameters from many different areas without having to install multiple sensors at each location.”

Steve Heun, President
Woodman Controls

talented students and faculty to the college. Iowa Central Community College was committed to making this a LEED® certified project. The architect, Bergland + Cram, teamed up with intelligent building solutions company, Woodman Controls, and the local Aircuity partner to make this happen. The team worked together to develop a plan to implement centralized demand control ventilation throughout the building’s laboratory space.

Aircuity’s system was installed in four labs on campus, totaling over 5,000 square feet, to significantly reduce energy consumption. Differing from traditional lab design practices which use a fixed air change rate, the Aircuity system continually monitors the air quality and varies the amount of air supplied based on current conditions. When contaminants in the air are detected, ventilation is increased to improve the indoor environmental quality; when the air is determined to be clean, ventilation rates are reduced to save energy.

Iowa Central had been operating their labs with a constant ventilation rate of 10 air changes per hour (ACH). The implementation of Aircuity's system allowed for a reduction in air change rates to 4 ACH. This resulted in an annual savings of \$26,703 the first year and an average of \$30,000 per year for the life of the project. The savings resulted in a simple payback period of 2.2 years.

“Bi-annual sensor calibrations provide the assurance that we constantly have an environmentally safe atmosphere. The Aircuity support team makes this facility virtually maintenance free for my support staff.”

**Troy Brandt, Director of Physical Facilities
Iowa Central Community College**

AWARDS AND SAVINGS

The Bioscience and Health Sciences Building received LEED Gold certification based on its sustainable design and efficiency. This was not only the first LEED Gold award for the college, but the Bioscience and Health Sciences Center also became the first Gold certified community college project in the state. The building also received the title of “Smartest Building in America” by Siemens based on its ability to save over 50% of energy a year when compared to “normal” building operations. Additionally, Iowa Central Community College received a rebate of more than \$100,000 from Midwestern Energy for the building's energy efficient design.



Aircuity's implementation is saving the college money year after year, which they are then able to direct elsewhere within the institution. The safe reduction in air change rates coupled with energy savings and awards, is proof positive that installing Aircuity brings resounding results that can be shared campus-wide.

ABOUT IOWA CENTRAL COMMUNITY COLLEGE

Organized in 1966 with a broad mandate to offer a vast array of educational opportunities to the residents of its



nine-county area, Iowa Central Community College was built on the firm foundation of three area junior colleges that had been operating since the 1920s. Iowa Central is committed to excellence in teaching and learning by providing for the varied educational needs of the diverse individuals whom it serves through accessible, flexible, community-centered programs and activities both within and beyond the classroom. For more information on ICCC, visit: <http://www.iowacentral.edu>.

ABOUT AIRCUITY

Aircuity is the smart airside efficiency company providing building owners with sustained energy savings through its intelligent measurement solutions. By combining real-time sensing and continuous analysis of indoor environments, the company has helped commercial, institutional and lab building owners lower operating costs, improve safety and become more energy efficient. Founded in 2000 and headquartered in Newton, MA, Aircuity's solutions have benefitted organizations such as the University of Pennsylvania, Eli Lilly, Masdar City, the Bank of America Tower and the University of California-Irvine. For additional information on the company and its solutions, please visit: <http://www.aircuity.com>.

