



## Higher Education Facilities Shape Young Minds... Encelium Shapes Their Learning Environment


Encelium's customized lighting solutions for the higher education market enhances the learning experience while delivering maximum lighting energy savings.

Lighting Control  
for the Intelligent  
University/  
College Campus



**ENCELIUM**

LIGHTING CONTROL FOR THE SMART BUILDING



< Higher education facilities offer one of the greatest opportunities for an advanced lighting control and energy management system

For more information: [www.encelium.com](http://www.encelium.com)



## Customized Lighting Control Solutions to Enhance the Learning Experience

Education facilities offer one of the greatest challenges to an energy management and lighting control system due to their diverse use coupled with typically long operating hours. This challenge is compounded by the unique audio visual requirements that are an essential part of modern day instruction. The scope of a typical college or university campus is large - however, there are five unique areas each requiring a unique approach to optimize both lighting energy savings and the learning environment.

### Auditoriums and Classrooms

Here the principal objective is to seamlessly integrate lighting control with the audio/visual instructional requirements while saving lighting energy. Our experience has shown that the learning experience may be enhanced while simultaneously “greening” the classroom.

### Laboratories

Laboratories of every type span most higher education facilities. Depending on the type of lab, the lighting requirements are very specific and granular control is necessary to provide optimum light levels for the specific task at hand while saving energy. From the “soft” lighting required in a language lab to the bright lighting environment of science laboratories, Encelium’s ECS can maintain customized lighting scenes.

### Libraries

In most libraries the work day extends well into the evening with safety and security of the student being paramount. Dimming strategies such as task tuning and daylight harvesting may be deployed together with occupancy sensor based control of discrete rooms so that lights

are switched off when not in use. Well illuminated “secure zones” are created for such spaces as restrooms, rest areas and exits to ensure student security after nightfall.

### Sports Facilities

These facilities typically have all of their lighting on for long operating schedules even though they may be sparsely occupied during certain times of the day. Encelium’s ECS can illuminate only those spaces within the facility that are actually in use while turning off or dimming down lighting in unoccupied spaces.

### Common Areas

The learning experience in schools is both formal (classroom) and informal (peer interaction and contact with teaching staff) and common areas are critical to the overall learning experience. In addition, there are also many specialized areas that are multifunctional and in use for an extended day. These include offices, parking areas, student accommodation areas and cafeterias. Encelium’s ECS offers the ability to easily adapt to these diverse lighting requirements while delivering proven energy savings.



## Six Strategies to Reduce Energy Consumption, Save 50% to 75% and Reduce Your Carbon Footprint

**Smart Time Scheduling** In areas of a building where occupancy control is not appropriate or where predictable use occurs, time scheduled control of lights can be employed for zones as small as an office or classroom. Where people arrive and leave often at staggered times – smart time scheduling captures the savings by turning lights off or dimming lights when the space is not in use.

**Daylight Harvesting** Through the use of photo sensors, light levels are automatically adjusted to take account of natural light coming into a space - fixtures adjacent to the windows or skylights are dimmed down and a comfortable working light level for the occupants is maintained.

**Task Tuning** Maximum default light levels are set to suit the particular task or use of a workspace in order to eliminate excessive lighting. Generally this application would be deployed campus wide where appropriate.

**Occupancy Control** Through the use of occupancy sensors, lights are automatically turned off or dimmed based on occupancy detection. This strategy deploys well in any discrete room such as washrooms, classrooms, study rooms, private offices, mechanical and storage rooms and support areas.

**Personal Control** Through the personal control software on their PC, individuals can control the light levels in their workspace to suit their personal preferences thus enhancing both their comfort and productivity. Generally this application would be deployed in office or administrative areas.

**Variable Load Shedding** Overlaying the above five strategies, the ECS' load shedding utility automatically reduces the electrical demand in a building by shedding lighting loads dynamically (through dimming or switching), either to shave peak demand or to react to utility demand response programs.



## A Sound Investment Today and for the Future

Encelium customers demonstrate to the community at large their corporate commitment to sustainability and the environment. Put simply, regulate consumption and the implications of greenhouse gases are reduced. And savings of 50% - 75% speak for themselves. In almost every installation, Encelium delivers these impressive results – ROI that no other competitor can match all while improving the workplace environment.

### Corporate Commitment

Encelium was founded in 2001 as a software and systems company with one specific mission – to design the world’s leading lighting energy management system – a system focused on minimizing energy consumption while improving lighting quality and workplace ergonomics. With its software roots, Encelium is uniquely built around this mission. Most competitors in this sector are hardware focused and have merely adapted existing architectural light control systems in an attempt to manage light consumption.

The differences are clear in both cost effectiveness and delivered energy savings. No other system available today delivers savings approaching 75% while providing realistic ROI’s acceptable to building owners and their financial managers. This is made possible by a system architecture that permits the use of standard lower cost lighting components coupled with centralized software that is both granular in control and strategy integrative. The software also provides robust gateways to other building systems further promoting the concept of “smart” or intelligent buildings and LEED certification.

European and North American markets have responded with an outstanding endorsement of the Encelium approach and we now have over 250 projects completed and thirty million square feet controlled – more than all competitors combined.

Headquartered in New Jersey U.S.A., Encelium also has sales and technical offices in Canada and Europe that provide a level of support to our customers unequalled in the industry. It is our continuing mission to constantly enhance Encelium’s reputation for outstanding customer service and quality.



# ENCELIUM

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