Designing for Effective Acoustics

Course AC1, 1 LU/HSW Hour

Studies show that acoustics are an essential consideration in meeting what is arguably the primary goal of the office: to provide a setting conducive to optimal work performance. But what is an effective acoustic environment? Because many have an incomplete understanding of this concept, they often pursue noise control strategies in what we call the “Quest for Silence” — the notion that good acoustics are achieved when the sound levels in a space are as low as possible, with zero being the best. Others believe they can resolve the noise problems in their office by using only one or two of the methods and materials described in the “ABC Rule.” The results of these assumptions are usually disappointing.

This need not be the case. The first part of this presentation introduces the goals of acoustic design, methods of noise control and how various interior design elements can help achieve good acoustic performance in an office setting. The second part explains the acoustic principles behind the use of these techniques and materials. By showing how sound masking works in conjunction with absorptive elements, it demonstrates that a combination of acoustic treatments is key to achieving the desired results because each one functions in a unique way.

At the end of this course, participants will be able to:

• Explain the ABCs of effective acoustic design
• Incorporate noise control methods and materials into their designs
• Reduce costs associated with construction and furniture systems
• Provide facility occupants with speech privacy, comfort and freedom from noise disruptions

Green Acoustics: General Lessons & the Role of Sound Masking

Course ACG-I, 1 LU/HSW Hour

Sustainability is one of the driving forces in construction today, a road that has largely been paved by the United States Green Building Council’s Leadership in Energy and Environmental Design (LEED®) rating system. However, the lack of attention historically paid to acoustics has been detrimental to the overall performance of sustainable spaces. In fact, post occupancy evaluations reveal green building acoustics are typically worse than their traditional counterparts.

This course covers the ABCs of effective acoustics in the context of sustainable design. First, we discuss the meaning of the term ‘green building.’ We then review the treatment of acoustics in current green building guidelines, with emphasis on the LEED® program. We present a number of research projects and case studies that investigate speech privacy and noise control in green spaces and their effects on building occupants. From these, we summarize general lessons for sustainable acoustic design. Finally, we discuss potential LEED® credits for acoustics. While most of our presentation focuses on the challenges faced by commercial office environments, these principles can also be applied to many other types of interior workspaces.
Hospital Acoustics: General Lessons & the Role of Sound Masking
Course ACH-I, 1 LU/HSW Hour

Noise is a well-documented problem in hospitals. There are typically no less than 86 different sources — a cacophony produced by conversations, televisions, alarms, carts, medical equipment and mechanical systems. While it’s true that these sounds can set the emotional tone for this type of environment, they cause more than just irritation. A growing body of research shows that noise actually harms patients. Speech privacy is also an issue. All too often, their confidential medical information is overheard by others.

This presentation provides an overview of acoustical issues in hospitals. While we primarily focus on hospitals, the lessons can be applied to other healthcare environments. You’ll learn about the impact of noise on patients and staff, the industry forces pushing for change including HIPAA and HCAPHS, the goals of acoustical design and methods of controlling noise and increasing speech privacy. The presentation concludes with a case study describing a sound masking implementation and its outcome.

At the end of this course, participants will be able to:
• Identify the sources and impacts of hospital noise
• Explain the ABCs of effective acoustic design in the context of a healthcare setting
• Recognize the government and market forces behind the need to improve acoustics
• Provide occupants with speech privacy, comfort and freedom from noise disruptions

Hotel Acoustics: General Lessons & the Role of Sound Masking
Course ACHGR-I, 1 LU/HSW Hour

When guests arrive, they’re often stressed and tired. They want a warm welcome, a pleasant room with excellent amenities and, above all, a good night’s sleep. Most identify noise as their number one sleep inhibitor. In fact, noise is a top industry complaint, ranking first or second across nearly all property types, from luxury to extended stay.

This presentation provides an overview of noise issues in hotels. We review the sources of noise, its impacts on guests and properties, the coping strategies guests use, and the steps hotels typically take to try to improve noise control. We provide an acoustical analysis of several properties, as well as research regarding the role dynamic range plays in disrupting sleep. Finally, we discuss how sound masking can be used to address these problems and review two case studies: the Tribeca Grand Hotel in New York, NY and the Marriott Springhill Suites in Sacramento, CA.

At the end of this course, participants will be able to:
• Recognize sources of hotel noise
• Identify the impacts of noise on guests and properties
• Explain how dynamic range affects sleep
• Provide guests with increased privacy, comfort and freedom from noise disruptions

Contact your local LogiSon Representative to schedule a webinar or arrange a presentation at your location.