

BEYOND

SMART CITIES

INDOOR ENVIRONMENTAL QUALITY

GREEN BUILDING TECHNOLOGY TRAINING PROGRAM

FOR GREEN BUILDING AND SUSTAINABILITY SPECIALISTS

KRISHNAJI PAWAR, LEED AP BD+C, GSAS CGP, ISO 14001:2015, GCP

GREEN BUILDING SPECIALIST CURRICULUM

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INDOOR ENVIRONMENTAL QUALITY - OVERVIEW

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LEARNING OBJECTIVES

Indoor Environmental Quality - Overview

Indoor Environmental Quality in LEED v4.1

GREEN BUILDING SPECIALIST

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INDOOR ENVIRONMENTAL QUALITY - OVERVIEW

Indoor Air Quality (IAQ) refers to the air quality within and around buildings and structures, particularly as it relates to occupant health and comfort.

Understanding and eliminating common indoor contaminants helps lower the chance of developing indoor health problems.

Sources of indoor pollution that emit gases or particles are the primary cause of indoor air quality issues. Inadequate ventilation can increase indoor pollutant levels by failing to bring in sufficient outdoor air to dilute emissions from interior sources and by failing to remove indoor air pollutants from the region. Additionally, high temperatures and humidity can raise the quantities of certain contaminants.

INDOOR ENVIRONMENTAL QUALITY



The Indoor Environmental Quality (EQ) category rewards decisions made by project teams about indoor air quality and thermal, visual, and acoustic comfort. Green buildings with good indoor environmental quality protect the health and comfort of building occupants. High-quality indoor environments also enhance productivity, decrease absenteeism, improve the building's value, and reduce liability for building designers and owners. 1 This category addresses the myriad design strategies and environmental factors—air quality, lighting quality, acoustic design, control over one's surroundings—that influence the way people learn, work, and live.



CRITERIA IN THIS CATEGORY

IEQ PR MINIMUM INDOOR AIR QUALITY PERFORMANCE

IEQ PR ENVIRONMENTAL TOBACCO SMOKE CONTROL

IEQ CR ENHANCED INDOOR AIR QUALITY STRATEGIES

IEQ CR LOW-EMITTING MATERIALS

IEQ CR CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN

IEQ CR INDOOR AIR QUALITY ASSESSMENT / THERMAL COMFORT

IEQ CR INTERIOR LIGHTING / DAYLIGHT / QUALITY VIEWS / ACOUSTIC PERFORMANCE



MAXIMUM POSSIBLE CREDITS : 2 P / 16 C

INDOOR ENVIRONMENTAL QUALITY - OVERVIEW

The Indoor Environmental Quality (EQ) category recognises team decisions regarding indoor air quality, thermal, visual, and auditory comfort. Green buildings with high interior environmental quality safeguard occupants' health and comfort.

Additionally, high-quality indoor settings increase productivity, decrease absenteeism, increase the building's worth, and reduce designers' and owners' liability.

This category addresses the plethora of design methods and environmental aspects — air quality, lighting quality, acoustic design, and control over one's surroundings — that affect how people learn, work, and live.

INDOOR ENVIRONMENTAL QUALITY +

The complicated relationship between the indoor environment and the health and comfort of building occupants is not yet fully understood. Local conventions and expectations, inhabitants' activities, and the building's location, design, and construction are a few of the aspects that make it challenging to quantify and measure the direct effect of a structure on its residents.

Consequently, the EQ section strikes a compromise between the need for prescriptive metrics and more performance-based credit criteria. For instance, source control is addressed first as a precondition, followed by an indoor air quality evaluation to measure the actual outcome of these efforts in a later credit.

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INDOOR ENVIRONMENTAL QUALITY +

The EQ category combines traditional approaches such as ventilation and thermal control with emerging design strategies, such as a holistic, emissions-based approach (Low-Emitting Materials credit), source control and monitoring for user-determined contaminants (Enhanced Indoor Air Quality Strategies credit), lighting quality requirements (Interior Lighting credit), and advanced lighting metrics (Daylight credit). A new credit pertaining to acoustics is now available for all BD+C-rated projects.

The Indoor Environment category focuses on the quality of the indoor environment for occupants' and users' comfort, health, and well-being. People spend the majority of their time indoors, and the quality of their interior environment directly affects their health, comfort, well-being, and enjoyment. The design of the building should foster a comfortable, healthy, and secure environment for the tenants and users.

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