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A Color Guild Member Exclusive Presentation

# Designing Adaptive Learning Environments

*The Role of Functional Color to Support Focus & Performance*

AIA: CG-EDU-101 Session \_\_ 1 HSW LU



## Course Description:

This course presents current research and case studies demonstrating how environmental design influences learning outcomes across age groups and educational contexts. Participants explore how functional color design and biophilic strategies can be applied to support focus, cognitive performance, and emotional regulation. Drawing on neuroscience, environmental psychology, and educational design research, the course examines how the brain and body process visual and sensory information and how design cues—such as color, contrast, access to nature, and spatial organization—either support or inhibit learning. Participants gain practical methods for identifying biophilic features and using color as a low-cost, high-impact tool to improve engagement, comprehension, and retention from early childhood through lifelong learning.

## Learning Objectives: Participants will

- Explain how the brain processes environmental stimuli in learning contexts and identify design cues that support attention, memory formation, and cognitive performance.
- Describe the principles of trauma-informed design and evaluate their application in educational environments to reduce stress and improve learning readiness.
- Explain how biophilic strategies and evidence-based color application influence focus, emotional regulation, and academic performance in learning environments.
- Develop and apply functional learning-centered color palettes and implementation strategies that address the needs of diverse age groups to support engagement, retention, and educational success.

To have this presented live (in-person or virtual) for your firm or group, reach out to Fawn Chang:

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## HSW Justification

This course addresses Health, Safety, and Welfare by examining how visual and sensory conditions in learning environments directly influence cognitive function, stress response, emotional regulation, and behavioral stability—factors shown to affect academic performance, attentional capacity, and long-term psychological development. Research in neuroscience, environmental psychology, and educational design demonstrates that inappropriate color, contrast, glare, visual complexity, poor spatial legibility, and lack of access to nature increase cognitive load and physiological stress, which can impair concentration, memory formation, and emotional control. Conversely, evidence-based application of functional color, biophilic features, lighting quality, and coherent spatial organization has been associated with improved focus, reduced anxiety, lower rates of behavioral disruption, and safer movement within classrooms and campuses. The course further addresses safety and welfare through trauma-informed design principles, which help mitigate the effects of chronic stress and adverse experiences on learning readiness and behavior. By teaching architects how to identify environmental stressors and apply design strategies that support neurological regulation and perceptual clarity, the course equips professionals to reduce risk factors that contribute to distraction, aggression, fatigue, and disengagement in educational settings. Through practical design methods, palette development, and evidence-based environmental strategies, participants gain tools to create learning environments that support cognitive health, psychological safety, and functional performance—directly advancing the health, safety, and welfare of students, educators, and communities.

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