UW ARCHITECTURE→

LIGHTING DESIGN CERTIFICATE

The Lighting Design Certificate program focuses on the **integration** and **application** of light in architecture. This certificate program explores **daylighting**, **electric lighting**, and **computational lighting analysis**, to teach students how to design light that reveals the architecture and supports the visual environment. Its purpose is to give students a **comprehensive lighting education** focusing on sustainable approaches to light in architecture. The core knowledge areas that are covered include conceptual design, daylighting analysis, lighting metrics, lighting technology, computer simulations, lighting integration, site studies and applied lighting design competitions.

The 21 credit certificate is designed to be completed with the Masters of Architecture 1+, 2+ & 3+ degrees and can be completed within one year.

CERTIFICATE REQUIREMENTS

The Certificate can be completed within the Master of Architecture (M.Arch) professional degree program through **12 credits of coursework** and a **thesis** with an emphasis on lighting.

REQUIRED COURSES:

Arch 435 - Principles and Practices of Environmental Lighting (3 Perception-based approach to principles of natural and artificial lighting. Practical considerations of lighting involving environmental evaluations, calculations, and the use of lamps and fixtures. Sketch and model studies for applications. Impact of lighting design on energy conservation. Relation of lighting design process to architectural design concepts. Prerequisite: either ARCH 331 or ARCH 431. Autumn

Arch 439 - Architectural Lighting Design (3) Concentrates on the use of electric lighting and its effective integration in architecture and the built environment. Includes site visits, demonstrations, lectures, and projects. Prerequisite: ARCH 435. Winter

Arch 535 - Daylighting Design Seminar (3) Focuses on theoretical and applied daylighting principles in conjunction with physical and digital analytical tools. Includes field assessment of constructed buildings and individual projects involving research and design for lighting and daylighting. Spring

ARCH 582 Computational Lighting Design (3) Computational Lighting Design is an innovative course that draws from recent developments in lighting simulation, visualization, per-pixel data measurement and analysis techniques. It provides the student with an understanding of the theoretical aspects of computer applications for lighting design and analysis; and the practical knowledge of tools and techniques that enhance the integration of the lighting analysis into the architectural design process. Winter

ARCH 700 – Master's Thesis (with emphasis in lighting)

Note: To receive Certificate recognition you must fill out a "Certificate completion" form prior to graduation. Check with your advisor for deadlines. For more information contact:
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