

# Lighting Design

## The Art of Illumination

Instructor: Michael Colgan

### Outline:

**Successful lighting design** requires the application of both artistic talent and technical knowledge. An appreciation of lighting design is especially important for Interior Designers. Human vision depends on adequate lighting levels; our moods and well-being are greatly affected by lighting, as is our determination of color and the perception of form and space. Although lighting is an indispensable part of any interior design scheme, interior designers often feel uncomfortable interpreting the technical data which has become an integral part of the lighting design and specification process. Energy codes, electrical safety and liability issues as well as data aimed at specialist lighting designers and electrical engineers can be problematic for non-specialists, while more comprehensible marketing literature usually lacks important information necessary to make adequate design decisions.

The overall success of interior design frequently depends upon the coordinated efforts of a design team; complex interior design projects frequently require interior designers to work with architects, engineers and lighting specialists. Accurate communication between these disciplines is most important to a projects' efficiency. Interior designers need to be actively involved in and understand the overall process if their design visions are to become a practical reality.

### Intent:

The intent of this class is to provide an insightful overview of the Art, Science and Technology important to successful lighting design. Students will be introduced to the psychological, physical and physiological requirements of lighting as well as its aesthetic considerations. The class provides essential background information for an appreciation of light and lighting as it relates to interior design. Luminaire design is broadly outlined. Students should gain an understanding of interior design lighting requirements, the development of lighting as a design specialty and an appreciation of how to work on projects with lighting manufacturers and designers from other disciplines.

### Structure:

The class will comprise a mixture of lectures, discussions, class study and project work relating to lighting design. Class hours will be devoted to lectures, study forums and critical analyses; homework will involve critical observation, background reading and preparation for class and coursework study requirements.

### Professional development:

Successful completion of this course should enable students to develop an understanding of the possibilities and some of the difficulties of lighting design and will learn to work effectively with others on the design of lighting installations. The course could also serve as a foundation to the continued study of lighting as a design specialisation

### Evaluations:

Evaluations of coursework will be project oriented and will comprise 60% of overall required grade; 40% of grade will be by written examination. Both parts must be taken and passed to aggregate a final passing grade.

COURSE # ID 325

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Classwork, projects 60%, Exam 40%

### LIGHTING DESIGN

Lecture Topics: Does not include class or project work	20 lecture Hours + exam
Light & lighting overview/ The nature of Light	1
Getting the things to work /Electrical supply systems	1
Lighting effects/ Tricks of the trade	1
Lighting design & terminology/ Tools of the trade	1
Light & Color/ Kelvin & color rendering	1
Visual reception/ Seeing is believing	1
Psychology & lighting/ Designing for Emotion	1
The Lighting Trilogy, incandescent, fluorescent & discharge lighting	2
Luminaires, shining examples of the art & how to design them	2
Photometrics- measure twice, specify once	1
Residential lighting design, at home with lamping	2
Commercial & industrial lighting / Codes of conduct	2
Special Purpose lighting/ Film & Stage lighting	1
Lighting design as a specialty/ Designers from different backgrounds	1
Summary & Review	2
Final Exam	2hr exam

### COURSEWORK PROJECTS/ PRESENTATIONS:

due dates:

- |   |         |
|---|---------|
| 1. Natural & artificial light                                   | 1/30/98 |
| 2. Residential lighting designs & plans                         | 2/20/98 |
| 3. Commercial/hospitality/ industrial lighting designs & plans  | 3/20/98 |
| 4. Lighting design/ luminaire design/ mood lighting             | 4/09/98 |
| 5. Photometrics & the art of lighting (research & presentation) | 4/30/98 |