COURSE # ID 325

Chaminade University Fall 1999,

Pre-requisites: ID201, ID218, ID220.

Lighting Design

Instructor: Michael Colgan, IESNA

FD99

Outline, Lighting design among the liberal arts:
An appreciation of lighting design is especially important for Interior Designers. Lighting design requires the simultaneous application of artistic talent, general and interior design principles and an appreciation of modern technology . Human vision demands adequate lighting levels; our moods, health and well-being are greatly affected by lighting while our ability to determine color and accurately percieve form and space depend almost entirely on lighting intensity and quality. Lighting design is an indispensible part of any interior design scheme, Interior Designers, as well as being able to provide artistic input, must demonstrate competence in interpreting the voluminous technical data which has become an integral part of most design and specification processes. In addition, an awareness of ecological concerns, economics, safety and energy codes, liability issues and a basic comprehension of engineering, physics, electro-chemistry and life-science concepts all play a part in the evaluated success of modern lighting designs and installations. Equally important to design realization is the in-field application of aesthetic, technological and managerial design principles, without which interior and lighting designs may not succeed in practice. To provide service leadership to their clients, accurate, cost-conscious and appropriate lighting solutions must be imagined, proposed, researched, designed drafted and presented, with complete technical and purchasing specifications.

Teamwork:
The overall success of interior design usually 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 introduction to the art, science and technology of lighting design. Students will be introduced to the psychological, physical and physiological requirements of lighting as well as aesthetic and technical considerations. The class provides necessary 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 designers, manufacturers and designers from other disciplines.

Structure:
The course 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 projects and critical analyses; homework will involve project work critical observation experiments, background reading and preparation for class projects.

Professional development:
This course will enable students to develop an understanding of the possibilities and the complexities of lighting design and to work effectively with others on the design of lighting installations. The course may also serve as a foundation to the continued study of lighting as a design specialisation.

Evaluations/Grading:
Attendance is mandatory, unexcused absences will incur sliding-scale grade reductions. Excused absences require valid CUH approved reasons. Coursework will use the principles of project based learning and comprise 60% of overall required grade; 30% of grade will be by written examination, 10% of grade addresses attendance and in-class participation. All sections must be adequately addressed to aggregate a final passing grade. The instructor reserves the right to reject late work. Plagiarism and academic honesty issues are referenced to the Chaminade General Catalog p48-49, grades are: A-91 to 100; B- 81 to 90; C- 71 to 80; D- 60 to 70; F- below 60%.

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Evaluations: Projects & Coursework 60%, Exams 30% (5+25%), Attendance & class participation 10%

LIGHTING DESIGN Book : Interior lighting for Designers, 3rd ed. Gordon & Nuckolls

Additional materials will be given via handouts. Some (optional) handout materials may need to be copied at student expense, if required. Optional materials are for background information only.

cw = coursework HW. = Homework * field trips could require added non- class time; ddl. = deadline

Holiday schedules and schedule conflicts may require occasional lecture & classwork modifications

Student responsibilities: The correlation between attendance and GPA is unequivocal, Consequently, class attendance is emphasized. Coursework and projects must be completed in a timely manner, mirroring the fact that commercial design deadlines are often inflexible. Bringing theory and practice together is a goal of this course, students will need to observe and demonstrate the physical application of the design principles learned and report their observations in class. Teamwork, research and internet applications are a part of course structure. Pagers & cell phones shall be switched off completely during class time. Chaminade rules concerning grading, attendance, examinations and plaigiarism will be strictly enforced.

Penalties: Late/missing work penalty 10% per calendar day , except deadlines (ddl.) penalty =50%
Absent penalty: sliding scale 10%, 20%, 30%, 40% of attendance grade (overall 10%)

week 1 Lighting, fundamental concepts and basic theories	**HW. read chapters 1, 2, 12, plates 1,2,3,5, cw #1**
week 2 Perception; Physiology; Psychology ; *Field trip #1 cw #1 due	**HW. read ch. 3, 4, 5 plates 4,17,21, cw #2**
week 3 Electrical supply systems; Incandescent & discharge lamps	**HW. read ch. 6,7,9 plates 13,14,15,16 cw # 3**
week 4 lighting control systems; Photometrics cw #2 due practicum #1 update	**HW. read ch. 8,10 appendix tables**
week 5 Residential lighting concepts ; * Field trip #2; practicum #2 progress report	**HW. read ch 11, re-read ch 12 tables assigned**
week 6 Commercial lighting concepts & lighting economics practicum #1 progress report, cw #3 due	**HW. prepare for mid-term exam**
week 7 MID-TERM EXAM; review of lighting theories	**HW. read ch 13, research & design/build projects**
week 8 Lighting concept design; lighting specifications review practicum #2 update	**HW. design practice**
week 9 Hospitality & entertainment lighting design	**HW. commercial drafting & design practice**
week 10 Conceptual design review; Design practice practicum #1 update	**HW. design practice**
week 11 Practicum class project work; Vets Day practicum #2 update	**HW. practicum #1 project preparation**
week 12 Practicum #1 PRESENTATIONS (ddl); Design practice	**HW. Internet research**
week 13 Design project work & discussion; Thanksgiving	**HW. design/ build practicum**
week 14 Special topics TBA ; Course general review	**HW. practicum #2 preparation**
week 15 Design Practicum #2 PRESENTATIONS (ddl);	**HW. prepare for final exam**
week 16 FINAL EXAM	