

DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE PLAN – PART I			
Course Title	LIGHTING DESIGN		
Course Code	AR 706	No. of Credits	03
Course Code of Pre-requisite subject(s)	Nil		
Session	Jan. 2018	Section (if, applicable)	s
Name of Faculty	Dr.G.Subbaiyan	Department	Architecture
Email	subbaiah@nitt.edu	Telephone No.	0431-2503557
Name of Course Coordinator(s) (if, applicable)	-		
E-mail	-	Telephone No.	-
Course Type	<input checked="" type="checkbox"/> Core course <input type="checkbox"/> Elective course		
Syllabus (approved in BoS)			
Electromagnetic spectrum. Visual response visual acuity, Glare & visual comfort. Colour perception, Visual Task Requirements. Side lighting concepts, Top lighting concepts. Designing Atria / Light Courts. Daylight Controls. Daylighting Design, Daylighting Analysis Electrical light sources and Luminaires. Task requirements, point-by-point method, Lumen method, Qualitative calculations and Supplementary Artificial Lighting.			
COURSE OBJECTIVES			
1. To make an awareness about the benefits of day lighting in buildings. 2. To understand about different daylighting concepts, day lighting analysis and design. 3. To be knowledgeable about the salient features of various Artificial light sources and luminaires. 4. To understand the Artificial lighting design methods. 5. To get introduced to the software used for lighting design of buildings.			
COURSE OUTCOMES (CO)			
Course Outcomes			Aligned Programme Outcomes (PO)
CO1. Assessment of day lighting availability in existing buildings (Analysis).			
CO2. Design of Fenestration for Day lighting of interior spaces.			
CO3. Artificial lighting design for interior spaces of different types of			

buildings	
CO4. Integration of Day lighting and Artificial lighting – Permanent Supplementary Artificial Lighting Design.	
CO5. Lighting Modeling (Natural & Artificial Lighting) of interior spaces using software.	

COURSE PLAN – PART II			
COURSE OVERVIEW			
<p>This course focus on day lighting concepts, day lighting analysis and design of fenestration for day lighting of interior spaces, artificial lighting design for interior spaces, permanent supplementary artificial lighting design and the software used for lighting design/ modeling of buildings .</p>			
COURSE TEACHING AND LEARNING ACTIVITIES			
S.No.	Week/Contact Hours	Topic	Mode of Delivery
1	1 st	Lighting Fundamentals - Light and Optics, Measurement of Light, Vision and Perception, Color	PPT/ Lecture
2	2 nd	Quality of the Visual Environment, Lighting requirements of different types of buildings	PPT/ Lecture/ Discussion
3	3 rd	Day Lighting – Introduction and Concepts	PPT/ Lecture
4	4 th & 5 th	Day Lighting Analysis and Design	PPT/ Lecture/
5	6 th	Day lighting – Analysis and Design	Tutorials
5	7 th	Electrical light sources and Luminaires	PPT/ Lecture
6	8 th	Interior lighting systems and Test	PPT/ Lecture
7	9 th	Artificial Lighting Design – Lumen Method, Point by point method and Glare Index	PPT/ Lecture
8	10 th	Artificial lighting design – Point by point method and Glare Index and Supplementary Artificial Lighting Design	PPT/ Lecture/ Tutorials
9	11 th	Supplementary Artificial Lighting Design	PPT/ Lecture
10	12 th	Lighting – Economics, Control and Maintenance	PPT/ Lecture
11	13 th , 14 th & 15 th	Lighting design - software	Lecture / Hands on sessions/ Tutorials
12	16 th	Conclusion and Feedback	PPT

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Tutorial - 1	6 th	3 Hrs.	15%
2	Test	8 th	1 Hr.	15%
3	Tutorial - 2	11 th	3 Hrs.	15%
4	Tutorial - 3	12 th	3 Hrs.	05%
CPA	Compensation Assessment*	13 th	1 Hr.	15%
5	Assignment	15 th	18 Hrs.	10%
6	Final Assessment *	17 th	3 Hours	40%

*mandatory; refer to guidelines on page 4

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

- Feedback survey about course content and suggestions for any improvement/ modification - online
- Assessment of the knowledge the students have gained through this subject - online
- Feedback regarding the teaching-learning process - online

COURSE POLICY (preferred mode of correspondence with students, policy on attendance, compensation assessment, , academic honesty and plagiarism etc.)**MODE OF CORRESPONDENCE (email/ phone etc)**

E mail: subbaiah@nitt.edu, Phone: 0431-2503557

ATTENDANCE

100% attendance is preferred. The minimum attendance requirement to be eligible for appearing in the final semester examination is 75%.

COMPENSATION ASSESSMENT

- If any student is absent on the day of tutorial session, he/ she shall forfeit the marks for that particular tutorial exercise.
- If any candidate is absent in the test due to genuine reasons, he/ she can appear for retest.

ACADEMIC HONESTY & PLAGIARISM

- Assignments/ Tutorials are required to be prepared independently by each of the candidate. If any student submits assignments/ Tutorials directly copied from other students / books/ journals (cut and paste) he/ she shall forfeit the marks for that particular assignment.
- Mobile phones or any other electronic gadgets are not permitted inside the examination

hall. If any student found having mobile phones or any other electronic gadgets inside examination hall or found copying from other materials/ persons shall be reported to the Dean (Academic) and action shall be initiated as per the institute regulations.

ADDITIONAL INFORMATION

For a student to secure a minimum of E grade he/ she has to secure a minimum of 40% marks overall and appearance in end-semester examination compulsory

FOR APPROVAL

Course Faculty  CC-Chairperson  HOD 