



LET Diploma in Lighting Design Application and Programme 2017



Module Description

Module	Details
Maths	Basic maths for illumination engineering.
DIALUX	Basic DIALUX – Introduction to lighting software.
Introduction	What is lighting design? A personal view.
A	Fundamentals – Vision and the way we see; Photometry and units.
B	Luminaire design & light sources.
C	Human factors – the physical and psychological effects of light on humans including imaging and non-imaging systems.
D	The Concept of Lighting Design.
E	Daylight – the role of daylight lighting design; its effects and how to estimate its value; case studies provided.
F	Interior Lighting – a look at different types of interiors and how to deal with the key design points; case studies provided.
G	Lighting Controls – what are they for; how to use them for improving the visual environment and save energy.
H	Lighting Visualisation – Using the DIALUX programme for visualising a lighting design.
I	Functional exterior lighting – lighting of exterior areas and spaces.
J	Architectural exterior lighting – Lighting for pleasure and effect; master planning basics.
K	Environmental & Ecological impact of light and lighting; EIAs; case studies provided.
L	Emergency lighting – assessing risk; how to provide it sympathetically.
M	Electrical considerations and commissioning of lighting installations.



Concord



ERCO



IALD OPTELMA ARCHITECTURAL LIGHTING

PHILIPS



THORN LIGHTING PEOPLE



TRILUX SIMPLIFY YOUR LIGHT.



XICATO

Programme 2017–2019

Week	Date	Module	Description	Study Hours	Assignments due in
	21/08/2017	Maths	Maths for lighting revision	20	
	04/09/2017	DIALUX	Introduction to Lighting software	20	
1	18/09/2017	Introduction	What is lighting design? A personal view By Dominic Meyrick	10	
2	25/09/2017	A	Fundamentals	40	
3	02/10/2017				
4	09/10/2017				
5	16/10/2017				
6	23/10/2017				
7	30/10/2017				
8	06/11/2017	B	Luminaire Design & light sources	20	
9	13/11/2017				
10	20/11/2017		Case study	10	
11	27/11/2017				
12	04/12/2017	C	Human Factors	30	
13	11/12/2017				
14	18/12/2017		Christmas & New Year Break		
15	25/12/2017		Christmas & New Year Break		
16	01/01/2018				
17	08/01/2018		Assignment 1	20	
18	15/01/2018				
19	22/01/2018				29/01/2018
20	29/01/2018	D	The Concept of Lighting Design (A pictorial view by Nick Hoggett)	10	
21	05/02/2018	E	Daylight	30	
22	12/02/2018				
23	19/02/2018				
24	26/02/2018		Case Studies		
25	05/03/2018				
26	12/03/2018		Assignment 2	20	
27	19/03/2018				

Week	Date	Module	Description	Study Hours	Assignments due in
28	26/03/2018				02/04/2018
29	02/04/2018	F	Interior Lighting	30	
30	09/04/2018				
31	16/04/2018		Easter Break		
32	23/04/2018		Easter Break		
33	30/04/2018				
34	07/05/2018				
35	14/05/2018		Case Studies	30	
36	21/05/2018				
37	28/05/2018				
38	04/06/2018	G	Lighting Controls (Incl. Energy Reduction & Sustainability)	20	
39	11/06/2018				
40	18/06/2018				
41	25/06/2018		Assignment 3	20	
42	02/07/2018				
43	09/07/2018				16/07/2018
44-50	16/07/2018 - 27/08/2018		Summer Break		
51	03/09/2018	H	Lighting Visualisation using DIALUX	25	
52	10/09/2018				
53	17/09/2018				
54	24/09/2018	I	Functional Exterior Lighting	20	
55	01/10/2018				
56	08/10/2018				
57	15/10/2018		Case Studies	15	
58	22/10/2018				
59	29/10/2018	J	Architectural Lighting (Incl. Masterplanning)	20	
60	05/11/2018				
61	12/11/2018				
62	19/11/2018		Case Studies	15	
63	26/11/2018				
64	03/12/2018	K	Environmental & Ecological Impact of Artificial Lighting	20	

Week	Date	Module	Description	Study Hours	Assignments due in
65	10/12/2018				
66-68	17/12/2018 - 31/12/2018		Christmas & New Year Break		
69	07/01/2019				
70	14/01/2019		Case Studies	15	
71	21/01/2019				
72	28/01/2019		Assignment 4	20	
73	04/02/2019				
74	11/02/2019				18/02/2019
75	18/02/2019	L	Emergency Lighting (Incl. Risk analysis)	20	
76	25/02/2019				
77	04/03/2019				
78	11/03/2019	M	Electrical Installation associated with Lighting & Commissioning	20	
79	18/03/2019				
80	11/03/2019		Assignment 5 Design Project	50-60	
81	18/03/2019				
82	25/03/2019				
83	01/04/2019				
84	08/04/2019				
85	15/04/2019		Easter Break		
86	22/04/2019		Easter Break		
87	29/04/2019				
88	06/05/2019				
89	13/05/2019		Revision Period		20/05/2019
90	20/05/2019		Revision Period		
91	27/05/2019		Revision Period		
92	03/06/2019		Revision Period		
93	10/06/2019		Revision Period		
94	17/06/2019		Revision Period		
95	24/06/2019		Revision Period		
96	01/07/2019		Examination Date TBC		

Summary of the Lighting Design course content

As Innes (2012) says, 'Lighting is both an art and a science - and the science element is often clouded by technical terms, complex physics and mathematics'!¹ But please do not be too concerned about this. As you might expect the 'fundamentals' part of the course explains the physical properties of light and its physiological effect on humans. It will therefore cover some of the 'physics' of light and some of the lighting 'mathematics' by way of lighting calculations that today are performed by modern lighting design software - but that's the point - in professional practice you will be using such software to undertake the necessary design calculations, you will not be doing difficult calculations 'by hand'. So do not be too concerned if, whilst studying the fundamentals, you feel a little lost with the mathematics, which is to be expected, especially if it has been some time since you last studied such things as equations and trigonometry. It should not impede your ability to succeed on the course. All we are expecting of you is that you appreciate the principles behind these calculation methods; because again quoting from Innes (2012), 'No matter what science and technology is involved, there are only a few generic luminaire (light fixture) types and successful lighting projects rely on the intelligent application of simple principles'. The lighting designer must therefore first choose the lighting effects they desire to create and only then the lighting equipment to deliver that vision, finally checking using (the free) lighting design software to perform the necessary calculations and to visualise the result. So it's not the technology that creates great lighting - it's the lighting designer.

So in **Module A** - the 'fundamentals' - we start by explaining what 'light' is in both objective and scientific terms. Next we consider 'units' or the 'language of light' and the ways in which we quantify light. But quantifying light is only part of the story - we also need to be able to read and decipher a manufacturer's 'photometric' data - so we can better visualise the lighting effects the luminaire will produce.

Colour comes into the 'fundamentals' and is an extremely important feature of our world, yet it is very difficult to describe and even harder to specify. At its most basic level, as Isaac Newton showed, 'white' light is a mixture of many wavelengths of light, each with their own characteristic colour - a feature which is replicated in every rainbow we see. And it is a common fallacy to think of colour as being a property of an object or the material it is made from; but it isn't! It is a property of the light source the colour it's seen under... And so we continue our journey into the 'fundamentals of light' - how we 'see'; what affects this ability (such a controlling glare); and how do we ensure - indeed what do we mean by - 'enough' light to perform a task.

In **Module B**, we look both at light sources and the way light is produced by different forms of lamp (tungsten halogen, low- and high-pressure discharge lamps and LEDs); and the light fixtures or 'luminaires' that house these lamps and direct the light they produce to where it is needed.

Module C: describes in simple terms the effect of light on a person. You will be introduced to the visual system; the eye and brain how they receive light and what that system does under changing conditions. Understanding this will enable the student to consider how much light is needed, contrasts between task and background and how light affects our health.

Module D: introduces the student to the fundamentals of lighting design through a series of images put together by one of the country's leading lighting designers. Perhaps some of the information already gained will begin to make sense now. Lighting is considered in terms of what is needed to see a task clearly; create mood; to assist with movement about a space; to reveal the architecture of the space and to play with perception. Light is also considered in terms of quantity and quality. You then learn how to create a design by understanding what is going on; how much light is required and what sort of contrast is needed for a particular task.

Ref 1: Innes M, (2012), *'Lighting for Interior Design'*, Lawrence King Publishing, London

Module E: introduces sunlight and daylight to the student. For most buildings daylight is the starting point for any lighting design so understanding what it is how it performs and how to estimate the amount is very important. Some buildings require the designer to prevent sunlight entering a space, how to deal with this and how to design for daylight are all covered.

Module F: Interior lighting; to illustrate the different lighting techniques this module has been split into 5 sections covering lighting for offices, retail, Museums and galleries, leisure and a final miscellany of different building types. Extensive use is made of case studies to back up the explanation and techniques described.

Module G: Covers lighting controls, why we should use them and what are their benefits? What to avoid if they are not to be a nuisance. Can they save energy and improve health and well-being.

Module H: Visualisation of interior lighting using DIALUX and Visualisation of exterior lighting using DIALUX in preparation for the design project.

Module I: Functional exterior lighting including car parks lighting for sports and roads; what is obtrusive light and how to minimise it, case studies are provided.

Module J: Architectural exterior lighting including landscape lighting, floodlighting of buildings and amenity lighting. A section on master planning is included.

Module K: Environmental & Ecological aspects of lighting; this module has an introduction by CfDS (Campaign for Dark Skies) and will explore how light affects the natural world and the built environment. A case study will include details from an Environmental Impact study.

Module L: Emergency Lighting – an introduction to designing an emergency lighting installation.

Module M: Electrical installation associated with lighting installations; commissioning of lighting installations.

Who should take the course?

The course is aimed at a broad audience of those involved in Lighting:

- Lighting & Interior Designers
- Installers
- Electrical Contractors
- Energy Managers
- Facilities Managers
- Maintenance teams
- Architects
- Manufacturers' sales and design staff
- Electrical Consultants
- Wholesalers

Key points to note

- This is a distance learning course
- Enrolments run from mid-April to July each year
- The full fee for the LET Diploma in Lighting Design is £2,950
- Payment (deposit and first instalment) must be cleared before the course commences (in the September of each year)
- There is currently a limit of 25 places per year
- Exams can be arranged in the country of domicile
- Contact Pom Daniells for more information on let@cibse.org or 020 8675 5211

Application Form

Title
(Mr/Mrs/Miss/Ms/other)
First name(s)
Surname
Date of Birth
Address
Postcode
Telephone
Mobile
Email

Invoice amount - Please invoice:

The full course fee: £2,950

Deposit (non-refundable), plus first instalment: £1,700

Invoice recipient - Please issue the invoice to:

Me

My employer (if applicable)

If employer, please provide their:

Name
Email

The LET Diploma in Lighting Design (2017)

Please complete and return to LET@cibse.org or by post to: The Secretary, The Lighting Education Trust, 222 Balham High Road, London, SW12 9BS

Employer's name (if applicable)
Employer's address (if applicable)
Postcode

Please provide the following information if applicable:

Qualifications held
Membership of Professional bodies

I apply to enrol for the LET Diploma in Lighting distance learning course provided by the Lighting Education Trust in association with London South Bank University.

Signed
Date

Payment schedule: The full fee for the LET Diploma in Lighting Design is £2,950. Mainly for the benefit of students who are self funding, LET offers the facility for payment by instalments over the course of one year. Payments, in UK pounds, may be made by cheque, credit/debit card or BACS (bank transfer) and become due as follows: On acceptance, payment of the non-refundable deposit (£450) plus first instalment (£1,250), ensures the first year of the course will be issued. The second instalment (£1,250) paid within 10 months allows the remaining modules to be issued. Instalments are payable to the schedule with modules being issued according to progress but not before the appropriate payment has been received. Please consult the LET administrator, in strict confidence, over any difficulty in maintaining the payments. **Booking Conditions:** LET reserves the right to make changes to the programme. Acknowledged bookings are firm. Cancellations must be received in writing and can be made up to 4 weeks after the course start date subject to a charge of the initial deposit £450. No refund will be made if you subsequently do not complete all or any part of the course or if you fail any part of the course. The personal information you give on this form will be held on the CIBSE database. Your contact details may be used by us to contact you from time to time with offers on similar products and services.

Please tick if you do NOT want to receive this information.

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