



theLIA  
Academy



HNC/HND  
LIGHTING DESIGN  
AND TECHNOLOGY

Academy

# DEVELOPING THE LIGHTING COMMUNITY FOR A BRIGHT AND EXCITING FUTURE

University of  
South Wales  
Prifysgol  
De Cymru

## HNC/HND LIGHTING DESIGN AND TECHNOLOGY

In partnership with the University of South Wales (USW), the LIA has developed two formal higher education qualifications for the lighting industry.

The Higher National Certificate (HNC) and the Higher National Diploma (HND) will appeal to those seeking to develop an understanding of the physics of light, lighting technologies and their applications.



For more information please visit [www.thelia.org.uk/academy](http://www.thelia.org.uk/academy)  
email [academy@thelia.org.uk](mailto:academy@thelia.org.uk) or call our academy team on **01952 525158**

## HNC/HND LIGHTING DESIGN AND TECHNOLOGY

### Who is the qualification for?

The HNC and HND have been developed for those with the need, or aspire, to develop in-depth understanding of lighting design and technology. Offering the benefit of formally recognised qualifications to a wide range of backgrounds right across the breadth of the lighting community. These qualifications have been designed to advance understanding, competencies and employability for those who graduate, whether new entrants or those who have previously not had the opportunity to further develop their career through formally recognised education.

### How is the qualification structured?

All Higher Education the HNC and HND are of composed of mandatory and optional modules with credit value.

MODULE	LEVEL	CREDIT	HNC*	HND*
Lighting Fundamentals	4	20	M	M
Electrical Principles and Design	4	20	M	M
Light Sources and Luminaire Design	4	20	M	M
Lighting Design	4	20	M	M
Lighting Project Specification	4	20	M	M
Singleton Project	4	20	M	M
Work Based Project	5	40		M
Advanced Lighting Principles	5	20		M
Product and Component Design	5	20		M
Exterior Lighting	5	20		M
Highway Lighting**	5	20		O
Interior Lighting**	5	20		O

\*M - Mandatory, O - Optional

\*\*Students will complete one of these modules to complete their HND award

## HNC/HND MODULE AIMS

### Lighting Fundamentals – Level 4

- To provide an understanding of lighting history and the emerging considerations and trends which are shaping the sector
- To introduce the student to basic human factors, colour, and behaviour of light, lamps, fixtures, and circuiting
- To undertake a study in how light is produced and measured
- To introduce the student to the terms and presentation of photometric data from luminaires

### Electrical Principles and Design – Level 4

- To deliver knowledge and understanding of the fundamentals of electrical technology
- The fundamentals for Electrical Installation Design the application of (BS7671) IET Wiring Regulations

### Light Sources and Luminaire Design – Level 4

- Develop an awareness of the types of light sources and luminaires available. This includes both modern sources, and those which have historically been used which may still be encountered in day to day work
- Identify aspects that influence the quality and design of lamps and luminaires

### Lighting Design – Level 4

- To introduce students to techniques and approaches used by lighting designers and engineers in the development of successful projects to meet the needs of a client
- To develop an appreciation of art and science and how they will continue to be an influence both in the present and future
- To use a range of industry standard software for analysis and design

### Lighting Project Specification – Level 4

- To introduce students to the work practices of professional lighting engineers and designers
- To identify and use appropriate technical specification, drawing and visualisation techniques to express solutions
- To develop transferable research skills that will aid with progression to further study
- To develop proficiency in the analysis, evaluation and synthesis of the chosen subject

### Singleton Project – Level 4

- To integrate and apply the knowledge and understanding gained throughout the course in an integrative manner reflecting industry practice for project execution

## HNC/HND MODULE AIMS

### Work Based Project – Level 5

To enable the student to:

- Undertake a period of work-based learning under the direction of an employer (nominated work-based supervisor) and academic supervisor, enabling them to learn and develop in a working environment
- Apply in the workplace, a range of knowledge and skills learnt throughout the award
- Apply concepts and principles outside the context in which they were first studied

### Advanced Lighting Principles – Level 5

- To understand and develop knowledge of physics in optics
- To develop an understanding of how to calculate appropriate illuminations levels
- To acquire coherent and detailed knowledge of light sources and the environmental and economic effects of selection of the best technology for a particular purpose

### Component and product Design – Level 5

- To acquire knowledge of manufacturing and materials
- To develop skills and understanding in luminaire design
- To introduce students to functional testing requirements of lighting equipment

### Exterior Lighting – Level 5

- To familiarise students with the principles and tools used for exterior lighting
- Understand best practices for lighting in terms of exterior applications
- Understand the issues involved in designing for exteriors

### Highway Lighting – Level 5

- To provide knowledge of theory and technology applicable to highway lighting
- To study various roadway types and classifications
- To develop skills and awareness of the design process in the field of highway lighting

### Interior Lighting – Level 5

- Familiarise students with specific design techniques used within interior lighting design projects
- Explore critically the competing discourses related to the above forms of design practice
- To develop skills in observation, analysis, description, manipulation, and evaluation of daylight, as well as its effect on the quality of interior spaces

Modules are a combination of all, or some, of lectures, tutorials, group work, practical work, and independent study; and are delivered in blocks at most at the LIA in Telford, but also at the University of South Wales in Cardiff.

There is one intake per year. The next intake is in September 2019



### How long will it take?

The HNC is Level 4 and equates to a first year at University, once completed the student can continue onto Level 5 which is HND and equates to a second year at University. A third BSc (Hons) degree year will be made available through USW.

HNC - 1 year full-time or 2 years part-time.

HND - 2 years full-time or 4 years part-time after completion of the HNC.

Despite the terminology both qualifications are cleverly designed to be achievable by students who are in full employment.

### How much does it cost?

University fees are set by USW and fall in line with Higher Education.

#### FEES (FOR THE SEPTEMBER 2019 INTAKE)

Part-time £4,000 per year

Full-time £8,000 per year

For more information about the HNC/HND  
or any other courses offered by the  
Lighting Industry Academy please contact:

Tel: **01952 525158**

email: [academy@thelia.org.uk](mailto:academy@thelia.org.uk)

[www.thelia.org.uk/academy](http://www.thelia.org.uk/academy)