



COURSE SYLLABUS

Light for Health and Well-being, 6 credits

Ljus för hälsa och välmående, 6 högskolepoäng

Course Code:	TLHN12	Education Cycle:	First-cycle level
Confirmed by:	Dean Dec 1, 2019	Disciplinary domain:	Technology
Valid From:	Jan 1, 2020	Subject group:	TE9
Version:	1	Specialised in:	G2F
		Main field of study:	Product Development

Intended Learning Outcomes (ILO)

After completing the course, the student shall:

Knowledge and understanding

- show familiarity with human factors and diseases in relation to visual and non-visual effects of daylight and electrical lighting
- display knowledge of eye diseases and their particularities in terms of lighting as well as of preventive and supportive visual ergonomics
- demonstrate comprehension of well-being in relation to users' types and the light environment
- show familiarity with research on effects of lighting on health and well-being

Skills and abilities

- demonstrate skills in recognition of a research problem, and interpret and transcribe results from research
- demonstrate proficiency in formulating and motivating proposals for a lighting installation based on identified issues and user requirements

Judgement and approach

- demonstrate the ability to assess the quality level and suitability of a lighting situation according to human well-being requirements and the impact on human well-being and performance
- demonstrate the ability to select, motivate, and apply current principles to create lighting solutions based on requirements for human well-being and performance

Contents

This course is an introduction to the topic of *Light and Health*. It provides information to understand the various functions of the human body affected by light as well as several ways light can be used to support human health and well-being. In addition, the course provides insight into how scientific and applied methods can be used to design and study lighting for an environment that satisfies human health and well-being.

This course contains the following elements:

- Human factors in lighting
- Visual discomfort and prevention methods
- Execution and analysis of scientific experiments
- Application of results of (ongoing) light and health research in a lighting design project

Type of instruction

Lectures, seminars and workshops.

The teaching is conducted in English.

Lectures and course literature can sometimes be in Swedish.

Prerequisites

General entry requirements and completed courses 60 credits in first cycle, including Basics in Light Source and Luminaire Proficiency (or the equivalent).

Examination and grades

The course is graded Fail (U) or Pass (G).

The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Written exam	3 credits	U/G
Exercises	3 credits	U/G

Course literature

The literature is preliminary until one month before the course starts.

- Boyce, P.R., 2014, Human Factors in Lighting. Third edition ed: CRC Press Taylor & Francis Group (selection of chapters)
- Scientific articles according to the course coordinator's instructions
- Presentation/lecture slides as used by the teachers in the course