



## COURSE SYLLABUS

# Light for Health and Well-being, 6 credits

*Ljus för hälsa och välmående, 6 högskolepoäng*

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<b>Course Code:</b> TLVN12	<b>Education Cycle:</b> First-cycle level
<b>Confirmed by:</b> Dean Mar 1, 2021	<b>Disciplinary domain:</b> Technology
<b>Revised by:</b> Director of Education Dec 1, 2021	<b>Subject group:</b> TE9
<b>Valid From:</b> Jan 1, 2022	<b>Specialised in:</b> G2F
<b>Version:</b> 3	<b>Main field of study:</b> Product Development

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### 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 5,4,3 or Fail.

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

Registration of examination:

<b>Name of the Test</b>	<b>Value</b>	<b>Grading</b>
Examination	2 credits	U/G
Exercises <sup>1</sup>	4 credits	5/4/3/U

<sup>1</sup> Determines the final grade of the course, which is issued only when all course units have been passed.

### **Course literature**

The literature list for the course will be provided 8 weeks before the course starts.

- A booklet containing scientific background information relevant to the course - provided by the teacher
- Presentation/lecture slides as used by the teachers in the course