JÖNKÖPING UNIVERSITY
School of Engineering

2025-03-20

Student competence for IPC

Program: Lightning Design, 180hp

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Light affects our well-being, our mood and our health. Therefore, good lighting planning can improve people's lives. Good lighting contributes to safety, health and sustainability.

During the education, students learn to create lighting systems that work well technically, are adapted to the user's needs, are visually comfortable and add aesthetics to the room. The demand for efficient energy use and optimized lighting systems is high. A well-planned lighting system means the right light in the right place when you need it.

When students go to a company/authority/organization in the course Business Placement Course during semester 4, they will have received instruction in:

Design, presentation

- Visual concepts for humanly experienced light
- Manual and digital visualization techniques
- Design with light
- The design process
- Presentation techniques
- Basic formalism
- Architectural history
- Visual communication with light
- Test lighting and prototype

Lighting technology

- Light source and luminaire knowledge
- Lighting control
- Description, analysis and evaluation of light sources, luminaires and installations visually and technically
- History of lighting
- The importance of lighting installations for a sustainable society

Mathematics and physics

- Algebra
- Functional theory
- Power and energy
- Electromagnetic waves and light

Lighting projects for indoor and outdoor environments

- Run projects as group work based on a conscious design process within given timeframes
- Formulate and motivate lighting proposals
- Oral, written, and visual communication
- Presentations techniques
- Current research in the field
- Planning methods and evaluation methods
- Group dynamics

Lighting planning

- Dimensioning
- DialuxEvo and AutoCAD 2D and 3D software
- Planning based on standards and directives
- Life cycle calculations and energy calculations
- Sustainability
- Emergency lighting
- Protocols for lighting control

Program writing

- Analysis methods
- Information collection
- Analysis of premises and/or buildings as a basis for designing lighting plans
- Analysis of existing lighting planes
- Presentation and communication technology
- Writing and designing lighting plans
- Building regulations and requirements
- Current research in the field
- CAD