At a Glance

Target Audience

This course is for students that want to achieve special knowledge of innovative technologies in Photonics. Additionally this course adresses working people with bachelor's degree, that seek a higher occupational qualification by master's degree.

Degree

Master of Science (M. Sc.)

Aalen School of Applied Photonics (AASAP)

Discover the power of light - and start your career with us. The AASAP offers educational programs in the field of optical and photonic technologies - from Bachelor, to Master, to PhD in applied optics. We cover a wide range of scientific aspects with potential product applications in important economic sectors such as information and communication technologies, medicine and health, manufacturing and energy consumption.
Our mission is to educate and promote young national and international students and scientists in the research focus area of photonics.

Prerequisites for Admission

A high quality Bachelor or Diploma degree in Physics or Engineering, e.g. in Electronics, Optoelectronics, Mechatronics or Optometry.
Applicants must provide proof of the required English language skills with their application. Proof of the required English language proficiency at level B2 must be provided by submitting one of the following documents:
1. German university entrance qualification stating the language level achieved,
2. TOEIC (L&R) with a minimum score of 785,
3. TOEFL (iBT) with a minimum score of 72,
4. TOEFL (ITP) with a minimum score of 543,
5. Cambridge First with a minimum grade of B,
6. Cambridge CAE or CPE with a minimum grade of C,
7. IELTS with a minimum score of 6.0,
8. PTC Academic B2 with a minimum score of 65 or
9. UNIcert II certificate with a minimum grade of 2.3.

The University

Aalen University is one of the leading research institutions among the Universities of Applied Sciences in Baden-Württemberg. One of the key missions of Aalen University is to deliver a superior education to our students by combining the developments in industry with the latest research findings.

Application and Admission

The course starts in winter and summer semester (June 15th for winter semester and 15th December for summer semester).

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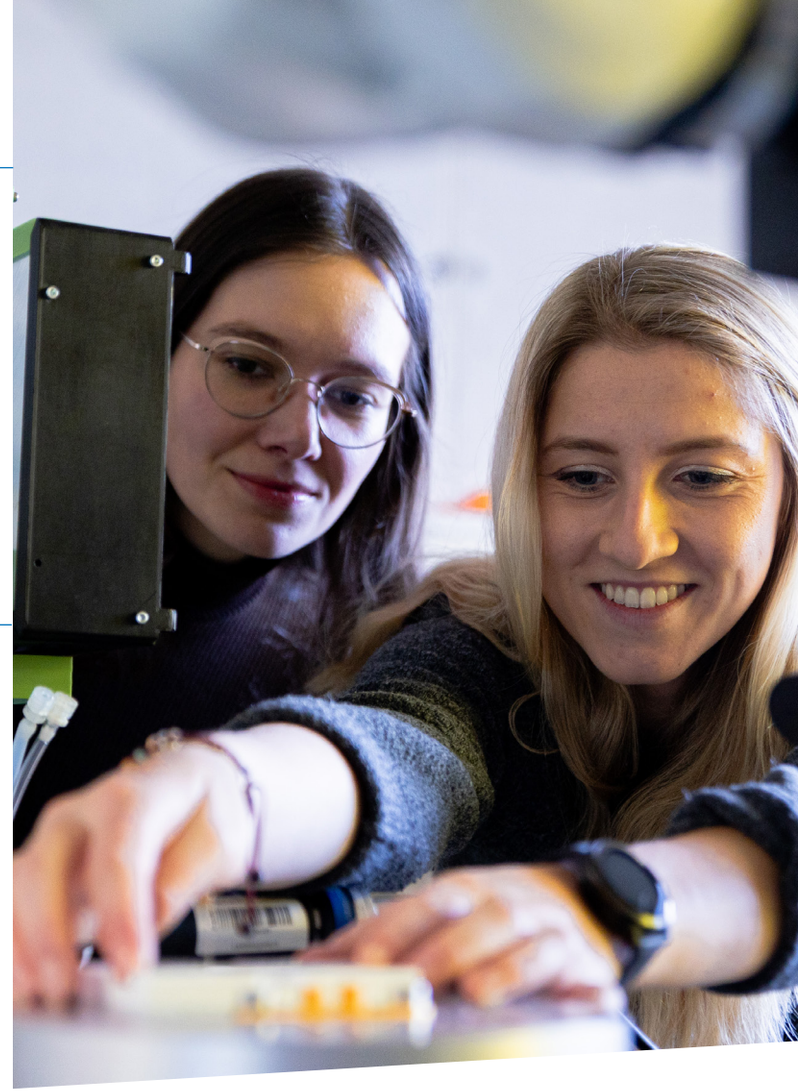


Applied Photonics

Master of Science (M.Sc.)

Hochschule Aalen
AASAP
Aalen School of Applied Photonics

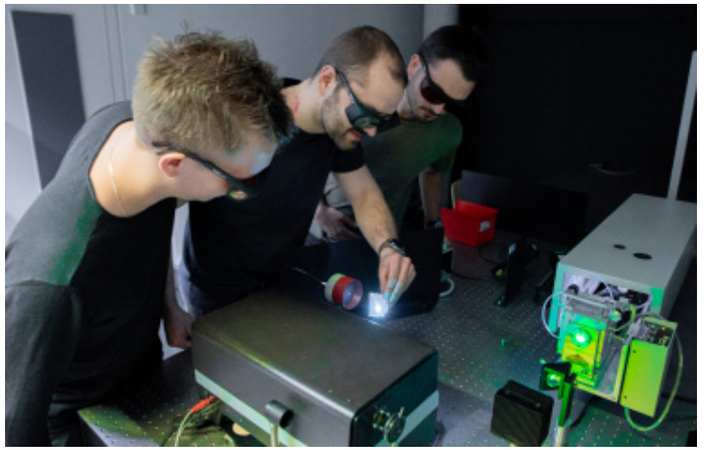
2410-V01

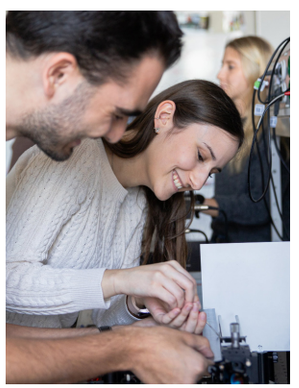
Photonics

Strictly, the term “Photonics” stands for the science of photon Today the term incorporates many novel disciplines. In the essence, it is related to four application areas, where “Photonics” is used to combine applied research and development. These are:

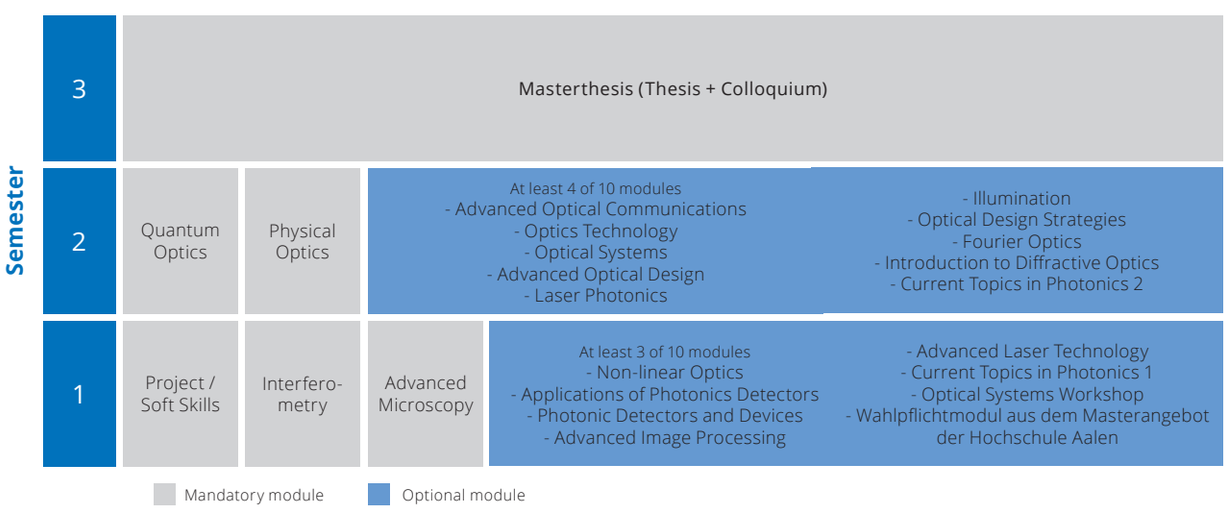
- Laser and light material interaction
- Industrial manufacturing
- Illumination and displays
- Biophotonics in the domain of Life Science

Specifically “Photonics” not only denotes the particle properties of light, the term incorporates all practical applications of optics, and the potential to create, transport and process optical signals. Photonic techniques are used in various fields, e.g. the combination of medical problems and photonic technologies proved to exhibit a high economical potential.





Study Course



Progress of Program

Duration of Study

First semester for lectures and project
Second semester for lectures
Third semester for Master Thesis
Maximum number of semesters: 6

Time Schedule

Monday to Friday according to class schedule

Conventional Education Program

- Lectures
- Laboratory exercises
- Project
- 5 days every week, 3 semesters duration

Part-time Program

- 2 days lectures, labratory, project
- 1-3 days professional life every week at one of our industry partners or at our research center (Center for Optical Technologies, Laser Application Center)
- 4 semesters duration typically (maximum 6 semesters)

Post-graduate

Graduates of the Photonics Master course are particularly well educated for a leading position in research and development, where good theoretical knowledge of physics and optics are combined with practical experience:

- Development and application of lasers and laser systems
- Design and development of optical instruments
- Novel techniques for illumination and displays
- Design and application of medical systems for diagnosis and therapy
- Design and fabrication of micro and nanoptics
- Biomedical optical microscopy
- Laser and light material interaction