

At a glance

Target group

Bachelor's degree graduates from Natural Sciences and Technology with intellectual curiosity.

Conclusion

Master of Science (M.Sc.)
Advanced Materials and Manufacturing

Term of studying

- 3 semesters incl. master thesis
- Scope of the programme: 90 Credit Points (ECTS)

Admission-requirements

An above-average vocational university degree (bachelor or diploma) in Materials Engineering, Mechanical Engineering, Manufacturing Engineering or a related subject (like Physics or Chemistry).

Special Features

In addition to working on your research subject, you will also attend two specific optional compulsory lectures in the first two semesters as well as methods-providing courses.

The third semester concludes with the Master's thesis.

Application

Take your chance to apply online or send your application documents to:

Admission Office Aalen University of Applied Sciences.

Beethovenstraße 1
73430 Aalen
Germany

☎ +49 (0) 7361 576-1299

✉ zulassungsamt@hs-aalen.de

🌐 www.hs-aalen.de/bewerbung

Students can begin their studies in the winter or summer semester. The deadline for applications is each 30 November (summer semester) and 15 June (winter semester).

The Aalen University of Applied Sciences

Innovative educational models, research strength, foresight, close links with industry, regional and international networks: We provide an attractive course of studies on a sound basis. For years, the Aalen University of Applied Sciences has been one of the most research-intensive universities in Germany. Increasing student numbers (about 5.800 right now), successful knowledge transfer with the business community and a continuously growing campus also testify to its enormous development. The Aalen University of Applied Sciences is firmly rooted in the region and has a wide international network. This is demonstrated by the numerous co-operations in the region and more than 115 partner universities all over the world.



[hs-aalen.de/studium/amm](https://www.hs-aalen.de/studium/amm)



Contact

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Studies consultation



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Advanced Materials
and Manufacturing
Master of Science (M.Sc.)



Research Master Advanced Materials and Manufacturing

The three-semester Research Master's programme at one of those Baden-Württemberg universities of applied sciences that strongest focus on research is an appealing, innovative Master's programme, provided only by very few German universities. In contrast to the traditional Master's programme, the main focus of this programme is on applied research. From the very beginning, you will autonomously work in the research modules on current research subjects in Materials and Manufacturing Engineering as well as modern Mechanical Engineering. The project work is carried out in close cooperation with your supervising professor and you will become an active member of the research group. By attending specific lectures in Materials Engineering, Manufacturing Engineering and Product Development, you will gain in-depth theoretical knowledge in the environment of your research subject.

Range of courses

During your studies, you will learn how to organise complex research and development tasks autonomously, develop successful solutions and discuss them critically. In addition to professional qualifications, we teach you how to present work results persuasively, publish them academically, and successfully plan and manage major research and development projects.



Progress

Applied research in modern equipped labs such as:

- Additive manufacturing
- Drive technology
- Battery and fuel cells research
- CAD/CAM centre
- Electroplating
- Foundry engineering
- Plastics engineering
- Laser application centre
- Lightweight construction materials
- Magnet research
- Materialography, material analysis and material testing
- Centre for optical technologies

Programme design and didactic concept

Many modern laboratories and high-quality equipment are at your disposal for working on research subjects. You will receive sound introductions into the procedures and a detailed discussion of your results with your supervising professor and the team members of your research group. Many research projects are part of national and international collaborations with renowned universities and companies, so that you will gain early insight into industrial R&D work and experience working in interdisciplinary teams.

After graduation

... you will have excellent career opportunities in industrial research, development and production, such as project manager or executive with thorough expertise in trendsetting subjects. As an alternative to a direct career start, you will also be well prepared for a further doctorate. Your prospects are in different industries such as the automotive or aviation industry, traditional mechanical engineering or energy and medical engineering..

Overview of studies

Semester	3	Master's thesis 29 CP + Studium Generale 1 CP			Doctorate
	2	Research module II (20 CP)	Engineering (5 CP) or Project management (5 CP)	Optional compulsory module 2 (5 CP)	
	1	Research module I (20 CP)	Project management (5 CP) or Engineering (5 CP)	Optional compulsory module 1 (5 CP)	

You may achieve 30 Credit Points per semester up to a total of 90 Credit Points

Legend: Lecture module | Project work