



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Master's degree



## Advanced Signal Processing and Communications Engineering

FAU Erlangen-Nürnberg • Erlangen

### Overview

Degree	MSc
In cooperation with	Elite Network of Bavaria
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	English
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	15 March for the following winter semester
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

#### Description/content

The Elite Master's study programme in Advanced Signal Processing and Communications Engineering ASC is a four-semester MSc programme within the "Elitenetzwerk Bayern" (Elite Network of Bavaria), an initiative for highly qualified students who aim for higher career goals. ASC is taught by select faculty members and renowned international guest lecturers. It is designed for holders of excellent Bachelor's degrees in Electrical Engineering, Communications Engineering, Computer Science, or closely related disciplines.

Admission is granted to highly talented individuals only. Applicants that are in doubt whether they meet the tough admission standards are encouraged to simultaneously apply to other MSc programmes of FAU.

The programme structure complies with internationally recognised Master's programmes. In addition to the majority of those, it involves intensified research-based training in close collaboration with outstanding faculty members in order to speed up subsequent doctoral education.

Publication of research results is strongly encouraged and travel costs for conference presentations will be covered.

A summer school, a winter school, and a kick-off seminar are mandatory components of the curriculum.

ASC focuses on interdisciplinary concepts that are fundamental for advanced technologies in the areas of signal processing and communications. Besides information theory, coding, and statistical signal processing, these are machine learning, deep learning, optimisation, and game theory.

Students deepen the broad interdisciplinary scope of these topics choosing various areas of specialisation.

Select faculty members guide the students in composing their own curricula tailored to their individual interests and career goals.

The four-semester curriculum starts with a kick-off seminar right before the winter semester. The study programme includes three research projects, one of them being the six-month Master's thesis.

A winter school complements the scientific education with soft skills in general, and people management and business development in particular.

A summer school prepares the students for the research-based training in the second year of the programme. Furthermore, students can opt for participation in various events organised by the Elitenetzwerk Bayern.

All courses are taught in English and do not require prior knowledge of the German language. Students can opt for intensive language courses in German to open the door to career opportunities in Germany. Students requiring financial support will be offered part-time work contracts with the involved institutes to cover at least a part of their subsistence costs in Erlangen.

## Course Details

Course organisation	<p>This two-year programme consists of lectures, exercises, seminars, experimental laboratories, research projects, a summer school, a winter school, and a kick-off seminar in Advanced Signal Processing and Communications Engineering and a six-month period for the Master's thesis. In addition, students are able to attend German language courses or optimise their abilities in soft skills seminars.</p> <p><a href="#">» PDF Download</a></p>
A Diploma supplement will be issued	Yes
International elements	<ul style="list-style-type: none"> <li>• Training in intercultural skills</li> <li>• International guest lecturers</li> <li>• Study trips</li> <li>• Projects with partners in Germany and abroad</li> <li>• International comparisons and thematic reference to the international context</li> </ul>
Integrated internships	Research projects (minor and major)
Special promotion / funding of the programme	<ul style="list-style-type: none"> <li>• Other (e.g. state level)</li> </ul>
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

## Costs / Funding

Tuition fees per semester in EUR	None
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<b>Semester contribution</b>	FAU does not charge tuition fees. However, each semester students must pay semester fees of 144 EUR consisting of student services fees and a fee for the basic semester ticket.
<b>Costs of living</b>	<p>According to a study by the German National Association for Student Affairs, students in former West Germany who no longer live with their parents have an average amount of more than 930 EUR per month at their disposal. However, monthly expenditures for personal lifestyle vary a lot. The study shows that approx. 25 per cent of the students asked have less than 700 EUR while 10 per cent have more than 1,300 EUR per month. For former West Germany, the study revealed the following details regarding average expenditures:</p> <ul style="list-style-type: none"> <li>• Rent, including bills (in the Erlangen-Nuremberg area): 325 EUR (250 to 600 EUR)</li> <li>• Food: 168 EUR</li> <li>• Clothing: 42 EUR</li> <li>• Transport (public transport and/or car): 94 EUR</li> <li>• Learning materials (depending on the subject): 20 EUR</li> <li>• Health insurance, doctors, medicine: 80 EUR</li> <li>• Telecommunications: 31 EUR</li> <li>• Leisure activities, culture, sports: 61 EUR</li> </ul>
<b>Funding opportunities within the university</b>	Yes

**Description of the above-mentioned funding opportunities within the university**

There is a wide range of scholarships available for outstanding students. In addition to requiring applicants to have excellent grades, most scholarship programmes have additional conditions regarding cultural, political, religious, or social involvement. If you have any questions about the application procedure or selection criteria, you can contact the Student Advice and Career Service (IBZ) or speak directly to FAU's liaison officer for the scholarship organisation you wish to apply to.

<https://www.fau.eu/study/prospective-students/financing-your-studies>

## Requirements / Registration

<b>Academic admission requirements</b>	<p>Bachelor's degree in</p> <ul style="list-style-type: none"> <li>• electrical engineering</li> <li>• communication engineering</li> <li>• computer science</li> <li>• applied mathematics or physics</li> </ul>
<b>Language requirements</b>	<p>Applicants must provide proof of their English skills, e.g. TOEFL or an equivalent internationally recognised test.</p> <p>Please visit this <a href="#">website</a> for more information.</p>
<b>Application deadline</b>	15 March for the following winter semester
<b>Submit application to</b>	<p>Apply here: <a href="https://www.campo.fau.de/qjsserver/pages/cs/sys/portal/hisinoneStartPage.faces">https://www.campo.fau.de/qjsserver/pages/cs/sys/portal/hisinoneStartPage.faces</a></p> <p>More information: <a href="https://www.asc.studium.fau.de/prospective-students/application/">https://www.asc.studium.fau.de/prospective-students/application/</a></p>

## Services

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### Possibility of finding part-time employment

All ASC students are employed as student assistants at the university during their first year of studies. The salary amounts to 600 EUR per month.

### Accommodation

The cities of Erlangen, Fürth, and Nuremberg offer a very good standard of living. They are popular places to live, meaning that accommodation is in high demand but often in short supply. This is particularly the case during the period before the start of a new semester. We therefore recommend that you start looking for accommodation as soon as possible. If you are flexible and also look in the surrounding area, you will have a better chance of finding somewhere affordable to live. The region has an excellent public transport system, so you should not have any problems getting to your place of study or work.

It is worth checking the available accommodation on the Internet every day, as new accommodation becomes available on a day-to-day basis. It pays to be flexible when it comes to the price, location, and available facilities of your accommodation.

Student Services Erlangen-Nürnberg runs its own [student accommodation](#) in Erlangen and Nuremberg. You will be informed about how to apply for a room in Student Services accommodation while you are in the process of applying to be admitted to FAU.

### Support for international students and doctoral candidates

- Buddy programme
- Cultural and linguistic preparation
- Pick-up service
- Welcome event
- Specialist counselling



## ASC – Advanced Signal Processing and Communications Engineering

Information regarding the ASC Elite Master's programme

» more:  
<https://www.youtube.com/watch?v=D4wJ2fe7twE>

Founded in 1743, FAU has a rich history. It is a strong research university with an international perspective and one of the largest universities in Germany with 39,657 students, [272 degree programmes](#), 4,000 academic staff (including over 624 professors), [243 million EUR third-party funding](#), and partnerships with universities all over the world. Teaching at the university is closely linked to research and focuses on training students in both theory and practice to enable them to think critically and work independently. The research itself also strikes the perfect balance between a theoretical approach and practical application.

FAU's outstanding research and teaching is reflected in top positions in both [national and international rankings](#) as well as the high amount of [DFG funding](#) that its researchers are able to secure.



## University location

FAU's two main sites, the cities of Erlangen and Nuremberg, are located at the heart of the Nuremberg Metropolitan Region. Both Erlangen, a city of 100,000 inhabitants that was the former home of the Huguenots and is a key location for Siemens, and Nuremberg, a city with a metropolitan flair and a population of half a million, have their own unique charms. The opera, theatre, and museums, along with a lively pub scene and nightlife, offer plenty of opportunities to relax after a day in the lecture theatre, lab, or library. The highlights of the cultural calendar in Erlangen include the Hörkunstfestival (acoustic art festival), International Comic Salon, figuren.theater.festival (puppet theatre festival), Poetenfest (poetry festival), and the "ARENA... of the young arts" theatre and performance festival. A wide range of cultural institutions open their doors to visitors during the Blue Night in Nuremberg, and once every two years, the Long Night of Sciences gives the public a chance to take a look inside research institutions in Erlangen, Nuremberg, and Fürth. In summary, the mixture of academia, innovative companies, art, and culture makes the region the perfect place for creative minds. There is also plenty on offer for keen athletes and nature lovers. Fränkische Schweiz, a paradise for climbers and walkers, is located to the north of Erlangen and is at FAU's doorstep. Water sports enthusiasts will love the Franconian lakes and the university's water sports centre, which is located just south of Nuremberg.

## Contact

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🌐 Course website: <https://www.asc.studium.fau.de/>

📘 <https://www.facebook.com/fauenglish/>

🐦 <https://twitter.com/UniFAU>

🌐 <https://www.linkedin.com/company/fau-erlangen-n%C3%BCrnberg/>

📷 [https://www.instagram.com/uni\\_fau/](https://www.instagram.com/uni_fau/)

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# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

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## GATE-Germany

Consortium for International Higher Education Marketing  
[www.gate-germany.de](http://www.gate-germany.de)

## Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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