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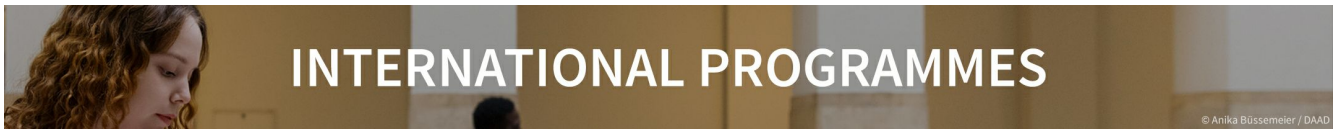

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Master's degree

Master of Science in Nuclear Applications (MNA)

FH Aachen University of Applied Sciences • Jülich

Overview

Degree	Master of Science
Teaching language	• English
Languages	Participants can choose to write the Master's thesis in either English or German.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	See the website Nuclear Applications for current application deadlines.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	Students acquire a wide-ranging, integrated knowledge and understanding of the scientific and technical fundamentals of nuclear technologies. They have at their disposal a critical understanding of the basic theories, principles and methods dealt with during their studies, and are in a position to broaden this knowledge independently. Moreover, students gain the ability to collect and interpret data and use it to infer scientifically based judgements, as well as to implement appropriate solutions that take into account social, scientific and ethical issues, and to construct continuous learning processes independently. They learn how to formulate and defend opinions and solutions with reference to their specific field, to exchange information, ideas, problems and solutions with experts and laymen, and to work responsibly in modern professional life. Our instruction methods include problem-based approaches and integrated teamwork. By taking modules in business and management, research planning and scientific writing, students obtain skills necessary for their future success. Our modern, well-equipped labs play a major role in ensuring that students are later able to apply their knowledge to their chosen careers. Advanced students plan projects together, work towards a common goal and then present the results in a written report as well as to the class. Topics include all modern applications of nuclear technologies. Students gain hands-on experience during the programme. Two independent projects are integrated to enable students to focus their studies further.

Study Focus:

- Nuclear Power and Fuel Cycle
- Nuclear Chemistry and Radiochemistry
- Radiopharmacy
- Medical Physics
- Radiation Safety
- Nuclear Waste Management

Course Details

Course organisation	Our programme uses a variety of methods to help students understand and apply information learned in the lectures, exercises, labs and seminars. Students also develop and carry out their own projects, and write and present papers on selected topics. During the first semester, students focus on the fundamentals of nuclear sciences including ethical problems. In the second semester, students begin to focus on their specialisation and learn to solve problems in their selected fields: • Nuclear Technology • Nuclear Chemistry • Medical Physics • Nuclear Waste Management In the third semester, students start their first research projects. This is followed by the fourth semester, during which each student conducts research for a Master's thesis with our partners in research institutions, industry or in our own well-equipped laboratories.
International elements	• International guest lecturers
Integrated internships	Two integrated study projects in industry or at research institutions
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	300 EUR per semester
Costs of living	In general, living costs, room and board total 700 EUR per month. International students who have been admitted may be required to submit proof to the German Embassy that they have 10,500 EUR in their account in order to obtain a visa to study in Germany. The semester ticket (included in the student activity fee) includes free use of public transport in the German state of North Rhine-Westphalia. German lessons cost about 315 EUR per semester, including books.

Funding opportunities within the university	No

Requirements / Registration

Academic admission requirements	BSc, BSc (Hons), BEng, BTech, Dipl-Ing, Dipl-Ing FH, or equivalent in related fields with high academic standing
Language requirements	Proof of English language proficiency, such as IELTS Band 5.5, TOEFL iBT 68 (Internet-based test), or German "Abitur" or "Fachhochschulreife" grade 3 in English, or equivalent German level B1 is required for admission. The admission committee can grant you an extension until the end of the second semester.
Application deadline	See the website Nuclear Applications for current application deadlines.
Submit application to	Please visit Nuclear Applications for further information.

Services

Possibility of finding part-time employment	Applicants should not count on financing their stay in Jülich or Aachen by working part-time during their studies. However, some students are successful in finding part-time jobs either at the university or elsewhere.
Accommodation	Some students live in student dormitories. Other students generally live in shared apartments in which each student has his or her own room. Living areas, bathrooms and cooking facilities are shared. Furnished rooms start at about 400 EUR per month plus about 80 EUR per month for electricity, water and heating. Most rooms require the first month's rent and a security deposit of one to three months' rent in advance before you can move into the room. If the room is in a good condition when you move out, your security deposit will be returned. International students can place their names on a waiting list for the student dormitories after they have arrived in Jülich and have enrolled.
Support for international students and doctoral candidates	• Specialist counselling

Contact

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