



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



Table of Contents

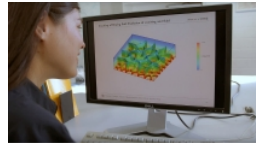
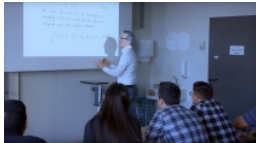
Master's degree	2
Computational Mechanics of Materials and Structures (COMMAS) • University of Stuttgart • Stuttgart	2

Master's degree



Computational Mechanics of Materials and Structures (COMMAS)

University of Stuttgart • Stuttgart



Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	English is the language of instruction in all subjects within the COMMAS programme. However, some elective modules are also offered in German. Students who have good German language proficiency can take those modules, too.
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	15 February for the following winter semester for both EU and non-EU applicants
Tuition fees per semester in EUR	Varied
Additional information on tuition fees	EU citizens do not pay tuition, whereas non-EU citizens pay a tuition of 1,500 EUR per semester.
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

Description/content

The Computational Mechanics of Materials and Structure (COMMAS) MSc programme addresses the development and implementation of numerical methods and simulation techniques to deal with complex engineering problems. Students learn different practical and powerful approaches to model, understand, predict and validate responses of materials and structures encountered in almost all engineering disciplines. One of the unique characteristics of COMMAS is that it is an interdisciplinary programme, with a close cooperation between the faculties of Civil Engineering, Mechanical Engineering and Aerospace Engineering. The programme has strong collaborations with local and international research centres as well as industrial partners.

Graduates of this programme can apply their knowledge to almost all engineering problems. Examples include simulating automobile crash tests, predicting the failure load of materials, modelling biological tissues, developing functional materials to be used in robotics, and more.

Since COMMAS is a strongly research-oriented programme, the graduates are also ideally prepared for careers at universities, laboratories and research centres.

Course Details

Course organisation	<p>The Master of Science programme has a duration of four semesters. During the first semester, every student takes the same set of compulsory modules (30 ECTS), which concentrate on the basics of mechanics, engineering materials, numerical methods, discretisation schemes and scientific programming.</p> <p>The core courses not only provide an extensive introduction to the discipline but also a deep insight into the most important areas in the field of computational mechanics of materials and structures.</p> <p>During the second and third semesters, subjects can be chosen from a large variety of courses. In order to establish and promote international interaction, further advanced subjects are delivered by internationally recognised experts during the course of a summer school programme. The fourth semester is dedicated to the Master's thesis. It is embedded into the current scientific activities of the participating research groups.</p> <p>Upon successful completion of the programme (120 ECTS credits), students are awarded a Master of Science degree and will be entitled to continue to study for a doctoral degree without having to meet additional academic requirements. Special PhD programmes in this field are also offered at the University of Stuttgart.</p> <p>Double degree programme:</p> <p>After their first semester, interested COMMAS students can apply to the double degree MSc programme of COMMAS in cooperation with the "Numerical Methods in Engineering" MSc programme (MNME) of Universitat Politecnica de Catalunya (UPC) in Barcelona, Spain. In this programme, the students study in Stuttgart during their first two semesters and then in Barcelona in the last two semesters (including writing their Master's theses).</p>
International elements	<ul style="list-style-type: none"> • Projects with partners in Germany and abroad • International guest lecturers • Integrated study abroad unit(s) • Courses are led with foreign partners
Integrated study abroad unit(s)	<p>A semester abroad at one of the partner universities is possible. Interested students should consult the programme coordinator or course director.</p> <p>Additionally, COMMAS offers a double degree Master's programme for interested COMMAS students.</p>
Integrated internships	<p>Internships are not part of the programme. Therefore, they are not organised by the study programme. However, students are supported if they wish to do internships.</p>
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	Varied
Additional information on tuition fees	EU citizens do not pay tuition, whereas non-EU citizens pay a tuition of 1,500 EUR per semester.
Semester contribution	Approx. 200 EUR per semester
Costs of living	Living expenses amount to about 940 EUR per month. You will have to demonstrate that you have sufficient finances to cover your living expenses for 12 months. EU citizens may apply for state-guaranteed loans during the time of enrolment. For more information, see the links on our websites.
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Please check our website on financial aid and scholarships: https://www.uni-stuttgart.de/en/study/living-in-stuttgart/finances/index.html .

Requirements / Registration

Academic admission requirements	<p>A qualifying Bachelor's degree in Engineering / Natural Sciences or in a related field is required.</p> <p>Please check the website of the COMMAS programme regarding the application procedure, requirements, list of application documents and for further information.</p>
Language requirements	<p>All applicants must provide evidence of their ability to carry out their studies in English by submitting either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) score reports:</p> <ul style="list-style-type: none">• For the TOEFL iBT test, a minimum score of 79 (out of 120) is required.• For the IELTS Academic test, a minimum score of 6.0 is required.
Application deadline	15 February for the following winter semester for both EU and non-EU applicants
Submit application to	<p>An application needs to be submitted online via the C@mpus portal of the University of Stuttgart: https://www.uni-stuttgart.de/en/study/application/online/</p> <p>A guideline for applications can be found on our website: https://www.commas.uni-stuttgart.de/admission/</p>

Services

Possibility of finding part-time employment

Please be aware that it may be very challenging to finance your whole studies by working. Non-EU citizens are allowed by law to work for a maximum of 120 days per year. Only students who are employed by the university in one of the institutes or departments ("Studentische/Wissenschaftliche Hilfskräfte") are exempt from this regulation, but other restrictions apply.

For more detailed information, please consult our websites:

[International Students: financing your studies](#) and [Working during your studies](#)

Accommodation

Both the campus in Stuttgart-Vaihingen and the campus in the centre of Stuttgart have on-site halls of residence. Dorm rooms (ranging from 240 to 350 EUR per month) are furnished. Some are equipped with a sink, and all have access to kitchen and sanitary facilities, telephone and Internet. From the campus in Stuttgart-Vaihingen, the city of Stuttgart can be reached by suburban railway within ten minutes.

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Accompanying programme
- Cultural and linguistic preparation
- Pick-up service
- Specialist counselling
- Visa matters
- Help with finding accommodation
- Support with registration procedures



The MSc programme Computational Mechanics of Materials and Structures (COMMAS)

Get an insight into the MSc programme "Computational Mechanics of Materials and Structures (COMMAS)" - in just 120 seconds. Two students from the University of Stuttgart explain what is special about this programme and why they chose Stuttgart.

» more:

<https://www.youtube.com/watch?v=8uIFV3A71Qg>

University of Stuttgart

Intelligent systems for a sustainable society

The University of Stuttgart is one of the leading technically oriented universities in Germany with global significance. Located centrally in an economically strong region with vast cultural integration, the university sees itself as a hub of university-based, extramural and industrial research. Furthermore, it takes a role as a leader in research-based teaching, focused on quality and holism. The university is dedicated to researching and strengthening the interfaces between technology, society and culture in an interdisciplinary manner, defined as the "Stuttgart Way". This means the integration of engineering, natural sciences, humanities and social sciences based on the fundamentals of cutting-edge research at a disciplinary level.

Excellent research and teaching

The University of Stuttgart implements innovative concepts in research and teaching in order to provide knowledge and strategies for a meaningful and sustainable development. It focuses on basic research that is both knowledge-oriented and application-related. To facilitate this research, the university is actively part of regional, national and international research networks.

The university is committed to the principle of unity between research and teaching. Students acquire knowledge, expertise and the power of judgement, in accordance with the guidelines of scientific research and awareness. The university fosters fascination for the sciences, supporting its students and junior researchers at all stages of their careers. It promotes independent thinking and provides an environment for responsible action. In doing so, it educates individuals into exceptional experts who think in an integrative and global manner and act responsibly in the sciences, economics and society.

A powerful region

Founded in 1829, at the beginning of the Industrial Age, the University of Stuttgart continues to prepare the way for innovation within an economically and scientifically powerful region and contributes to the economic success and prosperity of our society. This process combines the requirements of a social and cultural change, which allows an early and extensive input of social interests in research and design as well as teaching and further education.

Open-mindedness

The University of Stuttgart stands for open-mindedness, individuality and community spirit. It brings together students that are eager to learn, highly motivated employees, outstanding teachers, and excellent researchers as well as visionary thinkers and inventors. By means of its culture of integration, the university creates and conveys knowledge for shaping the future of our society.



University location

The University of Stuttgart is nestled in one of Europe's most vibrant industrial regions. This fosters many forms of interdisciplinary collaboration – for instance, in numerous Collaborative Research Centres (also known as CRC or sometimes CRC/TRR) and in application-oriented research assignments. The University of Stuttgart sets up a close relationship and a successful transfer of knowledge and technology between its research institutions and business enterprises in the region and beyond. This very practical orientation benefits research and teaching. At the same time, economic players profit from rapid access to new scientific knowledge and contact to experts in their specialised fields. There are numerous possibilities of collaboration for businesses. Furthermore, the university also maintains a close relationship with non-university research institutions such as the Max Planck Society, the Fraunhofer Society, the German Aerospace Center and the German Literature Archive Marbach. Thus, the optimal prerequisites for cutting-edge research at the highest level are all to be found in Stuttgart.

Contact

University of Stuttgart

Institute of Applied Mechanics (CE)

Siddharth Sriram

Pfaffenwaldring 7
70569 Stuttgart

Tel. +49 71168566377

✉ mscinfo@commas.uni-stuttgart.de

🌐 Course website: <https://www.commas.uni-stuttgart.de/>

📘 <https://www.facebook.com/Universitaet.Stuttgart>

🐦 https://twitter.com/Uni_Stuttgart

📷 <https://www.instagram.com/unistuttgart/>

Last update 05.05.2024 17:42:08

International Programmes in Germany - Database

www.daad.de/international-programmes
www.daad.de/sommerkurse

Editor

DAAD - Deutscher Akademischer Austauschdienst e.V.
German Academic Exchange Service
Section K23 – Information on Studying in Germany
Kennedyallee 50
D-53175 Bonn
www.daad.de

GATE-Germany

Consortium for International Higher Education Marketing
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".

The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.



Federal Ministry
of Education
and Research