# Innovative Textiles (B.Eng.)

# Bachelor's Program

**Engineering Department** 





University of Applied Sciences

# Innovative Textiles -What is it all about?

Today the term "textiles" is not just considered a synonym for clothing and home furnishing textiles. Due to the vast progress in development, the field of textiles has advanced to become one of the hi-tech sectors of global industry during recent years. Their versatile functionality has rendered these innovative materials indispensable for technical applications, ranging from automotive to aerospace industries.

Our Bachelor's program in Innovative Textiles provides students with a profound foundation in innovative materials science (fibers, yarns, knitted, woven and non-woven fabrics, finishing chemicals) and modern processing technology (surface engineering, finishing). This know-how lays the foundation for mastering materials engineering requirements such as optimizing processes regarding the manufacturing and finishing of textiles, while considering technical, economic and ecological aspects.

# What do I gain with this B.Eng.?

## With this Bachelor's program, you

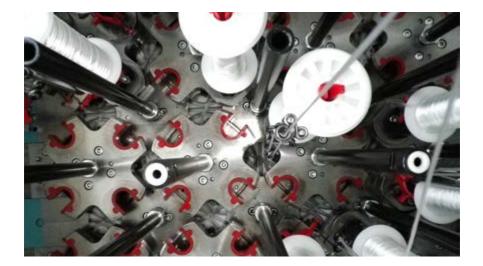
- \_ are prepared for complex engineering tasks in textile and related industries,
- have gained valuable work experience during the internship semester,
- have excellent career perspectives in research, development, production, and management.

## In addition, you benefit from

- \_ an innovative mix of teaching methods lectures, practical courses in labs and companies, simulations and case studies,
- \_ development of your intercultural competence,
- an excellently equipped campus including an on-site research institute.

Further information is available on www.hof-university.de





# Fast facts



# Degree awarded

Bachelor of Engineering (B.Eng.)



# Duration

7 semesters in total (please note: international students usually study two years at their home university and take up their studies at Hof University from semester 3; in this case, the study duration at Hof University is 5 semesters/ 2.5 years)



# Language of instruction

Semester 1 - 2: taught in German language Semester 3 - 6: taught in English language Semester 7: research project and Bachelor's thesis



## **Tuiton fees**

No tuition fees; just an administrative fee of approx. € 125 per semester



# Services and support for international students

- organisational support before and during your studies at Hof University
- \_ assistance in finding accommodation
- \_ Orientation Week prior to the start of your studies
- \_ social integration
- career-promoting activities such as intercultural trainings, field trips, and company visits
- free public transportation in the cities of Hof and Münchberg

# Special features

## Internship / Research project

Our B.Eng. students spend the seventh semester doing a practical internship in industry or a research project.

The Bachelor thesis is also project-based and written during this time. Thus, you can immediately apply your knowledge and gain profound professional experience.

### **Teaching concept**

The Bachelor's program is based on a hands-on, interdisciplinary concept. Current topics like circular economy, materials made from renewable sources, and resource efficient processes are interconnected with classic technologies applied in textile production and textile chemistry.

Theory and practical training are closely connected. Our campus Münchberg is excellently equipped: on an area of over 5,500 sqm, weaving, braiding, nonwovens and knitting pilot plants as well as laboratories for pre-treatment, dyeing, chemical finishing and testing of textiles are available.



# What are the prerequisites?

Academic requirements

\_ General higher education entrance qualification or subject-linked university entrance qualification, University of Applied Sciences entrance qualification or professional qualification

- \_ If you are not sure about your university entrance qualification, please check <u>www.uni-assist.de</u> and <u>www.anabin.de</u>
- successful completion of relevant basic studies at home university

Language requirements

International applicants ususally start in the third semester (when the teaching language switches to English). In this case, you need to fulfill the following language requirements:

You need to prove your **proficiency in English**. This can be done with either of the following:

- \_ TOEFL minimum 90
- \_ IELTS 6.5 or above

In addition: **Basic language skills in German**, **minimum level A1**, proven by official test score documents.

# When and how can I apply?

## **Online application**

You register in our online portal Primuss and fill in the application form with your personal details. If you acquired your university entrance certificate abroad, <u>uni-assist</u> must assess the certificate before you can send it to Hof University. We advise you to send your documents to uni-assist **at least 4 weeks before our application deadline**.



**Application deadline** 

May 1 - July 15

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Get your admission letter from Hof University

in June/July



**Online enrolment** 

in September



**Orientation Week in Hof** 

last two weeks of September



Start of your studies at Hof University

October 1

The study program provides practice-oriented theory (case studies, working in labs, excursions, expert talks, etc.) in combination with small class sizes and individual support from faculty. Thus, students can develop a unique qualification profile which allows them to pursue undergraduate research, internship experiences, and design projects.

The standard duration of this Bachelor's program is 7 semesters.

## **Semester 1 and 2: Orientation Phase**

- \_ basic textile and engineering subjects
- \_ for international students, the basic studies usually take place at the student's home university in their local language

## Semester 3 to 6: Core Phase

- \_ taught at Hof University completely in English language
- modules provide a broad base of fundamendal engineering courses
- \_ includes extensive laboratory exercises
- \_ Modules cover mainly the following areas: Textile Chemistry, Textile Finishing and Technical Textiles

Semester 7: student research project/internship and final thesis

After successful completion of the program, Hof University awards the academic degree Bachelor of Engineering (B.Eng.).

# Course content

1 & 2	Mathematics for Engineers	Basics of Construction	Applied Programming for Engineers	Textile Production Processes	Textile Raw Materials	Business Adminstration for Engineers
	Basics of Textile Finishing	Testing of Textile Materials	Chemistry I	Basics of Materials for Engineers	Statistics	Basics of Project Management
3 & 4	Subject-Specific Mandatory Elective*	Quality Management	Project "Textile"	Spinning Technology	Knitting Technology	Chemistry II
	Technical Studies for Knitted and Woven Structures	Weaving Technology	Technology of Nonwovens	Analytical Chemistry	Textile Composite Materials	Circular Economy and Sustainable Polymer Engineering
5 & 6	Technical Textiles - Knitted Fabrics	Advanced Coloration	Textile Chemistry	Future in Textile Printing	Manufacturing Systems	Environmental Analysis
	Subject-Specific Mandatory Elective*	Technical Textiles - Woven Fabrics	Textile Coating and Industrial Fibres	Textile Finishing	Business to Business Marketing	Material and Surface Characterisation
7	Internship with Student Research Project and Bachelor's Thesis					

Orientation Phase (usually takes place abroad for international students)
Core Phase

\* Subject-Specific Mandatory Elective: choose from a list of current topics

You can take additional German or English language courses in every semester.

Hof University is part of several textile-related networks (e.g. TEGEWA e.V. or the Partnership for Sustainable Textiles). This is a unique opportunity for our students to establish business contacts with potential employees at an early stage, e.g. for internships and research topics for the Bachelor's thesis. Study excursions to innvative textile tech companies and discussions with experts from research and industry form a vital part of the Bachelor's program.

In addition, our campus locations Hof and Münchberg are important centers for textile and materials research.

## Our Institute for Materials Science (ifm)

develops innovative and sustainable products and processes by using the core competencies of mechanical engineering, system materials, textile technology, composites, textile design, industrial and environmental engineering. This interdisciplinary approach enables the creation of composites with improved qualities and special functionalities.

The **Fraunhofer Application Center for Textile Fiber Ceramics** is located on our campus Münchberg and dedicated to processing carbon and ceramic yarns. The approx. 1,000 sqm technical center is equipped with stateof-the-art textile technology facilities for the production of 3D fabrics.



# What are my career perspectives?

# As a graduate, you...

- \_ are in high demand by industry and government, for a variety of careers in research, development, production, and management, both nationally and internationally
- demonstrate productive engineering practices, entrepreneurial behavior, research and leadership competences
- \_ possess the technical, ethical and societal knowledge and skills required for success in the complex modern world.

# ... Entry positions?

- \_ Functions in the areas: Production, development, purchasing, sales, management in mostly globally oriented companies in the textile and clothing industry.
- Professional focus also on technical textiles (e.g. fibre composites) & smart textiles
- Sales & customer service (key account management), application technology in textile machine construction or chemical fibre production
- \_ Purchasing & sales in related industries e.g. the automotive industry.



"Your new family is already waiting for you!"

## Isabell Korn from Germany B.Eng. Innovative Textiles student

#### How was your start at Hof University?

"When taking up my studies at Hof and Münchberg, I was cordially welcomed as a new member of the university and textile family right away. The university teachers impart their knowledge particularly with regard to practical applications and are always here to offer their help and support."

### What do you like about the program?

"The first year provides us with basic engineering and textile knowledge which is extended further in the following semesters, from then on in English. The combination of theoretical and practical knowledge along with various possibilities to establish a personal network makes me feel well prepared for my future workplace. Additional Master study programs such as Composite Materials or Sustainable Textiles are also offered at Hof University.

### What about the spirit among students?

"Innovative Textiles is well known for its general spirit of co-working and support among its students who see themselves as team members, not rivals. The friendly atmosphere, low living expenses and having all local facilities nearby are definitely the main ace up the sleeve of the university location."

### Anything you want to shout out to future students?

"You are interested in finding solutions for current issues like sustainability or want to plunge deeply into the manyfacetted world of technical textiles? Your new family is already waiting for you!" student-centered innovative green applied research startup culture fun active student life 24h opening campus university application-oriented knowledge water and energy efficiency focused on graduate employability modern teaching methods international Career

promoting activities for students open-minded and friendly atmosphere modern architecture



# About us









# Why choose Hof University?

## At Hof University, you can expect

- \_ a first-class, hands-on education,
- \_ a safe, friendly and open-minded study environment, especially for international students,
- extensive personal support by our Welcome Center, International Office and Career Service.

## In addition, you benefit from

- \_ assistance in finding accommodation,
- \_ orientation sessions prior to the start of your studies,
- additional activities such as intercultural trainings, field trips and company visits,
- \_ 24-hours access to computer labs and library,
- \_ free wifi on campus.



# About Hof University

Founded in 1994 as a Bavarian state university, Hof University of Applied Sciences offers a very attractive study environment with its modern architecture and state-of-the art facilities. Practiceorientation, internationalisation and graduate employability are at the heart of teaching and research at Hof University.

German students and international students from more than 60 countries learn together on our open-minded, intercultural campuses in Hof and Münchberg. Exciting student initiatives (e.g. eSports, Fairtrade Group or Formula Student) make student life even more interesting.

All professors and lecturers have a strong academic background as well as practical experience in the industry. As a result, graduates of Hof University are ideally prepared for the domestic and international labor markets.

Located at the top of Bavaria, Hof and Münchberg are safe and cozy towns in the heart of Europe with all amenities of a university town. Their green surroundings are ideal for all outdoor activities, and major cities like Berlin or Munich are within easy reach.

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# Contact



# Who can I contact with further questions?

Head of B.Eng. Program

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Welcome Center

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