

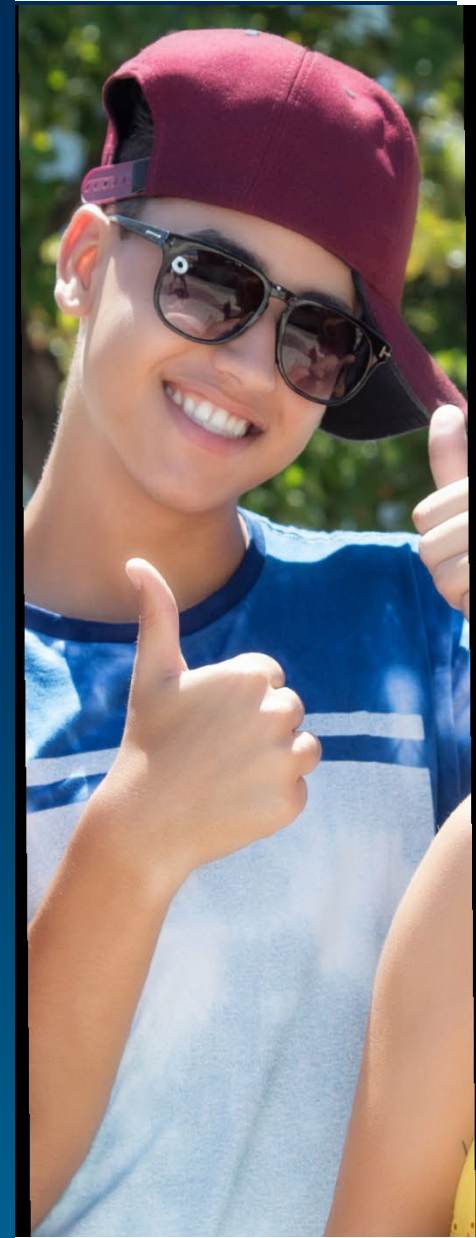
SUMMER BLOCK SEMINAR 2021

TECHNICAL BASICS

LIVE ONLINE HYBRID SEMINAR

A TWO WEEK CREDIT BEARING PROGRAM,
2ND TO 16TH OF AUGUST 2021

AT THE FACULTY OF MANAGEMENT AND TECHNOLOGY
UNIVERSITY OF APPLIED SCIENCES, ESSLINGEN/GERMANY



In the **Summer Block Seminar in Technical Basics**, international students acquire **fundamental technical skills and engineering knowledge** that broaden their understanding of a technical business economist who works in the industrial environment, at the interface between technical and business areas.

- All courses taught in English
- Industry-related courses
- Focus on practical implementation
- Small groups and Tutorials

You need sufficient command of the English language as well as basic mathematical knowledge.

Proficiency in English at Level B2 or higher according to the Common European Framework of Reference for Languages is required.



SUMMER BLOCK SEMINAR IN TECHNICAL BASICS

ALL COURSES ARE AT BACHELOR'S LEVEL, FULL-TIME AND WORTH 6 ECTS

- | Fundamentals of Material Science and their application in Vehicle and Mechanical Engineering
- | Fundamentals of Statics and Strength Theory and their application in Vehicle and Mechanical Engineering
- | Materials Processing and its application in Vehicle and Mechanical Engineering

Theory Lectures will be available via the moodle course

	Monday, 2. August	Tuesday, 3. August	Wednesday, 4. August	Thursday, 5. August	Friday, 6. August
1 pm – 2:30 pm (US time) 7 pm – 8.30 pm (Europe time)	Exercises Statics and Strength	Exercises Material Science	Exercises Statics and Strength	Exercises Material Science	Exercises Statics and Strength
	Monday, 9. August	Tuesday, 10. August	Wednesday, 11. August	Thursday, 12. August	Friday, 13. August
1 pm – 2:30 pm (US time) 7 pm – 8.30 pm (Europe time)	Exercises Material Processing	Exercises Statics and Strength	Exercises Material Processing	Exercises Statics and Strength	Exercises Material Processing
	Monday, 16. August				
	Online exam				

Lecturer:

Materials Science and Materials Processing
Statics & Strengths

Dr. R. Bot-Schulz
Thomas Hoover (B.Eng.)

COURSE DESCRIPTION

MATERIAL SCIENCE

LEARNING TARGETS:

- | Students will understand important materials and their construction, properties, meaning and applicability
- | Students will understand the relationship between internal structure and functional properties of materials
- | Students can assess opportunities to further process materials
- | Students will understand the possibilities and limitations of different material groups
- | Students will have in-depth knowledge of ferrous metals

COURSE DESCRIPTION

MATERIALS PROCESSING

LEARNING TARGETS:

- | Students will learn the six main groups of manufacturing processes (casting, forming, separating, joining, coating and modifying material properties)
- | Students will get to know the subcategories of the first three main groups of manufacturing processes
- | Students will learn both traditional and innovative processes and their respective characteristics
- | Students will identify boundary conditions for the technical and economical use of processes
- | Students will assemble several manufacturing processes to process chains for typical automotive components
- | Students will understand the relationship of Manufacturing Technology to Material Science and Statics and Strength

COURSE DESCRIPTION

STATICS AND STRENGTH OF MATERIALS:

LEARNING TARGETS:

- | Students will analyze systems of forces (decomposition and assembly of forces)
- | Students will recognize and calculate the resulting effect of multiple forces and torques
- | Students will mathematically and graphically determine unknown forces in even central force systems
- | Students will determine unknown forces in even general force systems
- | Students will calculate internal stresses in components for the base load cases
- | Students will understand and assess component's failure mechanisms

FAQs

How are the courses taught?

We offer a hybrid lecture model. The theory of the seminar is offered through videos that can be downloaded on the faculty website – exercises are mandatory and are offered live online. We use Moodle as Learning Management System.

Do I have to finish the whole seminar including all three courses?

For TBB, TAB and Gannon students all three courses have to be passed. For all other international students the courses can be chosen separately – a certificate will be given after the course has been successfully passed.

I am an international student – how does the exam take place?

The exam takes place in an online format. You need a good and stable internet connection, a web cam and a printer.

Which Corona Regulations apply to the final exams of the block seminar?

The Corona Regulations of HS Esslingen apply.
For more information look at our current [Corona Regulations](#).

REGISTRATION

OPEN UNTIL 11TH OF JULY 2021

LIMITED NUMBER OF PARTICIPANTS: 20

SEND AN E-MAIL WITH YOUR UNIVERSITY E-MAIL, THE NAME OF YOUR UNIVERSITY AND YOUR STUDY PROGRAM TO:

CHRISTIANE.HOEGER-RIEDEL@HS-ESSLINGEN.DE

CHRISTIANE HÖGER-RIEDEL

INTERNATIONAL COORDINATION OUTGOINGS AND INCOMINGS

*FACULTY OF MANAGEMENT AND TECHNOLOGY
UNIVERSITY OF APPLIED SCIENCES*

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