

UNIVERSITY OF APPLIED SCIENCES, ESSLINGEN

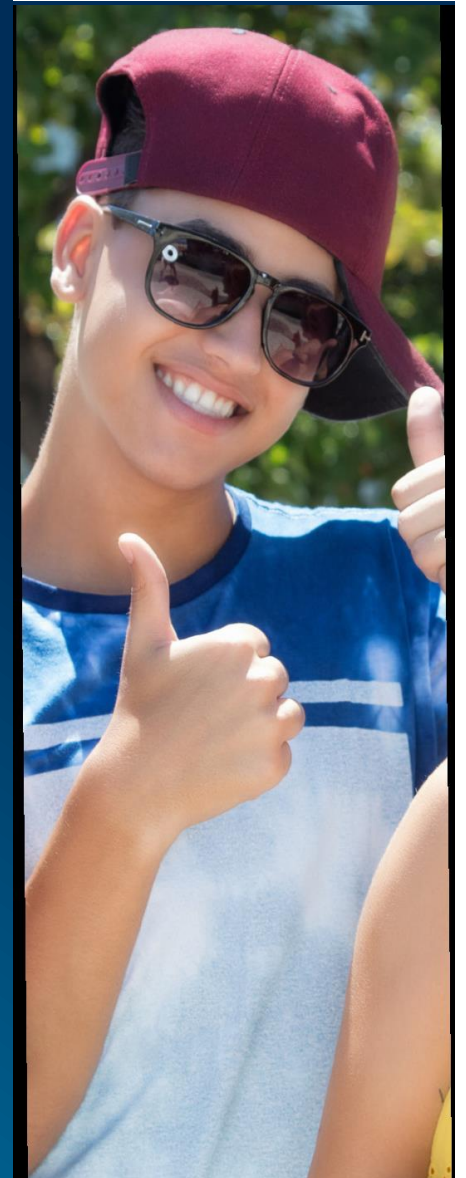
WINTER BLOCK SEMINAR 2021 AT THE FACULTY OF MANAGEMENT

LIVE ONLINE SEMINAR

TECHNICAL BASICS

A TWO WEEK CREDIT BEARING PROGRAM

FEBRUARY 2021



WINTER BLOCK SEMINAR IN TECHNICAL BASICS

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

Content:

- | 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.

TIMETABLE Winter Block Seminar Technical Basics 2021

Monday, 15 February 21		Tuesday, 16 February 21		Wednesday, 17 February 21		Thursday, 18 February 21		Friday, 19 February 21	
9.00-10.30	Materials Science	9.00-10.30	Materials Science	9.00-10.30	Materials Science	9.00-10.30	Materials Science	9.00-10.30	Materials Science
10.45-12.15	Materials Science	10.45-12.15	Materials Science	10.45-12.15	Materials Science	10.45-12.15	Materials Science	10.45-12.15	Materials Science
13.15-14.45	Materials Processing	13.15-14.45	Materials Processing	13.15-14.45	Materials Processing	13.15-14.45	Materials Processing	13.15-14.45	Materials Processing
15.00-16.30	Materials Processing	15.00-16.30	Materials Processing	15.00-16.30	Materials Processing	15.00-16.30	Materials Processing	15.00-16.30	Materials Processing

Monday, 22 February 21		Tuesday, 23 February 21		Wednesday, 24 February 21		Thursday, 25 February 21		Friday, 26 February 21	
9.00-10.30	Statics & Strengths	9.00-10.30	Statics & Strengths	9.00-10.30	Statics & Strengths	9.00-10.30	Statics & Strengths	9.00-9.40	40 Minutes Exam Materials Science
10.45-12.15	Statics & Strengths	10.45-12.15	Statics & Strengths	10.45-12.15	Statics & Strengths	10.45-12.15	Statics & Strengths	10.00-10.40	40 Minutes Exam Materials Processing
13.15-14.45	Statics & Strengths	13.15-14.45	Statics & Strengths	13.15-14.45	Statics & Strengths	13.15-14.45	Statics & Strengths	11.00-11.40	40 Minutes Exam Statics & Strengths
15.00-16.30	Exercises	15.00-16.30	Exercises	15.00-16.30	Exercises	15.00-16.30	Exercises		

Lecturer:

Materials Science Dr. R. Bot-Schulz

Materials Processing

Dr. R. Bot-Schulz

Statics&Strengths 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?

All courses are live and taught online via Webex Meetings. 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.

Do you offer the block seminar during summer break, too?

The seminar is planned for the summer break 2021 but it's not guaranteed that it will take place.

I am an international student - can I take the exams at my home university?

We are open to discuss this opportunity with your home university. Please contact us!

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 22. JANUARY 2021

SEND AN E-MAIL TO:

CHRISTIANE.HOEGER-RIEDEL@HS-ESSLINGEN.DE

CHRISTIANE HÖGER-RIEDEL

INTERNATIONAL COORDINATION OUTGOINGS AND INCOMINGS

*FACULTY OF MANAGEMENT
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