INTENSIVE TECHNICAL KNOWLEDGE FOR INTERNATIONAL MANAGEMENT STUDENTS

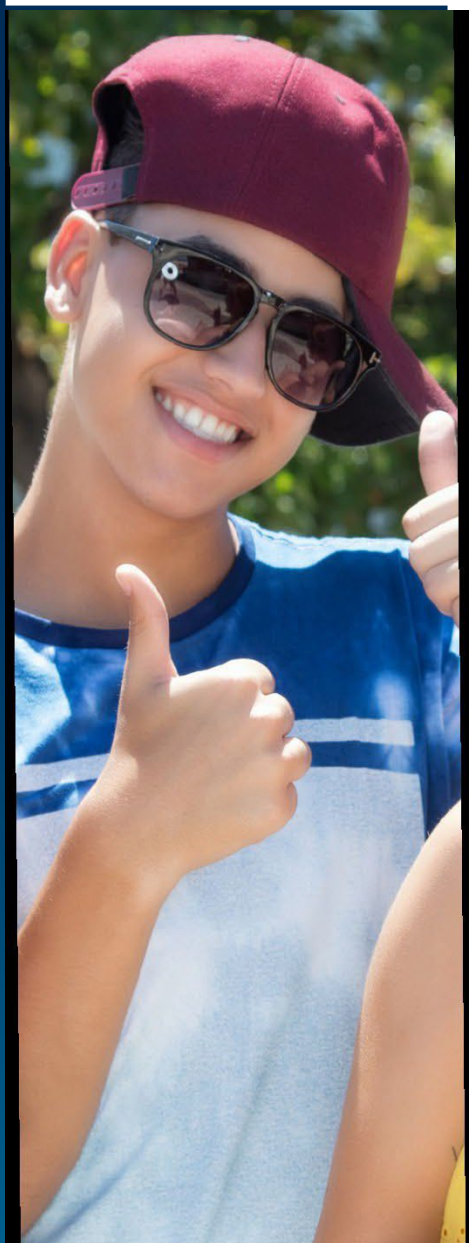
SUMMER BLOCK SEMINAR 2023

17TH OF JULY – 4TH OF AUGUST 2023

AT THE FACULTY OF MANAGEMENT AND TECHNOLOGY

UNIVERSITY OF APPLIED SCIENCES, ESSLINGEN, GERMANY

Hochschule Esslingen
University of Applied Sciences



SUMMER BLOCK SEMINAR

INTENSIVE TECHNICAL KNOWLEDGE FOR INTERNATIONAL MANAGEMENT STUDENTS

Three courses:

- Fundamentals of Material Science and their application in industry with a focus on steel on Vehicle Engineering
- Manufacturing Technology and its application in Vehicle and Mechanical Engineering
- Fundamentals of Statics and Strength Theory and their application in Vehicle and Mechanical Engineering

All courses are at Bachelor's level, full-time and worth 6 ECTS

TIMETABLE

THEORETICAL LESSONS WILL BE AVAILABLE THROUGH VIDEO DOWNLOADS. THE VIDEOS WILL BE PROVIDED ONLINE 2 WEEKS BEFORE THE SEMINAR STARTS

VIDEOS HAVE TO BE WATCHED BEFORE AN EXERCISE.

Schedule Summer Block Seminar in Intensive Technical Knowledge					
Week 1	**Monday, 17. July**	**Tuesday, 18. July**	**Wednesday, 19. July**	**Thursday, 20. July**	**Friday, 21. July**
08:00 - 9:30 (US-time), 14:00 - 15:30 (European time)	Material Science Exercise	Material Science Exercise	Material Science Exercise	Material Science Exercise	Exam
	Bot-Schulz	Bot-Schulz	Bot-Schulz	Bot-Schulz	Bot-Schulz
Week 2	**Monday, 24. July**	**Tuesday, 25. July**	**Wednesday, 26. July**	**Thursday, 27. July**	**Friday, 28. July**
08:00 - 9:30 (US-time), 14:00 - 15:30 (European time)	Manufacturing Technology Exercise	Manufacturing Technology Exercise	Manufacturing Technology Exercise	Manufacturing Technology Exercise	Exam
	Bot-Schulz	Bot-Schulz	Bot-Schulz	Bot-Schulz	Bot-Schulz
Week 3	**Monday, 31. July**	**Tuesday, 01. August**	**Wednesday, 02. August**	**Thursday, 03. August**	**Friday, 04. August**
08:00 - 9:30 (US-time), 14:00 - 15:30 (European time)	Static & Strengths Exercise	Static & Strengths Exercise	Static & Strengths Exercise	Static & Strengths Exercise	Exam
	Hoover	Hoover	Hoover	Hoover	Hoover

COURSE DESCRIPTION

MATERIAL SCIENCE

LEARNING TARGETS:

- Understand the structure of atoms and how the major crystal structures are built.
- Introduction to important materials and their construction, properties, meaning and applicability with a focus on ferrous metals.
- Understand the relationship between internal structure and their effect on functional properties of materials.
- Learn to assess opportunities to further process materials.
- Understand the possibilities and limitations of different material groups.

COURSE DESCRIPTION

MANUFACTURING TECHNOLOGY

LEARNING TARGETS:

- Learn the six main groups of Manufacturing Processes (casting, forming, separating, joining, coating and modifying material properties).
- Get to know the subcategories of the first three main groups of Manufacturing Processes (casting, forming, separating).
- Learn both traditional and innovative processes and their respective characteristics.
- Identify boundary conditions for the technical and economical use of processes.
- Assemble several Manufacturing Processes to process chains for typical automotive components in tasks.
- Understand the relationship of Manufacturing Technology to Material Science and Statics and Strength.

COURSE DESCRIPTION

STATICS AND STRENGTH OF MATERIALS

LEARNING TARGETS:

- Analyze systems of forces (decomposition and assembly of forces)
- Recognize and calculate the resulting effect of multiple forces and torques
- Mathematically and graphically determine unknown forces in even central force systems
- Determine unknown forces in even general force systems
- Calculate internal stresses in components for the base load cases
- Understand and assess component’s failure mechanisms

FAQs

HOW ARE THE COURSES TAUGHT?

All courses have a self-learning part with the videos and additionally a live part for the exercises which is taught online via Webex Meetings. We use Moodle as Learning Management System.

1. Introduction session : 26th of June (via webex)
2. Self learning time: starting 03rd of July
3. Live online exercises: starting 17th of July
4. Online exam: 21st of July, 28th of July and 4th of August

I AM AN INTERNATIONAL STUDENT – HOW DOES THE EXAM TAKE PLACE?

The exam takes place in an online format. You need a printer and a webex camera. Written exams are uploaded in Moodle and sent to the correcting lecturers.

WHAT ARE THE PREREQUISITES?

Videos have to be watched before an exercise. The videos are available 2 weeks before the course starts.
Good English language knowledge and mathematical knowledge are requested.

DO I HAVE TO FINISH THE WHOLE SEMINAR INCLUDING ALL THREE COURSES?

All three courses have to be passed.
A certificate will be given after the course has been successfully passed (6 ECTS and mark).

REGISTRATION

OPEN FROM MAY 1ST UNTIL MAY 31ST 2023

REGISTER ONLINE:
WWW.HS-ESSLINGEN.DE/EN/MANAGEMENT-AND-TECHNOLOGY/DEGREE-PROGRAMMES/ORIENTATION-OPPORTUNITIES/BLOCK-SEMINARS/

FOR QUESTIONS YOU CAN CONTACT:

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INTERNATIONAL COORDINATION OUTGOINGS AND INCOMINGS

FACULTY OF MANAGEMENT AND TECHNOLOGY
UNIVERSITY OF APPLIED SCIENCES

HS-ESSLINGEN.WEBEX.COM/MEET/CHRISTIANE.HOEGER-RIEDEL