Faculty of Technology

ENGLISH lectures & projects
Academic Year 2025/26
Subject to change/Status: October 2025

MECHANICAL ENGINEERING (required language level B1) BACHELOR LEVEL	Description	Lecturer	CP / ECTS	Term (Semester)
LECTURE: **Soft Skills**	Communicating and presenting basics of communication psychology, leading conversations and negotiations, leading teams and working groups (including motivations and tools, meeting management, creativity in teams, discussion situations, mastering appraisal interviews, leadership role, task and instruments, skills, learning and implementing conversation.	Mr Schmidt	5	fall
LECTURE: **Quality Management & Quality Assurance**	Introduction to quality management; QM philosophies; QM standards: general QM methods and tools; problem solving tools; management tools; quality costs; quality and law. Basics of statistics; acceptance sampling inspection; capability studies and characteristics; control charts; CAQ; supplier selection and evaluation; quality costs.	Mrs Blattmeier	5	fall
LECTURE: **Logistic & Supply Chain Management**	Knowledge of the role and activities of supply chain and logistics management as key elements for the successful management of companies; understanding the importance of customer thoughts in the entire chain; understanding of entire value-added networks, their planning and control techniques; understanding of the many instruments for analysis and problem solving in logistics chains.	Mr Schleuter	5	fall
LECTURE: **Int. Project Management**	Fundamentals of Project Management, Work Breakdown Structures, Project Scheduling and Budgeting, Earned Value Method, Risk Analysis in Projects, Project Organisations, Project Closure and Audit, PCSimulation	Mr. Passenheim	5	fall
SEMINAR: Digital Marketing **Prerequisites:Sufficient knowledge of English and basic knowledge of marketing is required**	International marketing activities are explored; international market research, strategic issues, international marketing mix; additional aspects such as generic internationalization strategies, methods of evaluating and selecting countries as target markets, and market entry modes extend the scope of contents to entirely new fields; exercises and case studies are used to apply learned contents to real-life scenarios.	Mr. Hummels	5	fall
LECTURE: **Advanced Project Management for Engineers**	Master level (available upon request)	Mr Haja	5	fall

LECTURE: **Control of and with Smart Products**	**Students can choose and program microcontroller boards for products. Students can select and describe microcontroller boards and the necessary sensors and actuators. Students can describe and create programs for microcontroller boards. The module serves as an input for the semester project and provides a foundation for understanding smart products.** **Content:** **Assembly of a control system, Data flow in control systems, Hardware for control systems, Microcontroller boards, Sensors, Actuators, Programming of microcontrollers, Documentation of programs and hardware, Case studies.**	**Mr. Wings**	**5**	**spring**
LECTURE: **Data Analysis and Machine Learning**	**Data analysis and machine learning is an interdisciplinary field that combines the areas of computer science, mathematics and an application area. After this event, the students are able to set up a process for knowledge acquisition from data. The students understand how all three subfields are considered equally. The students know the essential components of data analysis and their tasks. They are familiar with the basic functions of the components. The students know the general structure of the components and can illustrate and apply the basic algorithms and methods. They know not only libraries, frameworks, modules and toolkits, but can use them specifically. As a result, they develop a deeper understanding of the relationships and learn how essential tools and algorithms of data analysis work in the core.** **Content:** **Basics of Linear Algebra; Statistics and Probability Theory; Algorithms from the field of Data Science; Models, e.g. k-Nearest Neighbors, Naive Bayes, Linear and Logistic Regression, Decision Trees, Neural Networks and Clustering. Methods of supervised, unsupervised and reinforced learning. Applications, e.g. from the field of Production Technology.**	**Mr. Wings**	**5**	**spring**
LECTURE: **Digital Business Models and After Sales**	**Qualification objective** **Within the framework of the module, students are able to develop digital and sustainable business models, by selecting a suitable business model pattern, structuring a business model with the Business Model Canvas framework and identifying the value for the customer with the Value Proposition Canvas framework, in order to align value creation sustainably with a business model.** **Content:** **Business models and digital business models: structure, characteristics, goals; Life cycle of business models; The Business Model Canvas and the Value Proposition Canvas; Business model innovations; Application of digital business models in the digital economy: zero-cost society, network effects, two-sidedness, platform economy; Digital transformation of after-sales.**	**Mrs Blattmeier**	**5**	**spring**
LECTURE: **Product Management and Marketing**	**Qualification objective** **The module accompanies students in developing competences for the organization of product management. With the help of market analysis, students design a product portfolio, build a corresponding marketing concept, with which they integrate the products of the portfolio into the market based on digital technologies as an innovation, in order to meet the requirements of customers and see sustainability as a basic characteristic of a modern business model. The module is also an input for the semester project.** **Content:** **Goal setting of product management; Organizational forms for product management; Innovation management within the framework of product management; Brand and brand management, concept development of digital marketing.**	**Mrs Blattmeier**	**5**	**spring**

SUSTAINABLE ENERGY SYSTEMS **Interdisciplinary programme from departments of MECHANICAL ENGINEERING and NATURAL SCIENCES BACHELOR LEVEL** **(required language level B2)**	**Description**	**Lecturer**	**CP / ECTS**	**Term (Semester)**
LECTURE: **Simulation of energy systems** **Prerequisites: basic knowledge of programming. Only open to limited no. of students**	Modelling, simulation and analisys of local energy systems with producers, consumers and prosumers	Ms Pechmann	5	fall
LECTURE: **Energy storage**, **only open to limited no. of students**	Storage of thermal, chemical, electrical and kinetic energy, as well as potential energy. Fuel cell and hydrogen storage.	Mr Illing	5	fall
LECTURE: **Wind turbines**	Design of wind turbines and wind farms, aerodynamics, structural dynamics, wind ressource and site assesment.**Knowledge of fluid dynamics needed.**	Mr. Herráez	5	fall
PROJECT: **Wind challenge**	Design and production of a small wind turbine in cooperation with a group of students from different backgrounds for participating in an international wind energy contest.	Mr. Herráez	2	fall and spring
LECTURE**: Solar Thermal Energy**	Solar resource, design of solar thermal systems, performance analysis. **Knowledge of thermodynamics needed.**	Mr Herráez	2,5	fall
LECTURE: **Photovoltaics**	Physical principles of the use of photovoltaic energy, components of photovoltaic installations, design of photovoltaics systems. **Basic knowledge of electrotechnics needed.**	Mr. Herráez	2,5	fall
LECTURE: **Sustainable Production** **Prerequisites: Basic knowledge of programming. Only open for limited no. of students**	Globalization and climate change, production systems and production management systems, requirements for sustainable production	Mrs Pechmann	5	spring
LECTURE: **Thermal Power Plants**	Types of Thermal Power Plants, heat sources, power machines, efficiency, emissions, power density	Mr. Jakiel	5	spring
LECTURE: **Energy Process Technology**	Optimization of energy-relevant process, analysis of thermodynamics, chemical and biological aspects	Mr Paul	5	spring
LECTURE: **Process modelling and energy optimization**	Modeling of chemical and environmental processes, commercial process simulators, development and optimization of energy processes	Mr Steinigeweg	4	fall
LECTURE: **Sustainable energy generation**	Energy supply chains and their technical, enviromental and economic dimensions	Mr. Paul	2	spring
LECTURE: Laboratory Course Solar Energy	The theory of the lectures Solar Thermal Energy and Photovoltaics will be applied to perform and evaluate different experiments in the field of solar energy.	Mr Herráez	2	fall
LECTURE: Laboratory Course Wind Energy	description will follow	Mr Herráez	2	fall
PROJECT: **Technical Project**	Technical Project (wide range of topics possible).	Mr Herráez and others	5	fall and spring
PROJECT: **Sustainable energy project**	Technical Project (focus on sustainable energy).	Mr Herráez and others	7	fall and spring

INDUSTRIAL INFORMATICS (required language level B2) MASTER LEVEL	MASTER LEVEL Description	Lecturer	CP / ECTS	Term
PROJECT : Digitalization with Industry 4.0	Project description will follow soon/only 1 project per semester is possible	Mr. Kane	5	fall
PROJECT: Industrial Internet of Things	Project description will follow soon/only 1 project per semester is possible	Mr. Kane	5	fall
PROJECT: Artifical Intelligence and Digitalization	Project description will follow soon/only 1 project per semester is possible	Mr. Kane	5	fall
LECTURE/LAB: Blockchain and the XRP Ledger	The ultimate goal of the course is to carry out a project in the field of "Web3"/Finternet.You can actively shape the project's topic yourself. Here is a brief overview of the key topics we will cover at the beginning: •Fundamentals of Blockchain and Crypto: oThe basics of cryptocurrencies, blockchain technology, and Web3. Covers topics such as blockchain, transactions, smart contracts, and current trends like NFTs and gaming. •Introduction to XRPL: oThe XRP Ledger, its history, functionality, and key features. •XRPL and DeFi: oTopics related to decentralized finance (DeFi) on the XRPL, including auto-bridging, pathfinding, and liquidity pools. •Programming with XRPL and JavaScript: oHow to program on the XRPL using JavaScript, set up accounts, send XRP, and create trustlines. •Development with XRPL and React.js: oUsing React.js to interact with the XRPL, including account creation and XRP transactions. For more information, visit the XRPL Learning Portal: https://learn.xrpl.org/	Mr. Veltink	5	fall

NATURAL SCIENCES (required language level B2) MASTER LEVEL Master of 'Applied Life Sciences' and Master of Technology of Circular Economy	MASTER LEVEL Description	Lecturer	CP / ECTS	Term
LECTURE: **Recovery of Recyclable Materials**	The students learn about processes for recovering valuable materials from industrial and other material streams as well as the application and optimization of these processes.In the form of a project, the students deepen what they have learned using an example process.	Mr. Hüppmeier	6	fall
LECTURE: **Water Reuse**	Module description will follow soon	Mr. Illing	6	fall
LECTURE: **Soil Remediation**	Students receive information about typical chemical contamination of soil at contaminated sites (e.g. PAHs, heavy metals, mineral oils) and how to remediate these contaminations. Soil samples are taken from former industrial sites, analyzed and evaluated.	Mr. Walker	6	fall
LECTURE: **Energies and Materials in Biotechnology**	This course introduces students to biotechnological processes, with particular emphasis on the use of material and energy sources. While projects are primarily conducted on a theoretical basis, selected laboratory excursions and practical demonstrations involving yeast, bacteria and mammalian cells are integrated to enhance conceptual understanding.	Mr. de Vries	6	fall
LECTURE: **Solid Waste and Recycling**	Module description will follow soon	Mr. Habermann	6	spring
LECTURE + LAB: **Biopolymers**	The module consists of a lecture and a lab course. Students will learn to prepare, process and analyse biopolymers and understand their role in polymer industry.	Mr. Rüsch gen. Klaas	6	spring
LECTURE: Biodegradability and Environmental Impact Limited number of participants: max. 2 students	The module consits of a lecture on "Environmental Assessments" (EIA, EA, ESIA) and social & environmental responsibilities and a seminar in which independent topics on "Biodegradability" of various components are developed and presented	Mrs. Gallert	6	spring
LECTURE **Introduction to Circular Economy**	Module description will follow soon	Mr. Steinigeweg	6	spring
PROJECT: **Circular Economy Project**	Students are working in small groups on an interdisciplinary project in the field of Circular Economy Technology.	all lecturers	6	spring
LECTURE: **Soft skills**	Module description will follow soon	all lecturers	5	fall and spring
LECTURE: **Soil Remediation**	Module description will follow soon	Mr Walker	5	fall

BUSINESS STUDIES (required language level B2) **BACHELOR LEVEL**	**Lecturer**	**CP / ECTS**	**Term (Semester)**
LECTURE: **ERP – Systems** (Enterprise-50:60Resource-Planning Systems e.g. SAP)*	**Mr Ihnen**	**5**	**fall**
LECTURE: **International Management for SMEs***	**Ms Alvares-Wegner**	**5**	**fall**
SEMINAR: **Digital Marketing*** **Prerequisites:Sufficient knowledge of English and basic knowledge of marketing is required**	**Mr Hummels**	**5**	**fall**
LECTURE: **International Project Management***	**Mr. Passenheim**	**5**	**fall**
BLOCK SEMINAR: **Green Economy & Digital Innovation**	**Mr. Bruns**	**5**	**fall**
LECTURE: **Financial Instrument Accouting**	**Mr. Henkel**	**5**	**fall**
LECTURE: **Logistics and Supply Chain Managemen**	**Mr. Wessels**	**5**	**fall**
LECTURE: **International Business Communications**	**nn**	**5**	**fall**
LECTURE: **Communication & Presentation Skills***	**Ms Alvares- Wegner**	**5**	**spring**
BLOCK SEMINAR: **Sustainability Management***	**Mrs Wolf**	**5**	**spring**
LECTURE: **Organisation and Human Resources**	**nn**	**5**	**spring**
LECTURE: **International Marketing**	**Mr. Hummels**	**5**	**spring**
LECTURE: **International Mergers & Acquisistions**	**nn**	**5**	**spring**
LECTURE: **English Courses on different levels**	**nn**	**5**	**spring**
LECTURE: **Managing Across Cultures**	**nn**	**5**	**spring**
LECTURE: **Innovation and Service Management**	**nn**	**5**	**spring**
LECTURE: **Management Control Systems (Master)**	**Mr. Wilken**	**5**	**spring**
LECTURE: **International Human Ressource Management*** **Prerequisites: sufficient knowledge of English; good written and oral communication skills and basic knowledge of management required**	**Ms Alvares-Wegner**	**5**	**spring**

* **Please check language and knowledge prerequisites for the *marked business lectures in cooperation with the Faculty of Business Studies here:** https://www.hs-emden-leer.de/en/faculties/wirtschaft/studies/international-faculty-office-for-business-studies/english-programme/

Faculty of Social Work and Health

ENGLISH lectures & projects
Academic Year 2025/26

SOCIAL WORK (required language level B2) BACHELOR LEVEL	Description	Lecturer	CP / ECTS	Term (Semester)
From Life to Stage: Empowering Children`s Rights and Future Vision through Theatre	Children's rights – such as the right to equality, education and protection from violence – apply to all individuals from birth until the age of 18. Yet their significance extends far beyond this age group: dealing with children's rights consciously or unconsciously shapes our own biographical experiences as well as our professional and private practice. This seminar combines knowledge on the topic of children's rights with theater-educational methods. These methods build on existing knowledge about children's rights and create a creative space for biographical reflection and self-expression. At the same time, the theatre pedagogical approach enables participants to get to know concrete techniques for working, creating, and reflecting on the topic of children's rights with different target groups. It is the combination of this theoretical and practical approach that makes this seminar particularly distinctive.	Mrs. Witzke Mrs Weinzierl	3	spring
Addiction to Health: Social Perspectives for Addiction Prevention and Addiction Support	The seminar offers a concise yet comprehensive overview of addiction issues from a social work and social science perspective. It explores addiction in the context of health, taking into account key forms of addiction, their causes and conditions of development, as well as relevant epidemiological data. The addiction support system is examined in its various facets (prevention, counseling, treatment, and support), and new findings and open questions in addiction research are discussed. Evidence-based approaches and sociocultural aspects are integrated throughout. Students are expected to gain competency in the critical review and understanding of emerging alcohol and drug issues, also addictive behaviors and policies and self-efficacy to effectively articulate to develop research and better inform policy changes in Germany and globally.	Mr. Tielking	3	spring
LECTURE: **Press and Public Relations in Social , Education and Health Sectors** (online)	Press and public relations work is an important element in order to be visible as a social institution and to be perceived with one's own profile. The course provides basic knowledge of effective public relations in the social sector.	Mrs. Segebade	3	spring
LECTURE: **International University Week**	You have the opportunity either to participate in the IUW 2025 or in another international week either in emden or outside Germany	Mrs. Hübner	3	spring
LECTURE / PROJECT: **Project development and practice**	Short introduction into the system of social services in Germany. Weekly practice day in a social service. If applicable: Development and implementation of a project offered in the social service.	Mr. Bunk	4	spring

LECTURE: **Potential traumatic life events and health across the life course**	**Potential traumatic life events (PTE) have an impact on (mental) health. The specific aims of this course are: 1) to define potentially traumatic life events; 2) identify vulnerable groups and the impact of PTEs; 3) recognize trajectories of health impacts; 4) get to know intervention models to mitigate the impact of traumatic life events.**	**Mrs. Jutta Lindert**	**4**	**spring**
LECTURE**: Creative Writing in Social and Educational Work** (online)	**“Fiction gives us empathy: it puts us inside the minds of other people, gives us the gifts of seeing the world through their eyes. Fiction is a lie that tells us true things, over and over“, said Neil Gaiman and explains at the same time why creative writing is a good company ion if your work in a social institution. You will learn on a practice-based method how writing works and how and why writing can be used in social work.**	**Mrs. Segebade**	**3**	**spring**
Body Based Methods in Social Work: Psychomotricity for Empowering Children and Families (Block Seminar)	**This practice-oriented weekend seminar (Fr/Sa/Su) introduces fundamental psychomotor principles of empowerment and personal development, not only through theoretical input but primarily through embodied, movement-based self-exploration. The seminar includes relaxation techniques, body awareness exercises, and cooperative group activities and games. Learning outcomes are largely based on the group’s willingness to reflect on their personal experiences in relation to their own professional field within social work. No prior experience or specific physical abilities are required. Participants are invited to wear comfortable clothing suitable for movement. Please bring enough to drink and eat for the breaks with you (the cantine is closed on the weekend).**	**Mr. Schmid**	**3**	**spring**
Non-Violend Communication	**This course introduces students to the principles of Nonviolent Communication (NVC) according to Marshall Rosenberg. Through interactive exercises and reflection, students develop key skills such as empathy, active listening, and needs-based communication. As part of the final assessment, students apply the NVC concept to a specific field of social work.**	**Mrs. Henn**	**2**	**spring**
Laughter (Yoga) as a tool in Social Work	**This practical module explores the use of Laughter Yoga as a resource-oriented method in social work. Students actively engage in exercises that promote joy, connection, and emotional resilience. A willingness to laugh without reason is essential. Upon successful participation, students receive a certificate from the International Laughter Yoga University.**	**Mrs. Henn**	**2**	**spring**

Faculty of Maritime Sciences (location: Leer)

ENGLISH lectures **& projects**

Academic Year 2025/26

MARITIME SCIENCES (required language level B2) BACHELOR LEVEL	Study course	Lecturer	CP / ECTS	Term (Semester)
LECTURE: **Basics of Nautical Science: Part 1 (Professional Practice), Part 2 (Maritime Project), Part 3 (Public Shipping Law)**	Nautical Science and Maritime Transport (NSMT)	Ms Beelmann/Mr Vahs/Ms Woltron	10	spring
LECTURE: **Mathematics 1 (Linear Algebra)**	Nautical Science and Maritime Transport (NSMT)	Mr Bentin	5	spring
LECTURE: **Physics**	Nautical Science and Maritime Transport (NSMT)	Mr. Meyer	5	spring
LECTURE: **Navigation 1 (Classical Navigation)**	Nautical Science and Maritime Transport (NSMT)	Ms Knoop	5	spring
LECTURE: **Meteorology**	Nautical Science and Maritime Transport (NSMT)	Mr Göken	5	spring
LECTURE: **Ship Theory**	Nautical Science and Maritime Transport (NSMT)	Mr. Plawenn - Salwini	5	spring
LECTURE: **System Monitoring**	Nautical Science and Maritime Transport (NSMT)	Mr Meyer	5	spring
LECTURE: **Computer Science**	Nautical Science and Maritime Transport (NSMT)	Mr. Ostrowitzki	5	spring
LECTURE: **Business Administration**	Nautical Science and Maritime Transport (NSMT)	Mr Heilmann	5	spring
LECTURE: **Mathematics 2 (Analysis)**	Nautical Science and Maritime Transport (NSMT)	Mr Bentin	5	spring
LECTURE: **Navigation 2 (I) Techn. Navigation 1 + Radar Technology***	Nautical Science and Maritime Transport (NSMT)	Ms Knoop/Mr. Plawenn-Salvini	5	fall
LECTURE: **Watchkeeping***	Nautical Science and Maritime Transport (NSMT)	Mr. Plawenn - Salwini	5	fall
LECTURE: **Human Resource Management**	Nautical Science and Maritime Transport (NSMT)	Ms Beelmann	5	fall
LECTURE: **Maritime English**	Nautical Science and Maritime Transport (NSMT)	Ms. Walden	5	fall
LECTURE: **Medical Care**	Nautical Science and Maritime Transport (NSMT)	Ms Winther	5	fall
LECTURE: **Navigation 2 (II) Astro Navigation + Techn. Nav. 2 + ECDIS***	Nautical Science and Maritime Transport (NSMT)	Ms Knoop/Mr. Plawenn-Salvini	10	spring
LECTURE: **Astronomical Navigation***	Nautical Science and Maritime Transport (NSMT)	Mr. Plawenn - Salwini	5	spring
LECTURE: **Dangerous Goods***	Nautical Science and Maritime Transport (NSMT)	Mr. Kreutzer	5	spring

LECTURE: **Cargo Operations/Loading Technology***	**Nautical Science and Maritime Transport (NSMT)**	**Mr. Plawenn - Salwini**	**5**	**spring**
LECTURE: **Energy Efficient Maritime Handling**	**Nautical Science and Maritime Transport (NSMT)**	**Mr. Vahs**	**5**	**spring**
LECTURE: **GMDSS***	**Nautical Science and Maritime Transport (NSMT)**	**Ms Woltron**	**6**	**fall**
LECTURE: **Manoeuvring ***	**Nautical Science and Maritime Transport (NSMT)**	**Mr. Vahs**	**5**	**fall**
LECTURE: **Emergency Management ***	**Nautical Science and Maritime Transport (NSMT)**	**Ms Woltron**	**7**	**fall**
LECTURE: **Cargo Care ***	**Nautical Science and Maritime Transport (NSMT)**	**Mr. Kreutzer**	**5**	**fall**
*Prerequisite: 6 months on board training prior to exchange semester				

Faculty of Maritime Sciences (location: Leer)

ENGLISH lectures **& projects**

Academic Year 2025/26

MARITIME SCIENCES (required language level B2) BACHELOR LEVEL	Study course	Lecturer	CP / ECTS	Term (Semester)
LECTURE: **Ship Steel Design and Strength Calculations**	Martime Technology and Shipping Management (MTSM)	Mr. Bentin	5	spring term
LECTURE: **Ship Design**	Martime Technology and Shipping Management (MTSM)	Mr. bentin	5	spring term
LECTURE: **Business Communication**	Martime Technology and Shipping Management (MTSM)	Ms Walden	5	fall term
LECTURE: **Ocean and Hydraulic Engineering**	Martime Technology and Shipping Management (MTSM)	Mr. Strybny	5	fall term
LECTURE: **Applied Finite Elements**	Martime Technology and Shipping Management (MTSM)	Mr. Bentin	5	fall term
LECTURE: **Applied Ship Hydrodynamics**	Martime Technology and Shipping Management (MTSM)	Mr. Bentin	5	fall term
LECTURE:**Strategic Shipping Company Management**	Martime Technology and Shipping Management (MTSM)	Mr. Heilmann	5	fall term

Courses open for Students of ALL FACULTIES

ENGLISH lectures **& projects**

Academic Year 2025/26

	Course Description	Lecturer	CP / ECTS	Term (Semester)
LECTURE: International Management of Small and Medium-Sized Companies	course description will follow soon	Mrs Alvares-Wegner	5	fall term
LECTURE: Managing Across Cultures	course description will follow soon	Mrs Alvares-Wegner	5	fall term
LECTURES: International Business Communication	course description will follow soon	Mrs Alvares-Wegner	5	fall term
ONLINE LECTURE: Our World Our Future	The course consists of: the function and understanding of our world; the impact on environment due to humans; the main problems: climate change and biodiversity; human behavior and economy; sustainability policy	Mr. Schlaak	2,5	fall and spring term
BLOCK SEMINAR: Green Economy and Digital Product Innovation	course description will follow soon	Mrs. Bruns	5	fall term
LECTURE: German Courses on different levels	different levels		5	fall and spring term
LECTURE: International Strategic Leadership	course description will follow soon	Mrs Alvares-Wegner	5	fall term