

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 analysis 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 resource and site assessment. 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	spring
LECTURE: Sustainable energy generation	Energy supply chains and their technical, environmental 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	<div>MASTER LEVEL</div> 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: Artificial 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	<p>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.</p> <p>Here is a brief overview of the key topics we will cover at the beginning:</p> <ul style="list-style-type: none"> •Fundamentals of Blockchain and Crypto: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> oThe XRP Ledger, its history, functionality, and key features. •XRPL and DeFi: <ul style="list-style-type: none"> oTopics related to decentralized finance (DeFi) on the XRPL, including auto-bridging, pathfinding, and liquidity pools. •Programming with XRPL and JavaScript: <ul style="list-style-type: none"> oHow to program on the XRPL using JavaScript, set up accounts, send XRP, and create trustlines. •Development with XRPL and React.js: <ul style="list-style-type: none"> oUsing React.js to interact with the XRPL, including account creation and XRP transactions. <p>For more information, visit the XRPL Learning Portal: https://learn.xrpl.org/</p>	Mr. Veltink	5	fall

NATURAL SCIENCES (required language level B2) MASTER LEVEL Master of 'Applied Life Sciences' and Master of Technology of Circular Economy			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. Rüschen. Klaas	6	spring
LECTURE: Biodegradability and Environmental Impact Limited number of participants: max. 2 students	The module consists 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
LECTURE: Modelling and Simulation	Introduction to the fields of scientific computing, modelling and simulation, programming with Matlab/Octave, implementation of numerical models from the fields of natural sciences and technology.			Mr. Herráez	5	spring

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 Accounting	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: Crisis Management in International Mergers and Acquisitions* Prerequisites: Sufficient knowledge of English and good basis in general management theory required	Ms Alvares-Wegner	5	spring
LECTURE: International Marketing	Mr. Hummels	5	spring
LECTURE: Production and Logistics	Mr. Schleuter	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	<p>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.</p> <p>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.</p>	Mrs. Witzke Mrs Weinzierl	3	spring
Addiction to Health: Social Perspectives for Addiction Prevention and Addiction Support	<p>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.</p>	Mr. Tielking	3	spring
LECTURE: Press and Public Relations in Social , Education and Health Sectors (online)	<p>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.</p>	Mrs. Segebade	3	spring
LECTURE: International University Week	<p>You have the opportunity either to participate in the IUW 2025 or in another international week either in emden or outside Germany</p>	Mrs. Hübner	3	spring
LECTURE / PROJECT: Project development and practice	<p>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.</p>	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 canteen 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-Salwini	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-Salwini	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
LECTURE: Crisis Management	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: Sustainability Consulting	Students from different universities will work together in projects to discuss, understand and develop their ideas for any SDGs. It will be also recognized for our sustainability certificates	Mrs. Wolf	5	fall term
LECTURE: International Strategic Leadership	course description will follow soon	Mrs Alvares-Wegner	5	fall term