Module manual

Sustainability Management & Technologies

Master full time

Study and examination regulations: SPO 2024

As of November 18, 2024

Contents

1   Overview

This handbook describes the individual modules of the Master's programme in Sustainability Management & Technologies offered at the Neuburg campus of TH Ingolstadt (THI).

Please note that it is a preliminary version and still work in progress. The descriptions of modules of the 1st semester are currently more elaborate than the descriptions of the remaining modules, yet this will change until the start of the programme when a finalized version of the handbook will be released (expected end of February 2025).

The descriptions of the modules contain explanations about the requirements and types of module examinations. In addition to the course content, the objectives of the course, career profiles and opportunities that arise from studying Sustainability Management & Technologies are described.

In addition to the content of the degree program, the module handbook also contains the study guidelines that lead to successful studies at THI.

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2 Introduction

2.1 Overall objective of the programme

Sustainability in a company means more than just printing on recycled paper. Sustainability management and Corporate Social Responsibility (CSR) penetrate all areas and reveal connections between technological and management-orientated aspects of sustainable transformation. As a graduate of the Master's programme, you will develop action plans, design new business models under the maxims of sustainability and circularity, and develop their implementation. You will be able to read the values, cultures and management structures of a company, design them with regard to their ecological, social and economic characteristics and identify potential for improvement. Graduates will have the potential to revolutionise companies and organisations at the interface of sustainability and technology application!

Figure 1 summarizes some of the key elements of the study programme: sustainability management and economics combined with insights into technologies for a sustainable future within a global framework with a focus on practical application in the form of cases and field work. The programme's objective is to train personalities who manage technology-oriented businesses and organisations sustainably and responsibly, to enable a sustainable development for people and the planet.
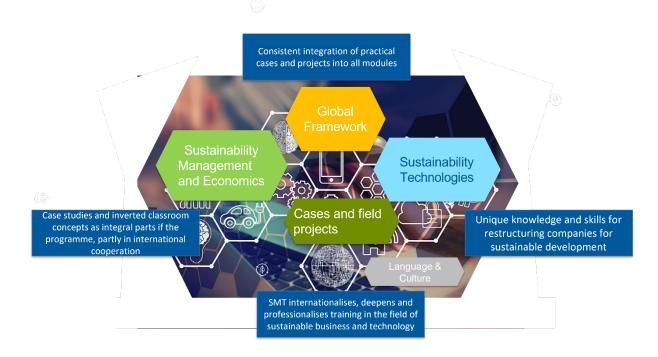

Figure 1.: Elements of the programme

2.2 Admission requirements

For the Master's degree programme, the general admission requirements for studying at Master level at universities of applied sciences must be met.

The **binding regulations** for this study plan can be found in:

- Study and examination regulations for the Master's degree program in Sustainability Management and Technologies in the version dated November 18, 2024

- General examination regulations (APO) of the Ingolstadt University of Technology

- Matriculation regulations of the Ingolstadt University of Technology. The relevant provisions of the study and examination regulations influence the course of study.

The **admission criteria** are as follows:

- Proof of English language skills at level B2

- The successful completion of an academic study programme in business/economics, engineering or natural sciences, in each case with a business/economics focus or related fields, at a German university with at least 180 ECTS credit points or an equivalent domestic or foreign degree

- Basic knowledge of management theory or business administration as well as the ability to think abstractly and system-oriented and to formalize approaches and solutions

- Knowledge/experience relevant to the degree program, be it of a scientific or practical nature

For more information about the admission criteria and procedures, please check the Statutes on the aptitude test for the Master's programme in Sustainability Management and Technologies.

2.3 Target group

The course is aimed at

- Bachelor graduates from different backgrounds (engineering, management, sciences) who want to deepen their knowledge in the fields of sustainability, management and (transformative) technologies and who seek an interdisciplinary approach towards these topics

- International students who aim to use their acquired skills in companies in Germany or abroad

- National students who want to get a more international perspective & training on the topics of sustainability, management and technology

2.4   Structure of the programme

The programme covers four semesters, starting in spring (mid-March) and leads to the degree Master of Science. The first three semesters are focusing on course work, the fourth semester focuses on the completion of the Master thesis, which is usually connected to solving a practical problem rather than conducting purely theoretical research.

Figure 2 displays the curriculum of the programme. The programme starts with some foundations, such as in the module *Sustainability in Business and Economics*, which is an important prerequisite for those students who have a background in science or engineering and therefore have only basic knowledge in business administration and economics. It also introduces the students to the various aspects of economic, social and environmental sustainability, such as, for example, represented in the UN's Sustainable Development Goals. The students are further introduced into several aspects of sustainability management, such as *Metrics and Analytics for Sustainability* and *Sustainable Business Strategy and Entrepreneurship*. It also familiarizes students with the principles of *Circular Economy and Life Cycle Management* and raises the students' awareness for the complex interrelationships between *Technology and Society*.

1. Semester		
Circular Economy and Life Cycle Management	Sustainability Business Basics and Economics	Sustainable Business Strategy and Entrepreneurship
Metrics and Analytics for Sustainability	Technology and Society	
2. Semester		
Artificial Intelligence and Sustainability	Sustainable Materials and Recycling- Technologies	Natural Resources Management and Supply Chain Sustainability
Values and Ethics for Sustainable Leadership	Elective I	
3. Semester		
Urban Ecology and Sustainable Building Technologies	Climate Change and De-Carbonization Technologies	Sustainable Investments and Finance Policies
Sustainability Project and Field Trip	Elective II	
4. Semester		
Master-Thesis	Master- Colloquium	

Figure 2: Curriculum

The following semesters offer various opportunities to dive deeper into different transformative technologies (such as AI, urban building technologies, energy and decarbonization technologies, sustainable materials and recycling technologies) but also to learn more about sustainable leadership, supply chain sustainability and sustainable investment and finance. The students can further shape their profiles through the selection of two electives in the 2nd and 3rd semesters. A list of possible electives (preliminary, not conclusive) is:

- Enviromental Law, Policies and Institutions

- Social Skills (interpersonal skills, intercultural skills)

- Inner Development Goals & Sustainability

- Renewable Energy Efficiency

- Social Entrepreneurship & Sustainable Innovations

- Sustainable Market Communication

- Design Workshop for Sustainable Product Development

- Developing Effective Teams

- Communication Training

The 3rd semester is also marked by a *Sustainability project and field trip* that challenges the students to apply their newly developed knowledge and skills and prepares for the *Master thesis*, which is completed with a presentation in the *Master colloquium*.

2.5　　Conception and expert advisory board

The course was designed by THI experts with the involvement of practitioners and is continually being developed further.

3   Qualification profile

3.1   Mission statement

The course of study directly addresses the general mission statement of the THI "Personalities and innovations – for a future worth living." and its concept is aimed at the individual focal points:

- We develop personalities for the professional world of the future.

- We create innovations and live sustainability – technology and business are our focus.

- We shape the transfer in the economy and society.

- We teach, research and work internationally and in an interdisciplinary manner.

- We act humanely, passionately and open to the world.

3.2   Study objectives

The aim of the study programme is to prepare young professionals for career paths that involve the transformation of (tech-oriented) businesses and organisations for sustainable development - innovatively, creatively and with a high sense of responsibility. The course content is adapted to constantly advancing technical developments. This increases the career prospects of our graduates.

During their studies, students will be trained to become independent personalities with strong analytical, communication and leadership skills.

3.3   Competencies developed during the programme

We expect that graduates will have developed the following competencies after successful completion of the programme:

- Recognise connections between management-oriented and technological aspects of a sustainable transformation and develop action plans for their implementation (and accompany the implementation)

- Conceptualise, design, establish and lead sustainability management in companies as a (strategic) manager or expert

- Understand the requirements of sustainable development for companies in an international context and apply them to company specifics

- Identify the technical and technological levers for realizing transformation needs and estimate their potentials while at the same time classify the economic impact on the company

- Read and shape the values, culture & management structure of a company

- Evaluate value chains regarding their ecological, social and economic properties, identify and realise potential for improvement

- Optimise and transform business processes with a focus on sustainability

- Design new sustainable & circular business models and/or adapt existing business models

- Analyse, understand and integrate data into management processes

- Develop operational functions and make them fit for a sustainable future

- Identify existing and potential requirements for sustainability and translate them in a business context

3.4   Possible career fields

Graduates of the course are prepared for specialist and management positions in the following areas:

- Expert and leadership positions, especially trained to manage the transformation and restructuring of companies and organizations for sustainable development

- Management positions in technology-oriented companies at the interface of business administration and technology application, bringing in the sustainability perspective

- Management positions in public administration or international organisations in the field of sustainability and environmental protection

Graduates are expected to pursue careers in

- Technology companies

- Manufacturing industry

- Public administration/Municipalities

- Management consultancies

- Project management companies and financial service providers related to sustainability and environmental protection

- Public institutions and international sustainability and environmental policy organizations

- Start-ups with a focus on sustainability and the environment

4 Description of Modules

4.1 Compulsory modules

Sustainability in Business and Economics

Module abbreviation:	SMT_SustBusEco	Reg.no.:	1
Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	1

Responsible for module:	Blasch, Julia
Lecturer:	Blasch, Julia; Hoppe, Holger

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	1: Sustainability in Business and Economics
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

schrP90-120 written examination 90-120 minutes

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

The module equips students with the foundation for sustainable corporate management and a basic understanding of the principles of sustainable economics. After completing the module, students will be able to:

- Understand and critically analyse sustainable development and its entrepreneurial and economic relevance.
- Classify and apply methods and instruments of corporate sustainability management.
- Analyse sustainability problems from an economics point of view and identify appropriate measures to solve them
- Communicate and implement necessary changes for sustainable development, explaining connections and impacts.
- Recognize relationships, analyse independently, draw conclusions, and present findings systematically.

Content:

The module covers the following content:

- Origin and definition of the concept of sustainable development, e.g. Brundtland report
- Global challenges of sustainable development (social, ecological, economic) its current status, and interlinkages among sustainability dimensions

- Introduction to scientific basics of climate change and planetary boundaries, and its implications for economics
- Position of companies in relation to sustainable development (ethical principles and theories of integration)
- Global framework conditions of sustainable development with relevance for companies based on the structures of the stakeholder model and the extended task environment of companies (e.g. UN sustainability goals)
- Overview on methods, standards and instruments of corporate sustainability management: materiality, strategy formulation, performance management, internal and external reporting
- Possible pathways to a sustainable economy

Literature:

Will be specified at the beginning

Additional remarks:

None

Circular Economy and Life Cycle Management

Module abbreviation:	SMT_CirEcoLifeCyMgm	Reg.no.:	2
Curriculum:	Programme	Module type	Semester
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	1

Responsible for module:	Dirr, Martin		
Lecturer:	Dirr, Martin		
Language of instruction:	English	Language of exam:	English
Credit points / SWS:	6 ECTS / 4 SWS		
Workload:	Contact hours: Self-study: Total:		47 h 103 h 150 h
Subjects of the module:	2: Circular Economy and Life Cycle Management		
Lecture types:	SU/Ü - lecture with integrated exercises		
Availability of the module:	None		

Examinations:

PF - Portfolio Exam

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

Understand and explain the fundamental principles and frameworks of the Circular Economy and Life Cycle Management.

Analyse and map material flows using process mapping techniques to identify opportunities for circularity and life cycle optimization.

Design and evaluate circular business models and products based on sustainability principles, integrating life cycle thinking into innovation processes.

Assess product repairability, reuse potential and end-of-life strategies, considering design complexity and closed-loop supply chain requirements.

Utilize sustainable assessment methodologies (e.g., LCA, SLCA) to evaluate environmental, social, and economic impacts across the product life cycle.

Develop and implement Life Cycle Management strategies that address resource efficiency, environmental compliance, and value chain collaboration.

Conduct a Life Cycle Assessment using software tools, interpret results critically, and propose actionable sustainability improvements.

Content:
This module provides a comprehensive understanding of Circular Economy and Life Cycle Management, focusing on their principles, methodologies, and practical applications in modern business contexts. The content is structured to equip students with the skills needed to design, evaluate, and implement sustainable solutions. Key topics include:

- Fundamental concepts and principles of Circular Economy.
- Circular business models and their integration into sustainable business model innovation.
- Principles of circular product design, including eco-design, cradle-to-cradle, and design for disassembly.
- An introduction to life cycle concepts and sustainable assessment methodologies such as Life Cycle Assessment, Social Life Cycle Assessment or Life Cycle Costing.
- Detailed exploration of Life Cycle Assessment, including methodology, critical evaluation, and practical application using software tools.
- Through seminar-style teaching, group work, practical case studies, and interactive discussions, students will gain both theoretical knowledge and hands-on experience.

Literature:
Will be specified at the beginning

Additional remarks:
None

Metrics and Analytics for Sustainability

Module abbreviation:	SMT_MetAnSust	Reg.no.:	3

Curriculum:	Programme	Module type	Semester
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	1

Responsible for module:	Hoppe, Holger

Lecturer:	Hoppe, Holger; Müller, Marvin

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	3: Metrics and Analytics for Sustainability

Lecture types:	SU/Ü - lecture with integrated exercises

Availability of the module:	None

Examinations:

PF - Portfolio Exam

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

The students:
- understand the coverage and the limits of traditional performance management systems as cost and management accounting
- understand the concept of external costs and their relevance for sustainability
- know the state-of-the-art of nonfinancial reporting in the EU
- understand the concept of ESG and other measurement approaches for sustainability
- are able tu use different sustainability metrics to assess technologies, products, companies etc.
- understand the basic concepts and applications of Business Intelligence.
- utilize Excel tools for data analysis and create interactive dashboards to visualize trends and key performance indicators (KPIs).
- apply Power Query, Power Pivot, and DAX for data modeling and conduct BI projects based on case studies to support business decisions.

Content:

The module covers the following content:

Traditional Performance Management Systems:

- Understand the scope and limitations of cost and management accounting.
- Explore instruments such as balanced scorecards and key performance indictaors (KPIs).

External Costs and Sustainability:

- Concept of external costs and their relevance for sustainability.

Nonfinancial Reporting in the EU:

- Familiarize with the EU Non-Financial Reporting Directive (NFRD) and the upcoming Corporate Sustaina-biltiy Reporting Directive (CSRD) as well as more specific requirements as EU Taxonomy and TCFD.
- Understand frameworks such as the European Standards Sustainability Reporting (ESSR) and Global Reporting Initiative (GRI).

Environment, Social and Governance (ESG) Criteria:

- Explore various measurement approaches for sustainability.
- Analyze instruments like the Dow Jones Sustainability Index (DJSI) and the MSCI ESG Ratings.
- Sustainability Metrics and Evaluation:

Develop skills to use different sustainability metrics to assess technologies, produchts and companies.

- Introduction to Sustainability Life Cycle Assessment
- Apply methods such as carbon footprint analysis, water footprint analysis and social impact assessment.

Basics of Business Intelligence (BI):

- Understand the basic concepts and applications of Business Intelligence.
- Analyze the tole of Excel as a tool in BI.

Data management and analysis in Excel:

- Importing, clearing and structuring data in Excel
- Using tables, pivot tabels and pivot charts to analyze data.

Visualization and dashboards:

- Developing interactive dashboards for decision support.
- Visualization of trends, patterns and KPIs with Excel tools.

Data modeling:

- Introduction to Power Query and Power Pivot for data modeling (and automation)
- Use of DAX (Data Analysis Expressions) to create complex calculations.

BI projects and practical applications.

- Implementation of BI projects based on case studies and real-world examples.
- Analyzing and interpreting results to support business decisions.

Literature:
Will be specified at the beginning
Additional remarks:
None

Natural Resources Management and Supply Chain Sustainability

Module abbreviation:	SMT_NatResMgmSupChSust	Reg.no.:	4
Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	2

Responsible for module:	Blasch, Julia		
Lecturer:			
Language of instruction:	English	Language of exam:	English
Credit points / SWS:	6 ECTS / 4 SWS		
Workload:	Contact hours: 47 h Self-study: 103 h Total: 150 h		
Subjects of the module:	4: Natural Resources Management and Supply Chain Sustainability		
Lecture types:	SU/Ü - lecture with integrated exercises		
Availability of the module:	None		

Examinations:

mdlP - oral exam, 15 minutes

Additional Explanation:
None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Introduction to Natural Resources theory, types of natural resources, their distribution, and their importance
- Sustainable Resource Management & management of renewable and non-renewable resources
- resource efficiency, and resource productivity.
- Global supply chains and transportation
- Supply chain disruptions
- Supply chain resilience and recovery
- Sustainable practices in supply chains
- Act on corporate due diligence obligations in supply chains / Corporate Sustainability Due Diligence Directive

Literature:

Will be specified at the beginning

Additional remarks:
None

Technology and Society

Module abbreviation:	SMT_TechSoc	Reg.no.:	5
Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	1

Responsible for module:	Blasch, Julia
Lecturer:	Blasch, Julia

Language of instruction:	English	**Language of exam:**	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	5: Technology and Society
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

Einsetzungstext ist leer!

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

The module equips students with a comprehensive understanding of the interrelationships between societal change and technological developments.
After active participation in this module, students will be able to:

- reflect and discuss the role of technology in society and the mutual impacts of science, technology, and society.
- understand and critically assess why in past technology development certain technologies have been prioritised over others, and how these insights can be predictive for future technology development.
- assess ongoing societal developments and debate preconditions for a supportive role of technology in sustainable development.

Content:

The module covers the following aspects related to the role of technology in society and the mutual impacts of science, technology, and society:

- The foundations of human and scientific knowledge, and the history of technological advances
- Humanity-technology relationships
- Social construction of knowledge and technology

- Human and social values and their embeddedness in technological choices
- Impact of technological advances on humans and society
- Role of technology for a sustainable transformation

Literature:
Will be specified at the beginning

Additional remarks:
None

Urban Ecology and Sustainable Building Technologies

Module abbreviation:	SMT_UrbEcoSustBuTech		Reg.no.:	6
Curriculum:	**Programme**		**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)		Compulsory Subject	3

Responsible for module:	Blasch, Julia	
Lecturer:		
Language of instruction:	English	**Language of exam:**	English
Credit points / SWS:	6 ECTS / 4 SWS	
Workload:	Contact hours: 47 h Self-study: 103 h Total: 150 h	
Subjects of the module:	6: Urban Ecology and Sustainable Building Technologies	
Lecture types:	SU/Ü - lecture with integrated exercises	
Availability of the module:	None	

Examinations:

PF - Portfolio Exam

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Introduction to Urban Ecology and green infrastructures
- Sustainable Building Design, including the design of energy-efficient buildings, the use of renewable energy sources, and the integration of green spaces.
- Urban Agriculture, including the design of community gardens, rooftop gardens, and vertical farms.
- Sustainable Transportation as a means to further urban ecology

Literature:

Will be specified at the beginning

Additional remarks:

None

Values and Ethics for Sustainable Leadership

Module abbreviation:	SMT_ValEthSustLeadersh	Reg.no.:	7
Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	2

Responsible for module:	Blasch, Julia
Lecturer:	

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	7: Values and Ethics for Sustainable Leadership
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

Project report and oral presentation 15 min.

Additional Explanation:
None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Introduction to Ethics, its philosophical roots, current state and application for management and technology
- Principles of values and ethics in leadership, including the importance of values and ethics in leadership, the role of values and ethics in decision-making, and the impact of values and ethics on organizational culture.
- Relationship between sustainability, ethics and leadership
- Linking ethics and leadership to ESG and CSR
- Principles of ethical leadership, including the characteristics of ethical leaders, the importance of ethical leadership, and the impact of ethical leadership on organizations

Literature:

Will be specified at the beginning

Additional remarks:
None

Sustainable Business Strategy and Entrepreneurship

Module abbreviation:	SMT_BusStrEntrprsh		Reg.no.:	8

Curriculum:	Programme	Module type	Semester
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	1

Responsible for module:	Risi, Annette		
Lecturer:	Risi, Annette		
Language of instruction:	English	Language of exam:	English
Credit points / SWS:	6 ECTS / 4 SWS		

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	8: Sustainable Business Strategy and Entrepreneurship
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

PF - Portfolio Exam

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

- Comprehend and apply key concepts of strategy, entrepreneurship and sustainability
- Develop and evaluate sustainable, purpose-driven business models, business plans and strategies
- Successfully coordinate in an assigned team, integrate multiple persprectives and solve complex challenges

Content:

Among other topics, the following will be covered through presentations, discussions and practical exercises:
- History and development of sustainability theory and reporting frameworks, e.g.,GRI,ESG
- Strategic tools along the strategy cycle
- Introduction to sustainable business strategies
- Scope, characteristics, values and skills of entrepreneurship
- Innovation typologies, traps, management and protection, e.g.,patents
- Creativity techniques, e.g.,design thinking, mindfulness and lego
- Analysis of sutainable business ideas and scaling, e.g.,fair labor practices and carbon footprint
- The role of sustainable entrepreneurship and businesses for society

Literature:
Will be specified at the beginning
Additional remarks:
None

Sustainable Materials and Recycling Technologies

Module abbreviation:	SMT_SustMatRecTech		Reg.no.:	9
Curriculum:	**Programme**		**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)		Compulsory Subject	2

Responsible for module:	Blasch, Julia		
Lecturer:			
Language of instruction:	English	**Language of exam:**	English
Credit points / SWS:	6 ECTS / 4 SWS		
Workload:	Contact hours:		47 h
	Self-study:		103 h
	Total:		150 h
Subjects of the module:	9: Sustainable Materials and Recycling Technologies		
Lecture types:	SU/Ü - lecture with integrated exercises		
Availability of the module:	None		

Examinations:

PF - Portfolio Exam

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Concepts of sustainable materials, including the principles of sustainable material selection
- principles of material criticality, including the types of critical materials, their sources, and their importance to society.
- principles of material substitution, material efficiency, and material innovation.
- material production, including the types of material production, their environmental impacts, and their social impacts
- sustainable material production, including eco-design, green chemistry, and sustainable manufacturing
- waste management, including the types of waste, their sources
- Waste hierarchy reduction, reuse, and recycling
- Overview of recycling technologies, including the types of recycling technologies, their advantages and disadvantages, and their applications in different industries.

Literature:
Will be specified at the beginning
Additional remarks:
None

Artificial Intelligence and Sustainability

Module abbreviation:	SMT_ArtIntSust	Reg.no.:	10
Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	2

Responsible for module:	Blasch, Julia
Lecturer:	

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	10: Artificial Intelligence and Sustainability
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

schrP90-120 written examination 90-120 minutes

Additional Explanation:
None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Explores the impact of artificial intelligence on sustainability aspects
- Creates an understanding about the current and potential uses of AI to further a sustainable development
- Introduces the principles of a responsibility related to AI and other digital applications.

Literature:

Will be specified at the beginning

Additional remarks:

None

Sustainable Investments and Finance Policies

Module abbreviation:	SMT_SustInvFinPol	Reg.no.:	11

Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	3

Responsible for module:	Blasch, Julia
Lecturer:	

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	11: Sustainable Investments and Finance Policies
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

schrP90-120 written examination 90-120 minutes

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Introduction to Sustainable Finance, including the history of sustainable finance, types of sustainable finance, and the current state of sustainable finance
- The crucial role of sustainable finance for a sustainable development
- Sustainable Finance Policies around the globe:
- Principles and types of sustainable investment strategies, their advantages and disadvantages
- Environmental, Social, and Governance (ESG) Investing
- Impact Investing

Literature:

Will be specified at the beginning

Additional remarks:

None

Climate Change, Clean Energy and Decarbonization Technologies

Module abbreviation:	SMT_ClimChangeClnEnDecztTech	Reg.no.:	12
Curriculum:	Programme	Module type	Semester
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	3

Responsible for module:	Blasch, Julia
Lecturer:	

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	6 ECTS / 4 SWS

Workload:	Contact hours:	47 h
	Self-study:	103 h
	Total:	150 h

Subjects of the module:	12: Climate Change, Clean Energy and Decarbonization Technologies
Lecture types:	SU/Ü - lecture with integrated exercises
Availability of the module:	None

Examinations:

PF - Portfolio Exam

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Introduction to Climate Change: Physics, history, drivers, etc.
- Renewable Energy - their advantages and disadvantages, and their applications in different industries
- DeCarbonization Technologies (natural and industrial) - their advantages and disadvantages, and their applications in different industries
- Carbon Capture and Storage technologies – their advantages and disadvantages, and their applications in different industries
- Sustainable Transportation, means for decarbonisation and different approaches like design of bike lanes, pedestrian walkways, and public transportation systems.

Literature:

Will be specified at the beginning

Additional remarks:
None

Sustainability Project

Module abbreviation:	SMT_SustProj	Reg.no.:	13
Curriculum:	**Programme**	**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)	Compulsory Subject	3

Responsible for module:	Blasch, Julia		
Lecturer:			
Language of instruction:	English	Language of exam:	English
Credit points / SWS:	6 ECTS / 4 SWS		
Workload:	Contact hours: Self-study: Total:		47 h 103 h 150 h
Subjects of the module:	13: Sustainability Project		
Lecture types:	SU/Ü - lecture with integrated exercises		
Availability of the module:	None		

Examinations:

Project report and oral presentation 15 min.

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

- Educational program combining classroom learning with hands-on experience in the field.
- designed to teach students about sustainability and environmental stewardship by engaging them in real-world projects
- students work on in the classroom, followed by a field trip where they can apply what they have learned in a real-world setting.
- may involve visiting a sustainable building, a community garden, a waste management facility, etc.
- students will have the opportunity to interact with experts in the field, learn about sustainable practices, and gain a deeper understanding of the importance of sustainability.
- The goal is to provide students with a comprehensive understanding of sustainability and environmental stewardship, while also giving them the skills and knowledge they need to make a positive impact on the world around them.

Literature:
Will be specified at the beginning
Additional remarks:
None

Master Thesis

Module abbreviation:	SMT_MA		Reg.no.:	15
Curriculum:	**Programme**		**Module type**	**Semester**
	Sustainability Management and Technologies (SPO SS 25)		Einsetzungstext ist leer!	4

Responsible for module:	Blasch, Julia
Lecturer:	

Language of instruction:	English	Language of exam:	English

Credit points / SWS:	30 ECTS / 0 SWS

Workload:	Contact hours:	0 h
	Self-study:	750 h
	Total:	750 h

Subjects of the module:	15: Master Thesis 15.1: Master Thesis 15.2: Master Thesis Colloquium
Lecture types:	Master Thesis: MA - Master Thesis Master Thesis: MA - Master Thesis Master Thesis Colloquium: MA - Master Thesis
Availability of the module:	None

Examinations:

Master	Thesis:	Master-Thesis
Master	Thesis:	Master-Thesis

Master Thesis Colloquium:

Additional Explanation:

None

Prerequisites according examination regulation:

None

Recommended prerequisites:

None

Objectives:

To be determined

Content:

To be determined

Literature:

Will be specified at the beginning

Additional remarks:

None