

## Module manual

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# Sustainable Civil Engineering

*Bachelor full time*

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Study and examination regulations: SPO 2023

As of: 31/07/2024



Stand: 2025-02-11

[Hier eingeben]

## Inhalt

<b>1</b>	<b>Overview .....</b>	<b>4</b>
<b>2</b>	<b>Subject specific compulsory elective modules (WPF) .....</b>	<b>5</b>
<b>3</b>	<b>Description of Modules .....</b>	<b>6</b>
3.1	Electives .....	7
	Sustainability Basics.....	8
	Business in Latin America .....	10
	German A1 intensive .....	12
	German A2 intensive .....	14
	German B1 Intensive .....	16
	Summer School Sustainability in Management and Engineering .....	18
	Sustainability Management.....	20
	Sustainability Science .....	22
	Sustainability in Engineering .....	24
	Sustainable Value Assessment & Finance .....	26

## 1 Overview

The WPF module handbook describes the individual compulsory elective modules (WPF) of the Sustainable Civil Engineering degree program.

In the Sustainable Civil Engineering degree program, elective modules (WPF) with a scope of at least 8 ECTS must be completed. WPF contribute to the achievement of the required 210 ECTS and are counted as compulsory modules. The WPF are scheduled for the 6th and 7th semesters, but it is possible to take the WPF as early as the 3rd semester.

The following modules can be selected to achieve the 8 ECTS credits.

Note: The WPF offer changes every semester. Please always refer to the latest WPF module handbook for the current range of modules.

### Head of degree program:

Name: Prof. Dr. rer. Nat. Oliver Blask

E-Mail: Oliver.Blask@thi.de

Tel.: +49 (0) 841 / 9348-2394

**Updated: WS 24/25**

## **2 Subject specific compulsory elective modules (WPF)**

### 3 Description of Modules

## 3.1 Electives

<b>Sustainability Basics</b>			
<b>Module abbreviation:</b>	SCE_SustBas	<b>Reg.no.:</b>	35
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	General Elective Subject	
<b>Responsible for module:</b>	Hoppe, Holger		
<b>Lecturer:</b>	Hoppe, Holger		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	2 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		27 h
	Total:		50 h
<b>Subjects of the module:</b>	35: Sustainability Basics		
<b>Lecture types:</b>	Einsetzungstext ist leer!		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
Einsetzungstext ist leer!			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
The students:			
<ul style="list-style-type: none"> <li>• Understand the core principles and historical development of sustainability concepts.</li> <li>• Sustainable Development Goals (SDGs) and Systems Thinking:</li> <li>• Learn about the 17 SDGs and analyze the interconnectedness of environmental, social, and economic systems.</li> <li>• Understand planetary boundaries and learn strategies for effective energy and resource management.</li> <li>• Understand the social dimensions of sustainability and learn about governance frameworks and policies.</li> <li>• Understand the science of climate change and explore potential future scenarios for sustainability.</li> <li>• Know various sustainability metrics and assessment tools, and learn to apply them in practical contexts.</li> </ul>			
<b>Content:</b>			
The content covers the following content:			
<ul style="list-style-type: none"> <li>• Foundations of Sustainability</li> <li>• Historical Perspectives on Sustainability</li> <li>• Sustainable Development Goals (SDGs)</li> </ul>			



- Systems Thinking and Interconnectedness
- Environmental Boundaries Energy and Resource Management
- Social Aspects in Sustainability
- Sustainability Metrics and Assessments
- Climate Change
- Governance: Strategies, Policies and Public Measures
- Future Scenarios and Sustainable Futures
- Practical Applications and Leadership

**Literature:**

Will be specified at the beginning

**Additional remarks:**

The language of instruction for the module is English.

The module is offered exclusively digitally. As part of the module, you will work in a team with students from Brazilian universities.

**THIS EVENT WILL BE RECORDED ON VIDEO:**

When you enter the lecture room, you will take note of the recording of the event. This recording can be made publicly available. By entering the room, you consent to the possible unintentional recording of your person. Insofar as individualized verbal contributions on your part are part of the final version of the recording, you can object in writing to the lecturer within 14 days of publication of the final version and your acknowledgement. Your contribution will then be deleted insofar as you can be individualized within the group and the contribution can be directly attributed to you. The recording ends at the end of the event.

<b>Business in Latin America</b>			
<b>Module abbreviation:</b>	FW_BUSLA	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	4
<b>Responsible for module:</b>	Orozco de Plesnar, Roxana Xonali		
<b>Lecturer:</b>	Orozco de Plesnar, Roxana Xonali		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	3 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		52 h
	Total:		75 h
<b>Subjects of the module:</b>	Business in Latin America		
<b>Lecture types:</b>	S - seminar		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
LN - seminar paper			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
The students			
<ul style="list-style-type: none"> <li>are able to understand the potential and the challenges of conducting business in Latin America.</li> <li>acquire practical knowledge in cultural, managerial, economic, political and legal issues.</li> </ul>			
<b>Content:</b>			
Introduction to the Latin American subcontinent:			
<ul style="list-style-type: none"> <li>Geographic scope</li> <li>Common historic roots - Conducting business in Latin America</li> <li>Latin American cultures: similarities and differences</li> <li>Pragmatic overview of classic/ contemporary cultural studies on Latin America</li> <li>Economic outlook for the region</li> <li>Foreign direct investment</li> </ul>			

**Literature:**

- BALL , Donald and others, 2012. *International Business: The Challenge of Global Competition*. 13. edition. New York: McGraw-Hill. ISBN 978-0077606121
- BEAMISH, Paul W. and Allen J. MORRISON, 2003. *International Management, Text and Cases*. New York: McGraw-Hill. ISBN 978-0071151405
- HOUSE , Robert J. and others, 2004. *Culture, Leadership, and Organizations. The GLOBE-Study of 62 Societies*. London: Thousand Oaks. ISBN 978-0761924012
- LENARTOWICZ, Tomasz and James JOHNSON, 2002. *Comparing Managerial Values in Twelve Latin American Countries: An Exploratory Study*. In: *Management International Review, Vol. 42* .
- ALBERT, Rosita Daskal, 1996. A Framework and Model for Understanding Latin American and Latino/ Hispanic Cultural Patterns. In: *Landis:Handbook of Intercultural Training* . , p.317-348.

**Additional remarks:**

No remarks

<b>German A1 intensive</b>			
<b>Module abbreviation:</b>	SZ_GERM_INTENS_A1	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	
<b>Responsible for module:</b>	Copelea, Michaela		
<b>Lecturer:</b>	Copelea, Michaela; Klingenberg, Lothar; Kramer, Claudia; Weingärtner, Bartosz		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		47 h
	Self-study:		79 h
	Total:		126 h
<b>Subjects of the module:</b>	German A1 intensive		
<b>Lecture types:</b>	SU/Ü - lecture with integrated exercises		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
LN - written exam, 90 minutes			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
The students are able to			
<ul style="list-style-type: none"> <li>understand and use familiar everyday expressions and simple phrases, which relate to the satisfaction of concrete needs</li> <li>introduce themselves and others</li> <li>ask and answer questions about personal details (name, origin, interests, ...)</li> <li>communicate in a simple manner</li> </ul>			
<b>Content:</b>			
Acquisition of most fundamental language concepts allowing students to communicate in everyday situations, evaluate situations, communicate wishes and preferences and gain basic communication skills, e.g.			
<ul style="list-style-type: none"> <li>alphabet, numbers and ordinal numbers</li> <li>pronunciation</li> <li>word types (nouns, verbs, adjectives, pronouns, prepositions)</li> <li>tenses (present tense, perfect tense, past tense)</li> <li>most common regular and irregular verbs, reflexive verbs, modal verbs, separable verbs</li> </ul>			

<ul style="list-style-type: none"><li>• negation and questions</li></ul>
<b>Literature:</b>
<ul style="list-style-type: none"><li>• KRENN, Wilfried and Herbert PUCHTA, 2016. <i>Motive: Kompaktkurs DaF : Deutsch als Fremdsprache : Kursbuch, Lektion 1–30 : A1, A2, B1</i>. München: Hueber Verlag. ISBN 978-3-19-001878-9, 3-19-001878-2</li></ul>
<b>Additional remarks:</b>
<p>This course aims at our degree seeking students who must give proof of German A1 after their first semester. In addition, we recommend to participate in German A1 extension course as well in order to pass the exam.</p> <p>Minimum number of students: 8</p>

<b>German A2 intensive</b>			
<b>Module abbreviation:</b>	SZ_GERM_INTENS_A2	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	
<b>Responsible for module:</b>	Ekici, Gülsüm		
<b>Lecturer:</b>	Ekici, Gülsüm; Kraus, Dorothea; Nehir, Mehmet; Seyfferth, Heike; Weingärtner, Arleta		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		47 h
	Self-study:		79 h
	Total:		126 h
<b>Subjects of the module:</b>	German A2 intensive		
<b>Lecture types:</b>	SU/Ü - lecture with integrated exercises		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
LN - written exam, 90 minutes			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Objectives: Improve communication skills, speaking and writing skills			
Students are able to			
<ul style="list-style-type: none"> <li>• deal with everyday situations in Germany</li> <li>• understand factual information (weather, family, how to plan your vacation)</li> <li>• express and represent their own opinion</li> <li>• compare things</li> <li>• be polite and hand out advice</li> </ul>			
<b>Content:</b>			
Acquisition of fundamental language concepts allowing students to express themselves simply and coherently on familiar topics of personal interest (about personal experiences, events, dreams, hopes, objectives).			
Grammar:			
<ul style="list-style-type: none"> <li>• passive voice</li> <li>• prepositions (local, modal, temporal)</li> </ul>			

- modal verbs, separable verbs, subjunctive II
- reflexive verbs (acusative, dative)
- past tense (Perfekt, Präteritum)
- declension of adjectives, adjectives of degree
- prefixes
- adverbs
- infinitive clause, reported questions, subordinate clause, relative clause, conjunctions
- pronouns (possessive, demonstrative)
- cases (genitive, dative, acusative)
- Reading and Listening Comprehensions
- Essay Writing (E-Mail)
- role plays

**Literature:**

- KRENN, Wilfried and Herbert PUCHTA, 2015-. *Motive: Kompaktkurs DaF : Deutsch als Fremdsprache*. München: Hueber Verlag.
- KRENN, Wilfried and Herbert PUCHTA, 2016. *Motive Kompaktkurs DaF A2, Arbeitsbuch, Deutsch als Fremdsprache*. München: Hueber. ISBN 978-3-19-031878-0

**Additional remarks:**

Students have completed level A1.

<b>German B1 Intensive</b>			
<b>Module abbreviation:</b>	SZ_GERM_INTENS_B1	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	
<b>Responsible for module:</b>	Seitz, Daniela		
<b>Lecturer:</b>	Seitz, Daniela		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		47 h
	Self-study:		79 h
	Total:		126 h
<b>Subjects of the module:</b>	German B1 Intensive		
<b>Lecture types:</b>	SU/Ü - lecture with integrated exercises		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
LN - written exam, 90 minutes			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Nach dem Besuch des Moduls sind die Studierenden in der Lage, in schriftlicher wie mündlicher Form			
<ul style="list-style-type: none"> <li>• über Vergangenes zu berichten</li> <li>• Sachverhalte zu beschreiben</li> <li>• über Irreales zu sprechen</li> <li>• Beschwerden zu formulieren und darauf zu reagieren</li> <li>• Arbeitsabläufe zu beschreiben und über Fehler zu sprechen</li> <li>• Vergleiche anzu stellen sowie eine strukturierte Diskussion zu führen</li> </ul>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Veränderungen im Leben, Werbung, Fernweh und Heimat</li> <li>• Regeln für höfliches Benehmen</li> <li>• Einbürgerung</li> <li>• Verkehr der Zukunft</li> <li>• Grammatik: Konjunktionen, Plusquamperfekt, Konjunktiv II, Passiv, indirekte Fragen, Adjektivdeklination, Relativsätze, Infinitivsätze mit "zu", Vergleichssätze, Futur I</li> </ul>			



<b>Literature:</b>
<ul style="list-style-type: none"><li>• KRENN, Wilfried and Herbert PUCHTA, 2016. <i>Motive: Kompaktkurs DaF : Deutsch als Fremdsprache : Kursbuch, Lektion 1–30 : B1</i>. München: Hueber Verlag. ISBN 978-3-19-001878-9, 3-19-001878-2</li><li>• KRENN, Wilfried and Herbert PUCHTA, 2016. <i>Motive: Kompaktkurs DaF : Deutsch als Fremdsprache : Arbeitsbuch, Lektion 1–30 : A1, A2, B1</i>. München: Hueber Verlag. ISBN 978-3-19-031878-0, 3-19-031878-6</li></ul>
<b>Additional remarks:</b>
Minimim number of students: 8

<b>Summer School Sustainability in Management and Engineering</b>			
<b>Module abbreviation:</b>	NUM_SC_SME	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	4
<b>Responsible for module:</b>	Loza Adai, Cristian Rolando		
<b>Lecturer:</b>	Loza Adai, Cristian Rolando		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	2.5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		39 h
	Total:		62 h
<b>Subjects of the module:</b>	Summer School Sustainability in Management and Engineering		
<b>Lecture types:</b>	SU/S seminar based teaching; seminar		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
seminar paper (8-15 slides) and a presentation			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<ul style="list-style-type: none"> <li>• Understanding of the complex interrelationships and challenges of sustainability</li> <li>• Ability to use business games as learning and decision-making tools</li> <li>• Strengthening intercultural communication and teamwork skills</li> <li>• Development of creative and sustainable solutions</li> </ul>			
<b>Content:</b>			
The module contains the following content:			
Introduction to sustainability:			
<ul style="list-style-type: none"> <li>• Fundamentals and meaning of sustainability</li> <li>• Global challenges and Sustainable Development Goals (SDGs)</li> </ul>			
Interactive simulation games:			
<ul style="list-style-type: none"> <li>• En-ROADS: Simulation of global climate policy and its impact on the environment, economy and society</li> <li>• Sustain2030: Strategic planning and decision-making to achieve the SDGs</li> <li>• Sustainable Escape Room: Teamwork and problem solving in an exciting, themed escape room</li> </ul>			

International teamwork:

- Formation of mixed teams of Brazilian and German students
- Promotion of intercultural communication and cooperation
- Joint development of solutions and presentation of the results

Reflection and outlook:

- Discussion of learning experiences and findings

**Literature:**

Will be specified at the beginning

**Additional remarks:**

The language of instruction for the module is English. As part of the module, you will work in a team with students from Brazilian universities.

<b>Sustainability Management</b>			
<b>Module abbreviation:</b>	SCE_SustMgmt	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	General Elective Subject	4
<b>Responsible for module:</b>	Loza Aduai, Cristian Rolando		
<b>Lecturer:</b>	Loza Aduai, Cristian Rolando		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	2.5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		39 h
	Total:		62 h
<b>Subjects of the module:</b>	Sustainability Management		
<b>Lecture types:</b>	SU - lecture		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
Einsetzungstext ist leer!			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
The students:			
<ul style="list-style-type: none"> <li>• Understand the responsibility of business in modern society and analyze global trends.</li> <li>• Learn to develop leadership strategies that promote sustainability and strengthen intercultural cooperation.</li> <li>• Know how to develop and implement sustainable business and marketing strategies.</li> <li>• Understand and apply the principles of circular economy to promote resource efficiency.</li> <li>• Develop strategies to implement sustainable practices in global supply chains.</li> <li>• Evaluate and implement sustainable investment strategies.</li> </ul>			
<b>Content:</b>			
The modules contains the following content:			
<ul style="list-style-type: none"> <li>• The role of Business in the 21th century</li> <li>• Materiality assessment</li> <li>• Social Responsibility and Impact</li> <li>• Environmental Impact and Assessment</li> </ul>			

- Sustainable Leadership and Governance
- Sustainable Business Models (incl. Marketing)
- Sustainable and circular operations models
- Sustainable Design and Development
- Sustainable Supply Chains
- Sustainable Finance and Investment
- Sustainability Standards and Regulation
- Sustainability Accounting and Reporting

**Literature:**

- HAHN, Rüdiger, 2022. *Sustainability management: global perspectives on concepts, instruments, and stakeholders*. Fellbach: Rüdiger Hahn. ISBN 978-3-9823211-0-3, 3-9823211-0-7

**Additional remarks:**

The language of instruction for the module is English. The

module is offered exclusively digitally.

As part of the module, you will work in a team with students from Brazilian universities.

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<b>Sustainability Science</b>			
<b>Module abbreviation:</b>	NUM_SustSci	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	4
<b>Responsible for module:</b>	Hoppe, Holger		
<b>Lecturer:</b>	Hoppe, Holger		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	2.5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		39 h
	Total:		62 h
<b>Subjects of the module:</b>	Sustainability Science		
<b>Lecture types:</b>	SU - lecture		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
Einsetzungstext ist leer!			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p>This course aims to enable students to analyze the complex interactions between human activities and Earth's systems, evaluate the drivers and impacts of key environmental challenges such as climate change, biodiversity loss, and resource depletion, and apply sustainability principles to engineering practices. Students will assess the role of energy systems, biogeochemical cycles, and land-use change in shaping global environmental outcomes. They will also critique current approaches to managing freshwater use, atmospheric aerosol loading, and the introduction of novel entities while developing strategies to address these challenges through innovative, interdisciplinary solutions. By the end of the course, students will be equipped to propose evidence-based interventions that align with sustainability goals and communicate their findings effectively to diverse stakeholders.</p>			
<b>Content:</b>			
<p>The modules covers the following content in individual sessions:</p> <ul style="list-style-type: none"> <li>• Introduction - Lecture context and presentation of sustainED</li> <li>• Climate change</li> <li>• Change in biosphere integrity (biodiversity loss and species extinction)</li> <li>• Stratospheric ozone depletion</li> </ul>			

- Ocean (acidification)
- Biogeochemical flows (phosphorus and nitrogen cycles)
- Land-system change (for example deforestation)
- Freshwater use
- Atmospheric aerosol loading (microscopic particles in the atmosphere that affect climate and living organisms)
- Introduction of novel entities
- Energy
- Ressources
- Students-led: Brazilian and German Perspectives on Sustainability
- Introduction - Lecture context and presentation of sustainED
- Climate change
- Change in biosphere integrity (biodiversity loss and species extinction)
- Stratospheric ozone depletion
- Ocean (acidification)
- Biogeochemical flows (phosphorus and nitrogen cycles)
- Land-system change (for example deforestation)
- Freshwater use
- Atmospheric aerosol loading (microscopic particles in the atmosphere that affect climate and living organisms)
- Introduction of novel entities
- Energy
- Ressources
- Students-led: Brazilian and German Perspectives on Sustainability

**Literature:**

- GODIN, Seth, 2022. *The Carbon Almanac: it's not too late*. New York: Portfolio Penguin. ISBN 978-0-593-54251-4, 0593542517

**Additional remarks:**

The language of instruction for the module is English. The module is offered exclusively digitally.

As part of the module, you will work in a team with students from Brazilian universities.

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 When you enter the lecture room, you will take note of the recording of the event. This recording can be made publicly available. be made available to the public. By entering the room, you consent to the possible unintentional recording of your person. Insofar as individualized verbal contributions on your part are part of the final version of the recording, you can object in writing to the lecturer within 14 days of publication of the final version and your acknowledgement. Your contribution will then be deleted insofar as you can be individualized within the group and the contribution can be directly attributed to you. The recording ends at the end of the event.

<b>Sustainability in Engineering</b>			
<b>Module abbreviation:</b>	NUM_SE	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	4
<b>Responsible for module:</b>	Hoppe, Holger		
<b>Lecturer:</b>	Hoppe, Holger		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	2.5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		39 h
	Total:		62 h
<b>Subjects of the module:</b>	Sustainability in Engineering		
<b>Lecture types:</b>	SU/PR - Seminar based teaching/laboratory		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
Einsetzungstext ist leer!			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
To be determined			
<b>Content:</b>			
The module covers the following content:			
<ul style="list-style-type: none"> <li>• Introduction - Lecture context and presentation of sustainED</li> <li>• New trends and technologies to address the SDGs</li> <li>• World Energy Outlook and Energy Transition</li> <li>• Life cycle assessment</li> <li>• Climate Change and Carbon Emissions</li> <li>• Renewable Energy Sources</li> <li>• Hydrogen as a vector of decarbonization</li> <li>• Sustainable Product Development</li> <li>• Recycling, reuse and repurposing</li> <li>• Sustainable Construction</li> <li>• Material resources - sustainability aspects</li> </ul>			



<ul style="list-style-type: none"><li>• Urban Environment - sustainability aspects</li><li>• Smart Cities</li><li>• Water and sanitation - sustainability aspects</li><li>• Mobility and transportation - sustainability aspects</li><li>• Sustainable technologies applied to agriculture and forestry</li><li>• Global and local logistics - sustainability aspects</li><li>• AI and data science applications on sustainability</li><li>• Sustainability in manufacturing</li><li>• Brazilian and German Perspectives on Technology Application and Development for Sustainability</li></ul>
<b>Literature:</b>
Will be specified at the beginning
<b>Additional remarks:</b>
None

<b>Sustainable Value Assessment &amp; Finance</b>			
<b>Module abbreviation:</b>	SuVaAss&Fin_FW	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Sustainable Civil Engineering (SPO WS 23/24)	Einsetzungstext ist leer!	
<b>Responsible for module:</b>	Busche, Annika		
<b>Lecturer:</b>	Busche, Annika		
<b>Language of instruction:</b>	German	<b>Language of exam:</b>	German
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		47 h
	Self-study:		79 h
	Total:		126 h
<b>Subjects of the module:</b>	Sustainable Value Assessment & Finance		
<b>Lecture types:</b>	SU/Ü - lecture with integrated exercises		
<b>Availability of the module:</b>	None		
<b>Examinations:</b>			
LN - oral exam, 15 minutes			
Additional Explanation:			
None			
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Nach erfolgreicher Teilnahme an der Lehrveranstaltung sind die Studierenden in der Lage:			
<ul style="list-style-type: none"> <li>• Den theoretischen Hintergrund des Sustainable (Green) Finance zu verstehen</li> <li>• Sich in die unterschiedlichen Perspektiven der Hauptakteure im Bereich des Sustainable Finance hineinzuversetzen und ihre Rollen und Motive bewerten zu können</li> <li>• Herausforderungen und Schwierigkeiten bei der Integration von Nachhaltigkeit in den Finanzmarkt bzw. in Investitionsentscheidungen zu identifizieren und auf Investitionsprojekte zu übertragen</li> <li>• Berechnungen als Grundlage für das Treffen von Investitionsentscheidungen gemäß der ESG-Logik durchführen</li> <li>• Methoden, Tools und Strategien im Bereich einer nachhaltigkeitsorientierten Unternehmensbewertung (gemäß der drei Dimensionen der Nachhaltigkeit) einzuschätzen und anzuwenden</li> <li>• Die gewonnenen Erkenntnisse auf Unternehmen oder selbst entwickelte Neugründungen zu übertragen</li> </ul>			
<b>Content:</b>			
Zur Erreichung dieser Qualifikationsziele werden folgende Inhalte vermittelt:			
<ul style="list-style-type: none"> <li>• Theoretische Grundlagen des Sustainable (Green) Finance</li> </ul>			

- Die wesentlichen internationalen Abkommen, Nachhaltigkeitsinitiativen und gesetzlichen Vorgaben im Bereich des Sustainable Finance
- Vorteile für die Integration von Nachhaltigkeit in Investitionsentscheidungen
- Die wichtigsten Nachhaltigkeits-Rankings und -Ratings neben den weiteren Instrumenten und Methoden zur Unternehmensbewertung in Bezug zu den drei Dimensionen der Nachhaltigkeit
- Nachhaltige Finanzprodukte insbesondere aus dem Bereich des Gründertums und ESG-Investitionen
- Veranschaulichung der theoretischen Inhalte anhand von Case Studies

**Literature:**

- wird in der Veranstaltung bekanntgegeben

**Additional remarks:**

Eine gemeinsame Veranstaltung mit der Hochschule Coburg und Expertenvorträge sind im Rahmen des Moduls geplant.