

# Requirement Engineering

## Lecture 0: Organization

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## Team



Prof. Dr. Benjamin Leiding



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## Research Group

- **Emerging Technologies for the Circular Economy → ETCE**
- Research focus:
  - Intersection of IT and sustainability
  - Circular Economy and Circular Societies
  - Self-organized, decentralized and distributed systems
  - Sustainable and resilient food production
- Other courses:
  - Emerging Technologies for the Circular Economy (SS – M.Sc.)
  - The Limits to Growth - Sustainability and the Circular Economy (WS – open for everyone)

## Research Group

- Website – [Link](#)
  - Course material
  - Thesis/project topics
  - Publications
  - Etc.
  
- Our research in action:
  - ZDF documentary (German) – [Link](#)
  - Klartext Preis 2020 (German) – [Link](#)
  
- You want join us? Write us an email!
- → [benjamin.leiding@tu-clausthal.de](mailto:benjamin.leiding@tu-clausthal.de)

## Course Content

- Core terminology and core tasks of requirements engineering
- Requirements engineering process
- Elicitation techniques
- Documentation methods
- Textual, model-based and formal requirements specification
- Requirements negotiation
- Requirements Management
- Traceability
- Requirements validation and quality assurance

## Learning Outcome

- Core terminology and core tasks of requirements engineering
- Understanding of the requirements engineering process
- Ability to choose, justify and apply appropriate methods and techniques for each step of the requirements engineering process given project constraints and properties

## Disclaimer

- The course modelled and built based on the book „*Requirements Engineering – Fundamentals, Principles and Techniques* (2010)” from Klaus Pohl
- Special thanks to Prof. Dr. Steffen Herbold and Dr. Christian Bartelt, who provided valuable input in the form of the teaching materials of their requirements engineering courses.

## Course Content

Requirements Engineering					
Requirements Analysis				Requirements Management	
Elicitation	Negotiation	Documentation	Validation	Change Management	Tracing



# Lectures

Week	Date	Lecture	Location
1	03.11.25	Organization	BBB (Online)
2	10.11.25	Introduction	MOOC
3	17.11.25	System Context/Boundaries and Types of Requirements	MOOC
4	24.11.25	Elicitation I & II	MOOC
5	01.12.25	Negotiation	MOOC
6	08.12.25	Documentation – Introduction	MOOC
7	15.12.25	Documentation – Textual Requirements Specification	MOOC
8	05.01.26	Documentation – Model-based Requirements Documentation	MOOC
9	12.01.26	Documentation – Formal Requirements Specification	MOOC
10	19.01.26	Requirements Validation	MOOC
11	26.02.26	Requirements Management	MOOC
12	02.02.26	Requirements Traceability	MOOC
13	09.02.26	Tool Support	MOOC
14	16.02.26	Exam Q&A	BBB (Online)

## Exercises

Publication Date	Submission Deadline	Exercise
17.11.2025	24.11.2025	E01 – Knowledge Test (MC)
24.11.2025	01.12.2025	E02 – Elicitation I, E03 – Elicitation II
05.01.2026	12.01.2026	E04 – Agent-Oriented Modeling
12.01.2026	19.01.2026	E05 – CPN I, E06 – CPN II
26.01.2026	02.02.2026	E07 – Management
02.02.2026	09.02.2026	E08 – Traceability

## Course Organization

- Organization of the lecture:
  - Massive Open Online Course (MOOC) style asynchronous learning: [re.etce-lab.de](https://re.etce-lab.de)
  - Course content is mainly delivered as pre-produced learning material.
  - Slides are additionally available via Github ([Link](#))
  - Exercise / Q&A Session live streams (BBB - next slide)
  - Exercise time slots = Time for questions and eventual tutorials related to the exercises
- Questions? Write us an email: [etce-re@tu-clausthal.de](mailto:etce-re@tu-clausthal.de) ← **We will only respond to emails written to this specific email address!**

## Dates/Times/Locations

- Lecture:
  - Monday **2:00 pm to 3:30 pm** (Berlin time) – **03.11.2025 to 16.02.2026**
  - Location: BigBlueButton ([Link](#))
  
- Exercise / Q&A (Bi-Weekly):
  - Monday **4:00 pm to 5:00 pm** (Berlin time) – **03.11.2025 to 09.02.2026**
  - Location: BigBlueButton ([Link](#))

## Exercises

- Organization of the exercise:
  - Individual work → **no** group submissions
  - Multiple-Choice or practical tasks
  - 7-14 days to submit (depending on the task)
  - Submission deadline is always Monday at 1:59pm (right before the next lecture period)
  - **Submission of each exercise is mandatory**

## Exercises

- Multiple-choice exercises: Self-evaluated, available directly on the MOOC website.
- Practical Tasks: Submitted via Moodle.

# Examination

- **Prerequisites** for admission to the final exam (**all** criteria have to be fulfilled):
  - Successful completion of the compulsory seven exercises
    - You pass an exercise if you score 50% (or more)
    - You have to submit **every** exercise
  
- **Final exam (tentative):**
  - 02.03.2026 → 14:00 – 16:00
  - Written exam (120min)

## Self-Study Star

Self-Study Star → 

- Slides with the self-study star indicate optional/additional study material that is **not** mandatory but could be helpful for your future career
- Of course it won't hurt to have extra knowledge to impress us during the examination ;)



# Literature

- This course is not based on a single book and you **do not** need to buy a book to pass the exam.
- K. Pohl. *Requirements Engineering – Fundamentals, Principles and Techniques* (2010).
- K. Pohl, C. Rupp. *Requirements Engineering Fundamentals: A Study Guide for Requirements Engineering Foundation Level* (2011).
- J. Dick, E. Hull, K. Jackson. *Requirements Engineering (4<sup>th</sup> Edition)* (2017).
- Chris Rupp et al. *Requirements Engineering und Management – Das Handbuch für Anforderungen in jeder Situation (7th Edition)* (2021).



# Questions?