

# CRAFT & STRUCTURE UNIT

# RESEARCH SEMESTER



# LEHMRAUM

# LIECHTENSTEIN

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The University of Liechtenstein's "Lehmraum Liechtenstein" project aims to investigate key questions using the research method "Research by Design" and to answer them in a practical manner through a groundbreaking realized rammed earth project. The focus lies on materiality, innovative detailing, the involvement of local stakeholders, as well as the aesthetic and functional quality of the space. The results are intended to be both scientifically grounded and of sustainable value for practical application.

Central Research Questions for the students will be: What innovative architectural and technical solutions can be developed and implemented using the material rammed earth in Liechtenstein? How can local stakeholders be integrated into the planning and construction process to combine their expertise with rammed earth in a sustainable and forward-looking way? How can airtightness and building physics requirements for connections be met without using membranes in ecological construction? What methods and techniques enable stable and durable installation of doors and windows in rammed earth constructions? How can excavated material from Liechtenstein be used for rammed earth construction, and what level of compressive strength can be achieved with it?

Project Objectives and Added Value: The project offers participating students the opportunity to acquire in-depth knowledge of sustainable building design and implementation through an applied research strategy. They will benefit from collaboration with industry partners such as Lehm Ton Erde, GBD, Lenum, and other companies from Liechtenstein and the surrounding region. This includes access to laboratories, material testing, and the development of innovative approaches in cooperation with industry. At the same time, the project explores the interdisciplinary interplay between theory, material research, and practical implementation. Its aim is not only to contribute to the advancement of ecological construction but also to create a platform for future projects that address the sustainable use of resources and the evolution of regional building culture.

The final submission should comprise approximately 60,000 to 80,000 characters (including spaces).

12 ECTS

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