

Focusing on adulthood: Teaching and learning on the workplace
(chair: Attila Rausch)

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**PREPARING ENGINEERS FOR THE WORKFORCE: A CURRICULUM
ASSESSMENT**

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The evolution of Software Engineering (SE) to manage increasingly complex software systems led to the emergence of Requirements Engineering (RE) as a distinct discipline, focusing on eliciting, specifying, documenting, and managing software requirements (Callele et al., 2017). This specialization has elevated the importance of research on RE education (REE), emphasizing the need to prepare students for evolving industry demands (Daun et al., 2021). REE must blend technical methods with human-centric approaches to train students in specifying requirements, resolving conflicts, and addressing socio-technical challenges (Daun et al., 2021). Educators face the dual challenge of imparting theoretical knowledge while fostering practical decision-making skills, requiring curricula to balance theory with experiential learning (Fernandez et al., 2019; Daun et al., 2022). The research seeks to understand how RE is taught in higher education on a country-wide system level. It analyzes delivery methods, teaching languages, and integration into broader academic programs, comparing approaches at traditional research universities and universities of applied sciences (UAS). The research also explores advanced studies certifications (CAS) and investigates decision-making processes in curriculum design, focusing on educator perspectives. Furthermore, it examines the role of educational standards and frameworks in shaping these curricula and the potential adjustments educators foresee to address evolving industry needs. Data collection involved reviewing and assessing course descriptions from 19 identified HEIs and conducting purposive sampling interviews with 25 educators responsible for course curricula, covering 34 courses. The methodology utilized qualitative content analysis for document review and thematic analysis of interview transcripts. Findings reveal that RE is widely regarded as an interdisciplinary competency, essential for professionals in diverse fields. 13 of the courses teach RE as a standalone subject. Notably, the research identified 9 CAS programs that offer subject-specific education at an academic level, explicitly tailored for professionals already in the workforce. Among these CAS programs, the majority (78%) are dedicated RE programs, further emphasizing their importance to the industry. Educators highlighted the continued importance of RE amidst the rise of Artificial Intelligence (AI) in software development. Discussions reflect opportunities and concerns about AI's potential to reshape the role of Requirement Engineers. The study also found that the primary motivation for curriculum design among the interviewed educators is to meet industry expectations. By aligning their curricula with industry-specific certification syllabi and incorporating project work into course assessments, they aim to prepare students for real-world challenges in RE, thereby improving their transition into the workforce.