Supplementary Course (EVA) at ZHAW School of Engineering

Title: Advanced Software Production Seminar
Short Code: rEVA_SoftPro

ECTS Credits	3
Profile	Computer Science (CS)
Responsible Institute /Centre	Institute of Applied Information Technology (InIT)
Responsible lecturer and contact informtion	Dr. ir. Marcela Ruiz (ruiz@zhaw.ch); Prof. Jürgen Spielberger (spij@zhaw.ch)
Type and duration of examinations	Short presentation (20 minutes, typically within the software engineering research group at InIT) and paper (6 pages, 1-column Springer LNCS format). The paper reports on the problem investigation, design and/or results, and conclusion.
Start date and duration	Semester: Autumn/Spring Detail: Start of Semester or by agreement
Location	Winterthur
Course type	In this hands-on seminar, you will discover and learn how to use, design, develop, and implement advanced software production tools. The module consists of an introductory session, use case and topic assignment to students, regular colloquia with all participants to discuss findings and experiences, and a final world café session where each student shares main results and lessons learnt. Weekly semester rhythm • Contact hours: 28 (hrs) • Guided self-study: 20 (hrs) • Independent self-study: 42 (hrs)
Language of instruction	Literature and report in English / German on request (colloquia/short presentation)
Short description (max. 300 characters)	Which are the contemporary advanced software production methods and tools? Can I develop my own advanced software production tool? How to apply advanced software production tools to real-world use cases? In this hands-on seminar we will investigate advanced software production methods and tools and apply them to real world use cases.
Contents and Learning Objectives	Learning objectives: - You will be able to systematically develop an innovative software production method using automation tools and state-of-the-art technologies. - You know different methods and artifacts of software production research

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	- You know different technologies for software quality analysis automation and testing - You will be able to develop innovative software production tools - You are able to identify market segments and real application scenarios - You can apply your developed solutions in practice Module content: • Dive into a subfield or your choice of software production • Do academic and practice-oriented literature research • Extract insights from scientific publications and assess their originality Communicate your findings in an oral talk and a written short paper			
Prerequisites	Curiosity and passion to advance software production methods and tools.			
Literature	Initial papers will be provided			
Special requirements	Not applicable			
Offer for profiles	Aviation (Avi)	☐	Business Engineering (BE)	☐
	Computer Science (CS)	☒	Data Science (DS)	☒
	Electrical Engineering (ElE)	☐	Energy & Environment (EnEn)	☐
	Mechanical Engineering (ME)	☐	Mechatronics & Automation (MA)	☐
	Medical Engineering (Med)	☒	Photonics and Laser Engineering (Pho)	☐
	Information and Cyber Security (ICS)	☒	Civil Engineering (CE)	☐

Knaa, 21.05.24