

Module	Legally intended Smart Contracts
Lecturers	Prof. Dr.-Ing. Volker Skwarek and supporting lecturer with legal background
Language	English
Teaching Method	Lecture and practical exercise
Credit Points	1 ECTS
Attendance requirements	Required: Foundations of object oriented programming Advantageous: Basic understanding and terminology of contract law; Basics of smart contract operation on blockchains
Goals / Skills	The students shall understand the interaction between law and the design of legally intended smart contracts. The students will learn about design challenges, pattern and modelling tools. The focus of this module is on teaching the complexity of understanding legal terms and transferring them into code considering legal frameworks. The goal is to understand the need for a close cooperation with lawyers to write correct legal code. Additionally the student shall learn about modelling techniques and tools for legally binding code.
Content	• Introduction into basic legal terminology and processes by the example of a simple sales and delivery contract • Development of legal primitives (atomic elements) and transfer into programmable objects; learning using modelling tools • Analysis of an existing legally binding smart contract regarding the elements above • Design of a new (simple) legally binding smart contract
Media Used	Electronic presentation, live programming lecture, literature and code analysis, programming exercise
Literature	• Grigg, I.: The ricardian contract. In Proceedings of the First IEEE International Workshop on Electronic Contracting, pages 25–31. IEEE, 2004. http://iang.org/papers/ricardian_contract.html. • Grigg, I.: On the intersection of ricardian and smart contracts, 2015. http://iang.org/papers/intersection_ricardian_smart.html. https://docs.accordproject.org/docs/accordproject.html https://www.gesetze-im-internet.de/englisch_bgb/
Assigned Tutorial	The students will interpret a very short legal contract, convert it into a coding model, code it and deploy it on a blockchain
Suggested Reading before the start of the summer school	• C. D. Clack, V. A. Bakshi, und L. Braine, „Smart Contract Templates: essential requirements and design options“, 2016. • R3 and Norton Rose Fulbright. Can smart contracts be legally binding contracts?, 2016. http://www.nortonrosefulbright.com/knowledge/publications/144559/can-smartcontracts-be-legally-binding-contracts/