

Service Based Architecture					
Course Code CIF62036	Student Workload 90 hours	Credits (according to ECTS) 4.5	Semester Sem. 6 & 8	Frequency each even-semester	Duration 16 meetings
1	Types of courses <i>elective</i>	contact hours 63 hours	independent study 27 hours	class size 40 students	
2	Prerequisites for participation Completed Interactive System Programming				
3	Learning outcomes IF-ILO-3 Graduates are able to develop professional careers in the field of computer science based on quality aspects, data-based decision making, be responsible, and make continuous improvements. IF-ILO-7 Mastering the theoretical concept and principles of computer science, especially in the aspect of algorithms, programming, intelligent systems, information management, parallel and distributed computing, information security, human-computer interaction, software engineering, and fundamentals of computer systems and networks. IF-ILO-13 Graduates are able to perform abstraction, modeling, representation, and data acquisition in order to perform the data analysis.				
4	Subject aims Students are able to explain the basic concepts of enterprise information architecture. Students are able to explain the data representation used in enterprise architecture. Students are able to explain the concept of web service and service oriented architecture. Students are able to explain the concept of microservices architecture. Students are able to design microservices according to specific events. Students are able to explain the concept of microservices deployment and testing.				
5	Teaching methods lectures, case study, class discussion, presentation, practice				
6	Assessment methods assignment, mid-term examination, end-term examination, project evaluation, practical-skill assessment				

7	This module is used in the following degree programs as well
8	Responsibility for module
9	<p>Other information</p> <ol style="list-style-type: none"> 1. Martin Fowler, 2002, Patterns of Enterprise Application Architecture 2. Luke Hohmann, 2003, Beyond Software Architecture 3. Thomas Erl, 2005, Service-oriented Architecture: Concepts, Technology, and Design 4. Thomas Erl, 2007, SOA Principles of Service Design 5. Daniel Minoli, 2008, Enterprise Architecture A to Z: Frameworks, Business Process Modeling, SOA, and Infrastructure Technology 6. Sam Newman, 2014, Building Microservices: Designing Fine-Grained Systems 7. Irakli Nadareishvili, Matt McLarty, & Michael Amundsen, 2016, Microservice Architecture: Aligning Principles, Practices, and Culture 8. Eberhard Wolff, 2018, Microservices: A Practical Guide : Principles, Concepts, and Recipes 9. Chris Richardson, 2018, Microservices Patterns 10. Sam Newman, 2019, Monolith to Microservices: Evolutionary Patterns to Transform Your Monolith 11. Erich Gamma, John Vlissides, Ralph Johnson & Richard Helm, 1994, Design Patterns: Elements of Reusable Object-Oriented Software 12. David S. Linthicum, 1999, Enterprise Application Integration 13. Eric Evans, 2003, Domain-Driven Design: Tackling Complexity in the Heart of Software 14. Gregor Hohpe & Bobby Woolf, 2003, Enterprise Integration Patterns Designing, Building, and Deploying Messaging Solutions 15. Pressman RS (2009) Software Engineering A Practitioner’s Approach 7th Ed - Roger S. Pressman. 16. Sommerville I (2016) Software engineering (10th edition)