- Introduction to the course

- Service-based software engineering
  - Introduction to Web services
  - Core interoperability standards: XML, SOAP, WSDL, REST
  - Service composition: WS-BPEL (syntax and semantics)
  - Service descriptions (QoS, SLAs, behaviour)
  - Microservices

- Business process modelling and analysis
  - Business process modelling and analysis with workflow nets

- Cloud-based software engineering
  - Introduction to cloud computing
  - Introduction to OASIS TOSCA

- Hands-on laboratory
  - Programming Web services with Java
  - Developing WS-BPEL processes
  - Business process modelling and analysis with workflow nets
  - DevOps practices: Docker, combining TOSCA and Docker, deploying microservices with Docker

References


[W1] Introduction to Docker. Webinar.
[S1] A. Brogi. RESTful services. Slides.
[LAB*] <All slides used in the lab.>

1 The syllabus of the Software Services course does not include the lab topics.
2 A copy of [Pap] is available in the library of Mathematics, Computer Science and Physics. Students can get a copy of the other references, as well as of the other material distributed during the course, by sending an email to the Instructor from their unipi account.