

# Service Oriented Architectures Syllabus 2021-2022 Summer

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## Course Description

In this course, key foundations and fundamentals of Web services and service oriented architectures will be introduced. An overview of data mining and machine learning topics will be given.

## Recommended Readings

Web Services, Service-Oriented Architectures, and Cloud Computing: The Savvy Manager's Guide (The Savvy Manager's Guides) ,  
Douglas K. Barry , MK

Service-Oriented Architecture: A Field Guide to Integrating XML and Web Services, Thomas Erl, Prentice Hall

## Lecture Contents

Introduction
Introduction to Services and Servicing
Web Services Architecture
Web Services Development, Testing and Rollout
Management of Web Services Projects
Software components
Modularity; reuse; contracts; component-oriented programming; services.
Web-services XML; HTTP; SOAP; WSDL; UDDI. Representational state transfer
Architectural styles of the web; REST; resource-oriented architecture. Composition Workflow; activity diagrams; BPMN; BPEL. Objects
OO middleware; CORBA; objects versus services. Software architecture
<b>Midterm Exam</b>
Client-server; layers; pipes and filters; EDA; repositories; peer-to-peer; Grid Computing. Semantic web Knowledge representation; Resource Description Framework; Web Ontology Language; Semantic

Frameworks. Service qualities Transactions; performance; security.
Engineering SOA
<b>Final Exam</b>

### **Grading Policy**

<b>Midterm:</b>	<b>%40</b>
<b>Final:</b>	<b>% 60</b>

Wish all of you a successful, happy and healthy academic year.

Please send your questions and suggestions to my e-mail.