

Information Systems

Web Technologies and Service-oriented Architectures for Organizations

IDENTIFICATION

CODE : IF-4-S1-EC-WASO
ECTS : 1.0

HOURS

Lectures : 6.0 h
Seminars : 0.0 h
Laboratory : 8.0 h
Project : 0.0 h
Teacher-student
contact : 14.0 h
Personal work : 10.0 h
Total : 24.0 h

ASSESSMENT METHOD

TEACHING AIDS

TEACHING LANGUAGE

French

CONTACT

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AIMS

The first objective of this module is to study a methodology for designing service and micro-service -oriented architectures for IS applications, based on the UML formalism: a) analysis of functional situations; b) identification of business objects; c) identification of services and service layers; d) specification of services; e) distribution on the technical architecture.

The second objective is the discovery of technologies for the implementation of these architectures: Web services, application servers, data management middleware, communication middleware.

The target skills in this module are:

- 1) Apply a method for analysis and design of IS:
 - Using UML models as part of an IS design method
 - Analyze business and requirements of clients
 - Identify business objects, business services, and associated GUI
- 2) Design application cartography and technical cartography:
 - Identify application blocks and information flows
 - Design a technical architecture to deploy application components
- 3) Design and implement applications for IS:
 - Write IS specifications documents
 - Implement an application from IS specification documents

CONTENT

- Methodology for design of service-oriented Information Systems and development of multi-tier application architectures
- Technical Architectures for Web Services
- Technologies of Application Servers
- Middlewares for data management and communication

BIBLIOGRAPHY

Micro Service: Patterns and Applications, L. Krause, 2015

PRE-REQUISITE

Application Development for Information Systems
UML Modeling
Databases
Algorithmic and Object-oriented Programming
Java development