



Information Systems Department

Course Syllabus

IS743- Service-oriented Architecture

Catalog Description: This course provides students with the knowledge of Service Oriented Architecture (SOA) concepts and principles. The course targets to equip students with fundamental and working knowledge of SOA methodologies, and SOA based systems design paradigm.

Credit Hours: 3 Credit hours: 3 Lectures per week 0 Labs. per week 0 Recitation per week

Prerequisites: None

Course Learning Outcomes:

1. Understand the main concepts and principles of SOA.
2. Apply patterns for service design from the provider and requester perspectives
3. Design the systems using the Unified Modelling Language (UML)
4. Recognize SOA challenges related to governance, testing and maintenance.

Major Topics:

- Fundamentals of SOA and Principles
- SOA Development Lifecycle
- SOA Planning and Service Analysis and Identification
- Pattern-Based Service Design as a basis for designing Information system
- Pattern-Based Service Design - The provider and the requester perspective.
- Challenges of SOA Development

Text Books: Web Services & SOA: Principles and Technology - Papazoglou, Mike, Pearson Prentice Hall, January 2012.
Service-Oriented Modeling (SOA): Service Analysis, Design, and Architecture. - Bell, Michael, Wiley, 2008..
Service-Oriented Architecture: Concepts, Technology, and Design - Thomas, Erl, 2005. ISBN: 0-13-185858-0
SOA Design Patterns - Erl, Thomas, Prentice Hall, ISBN: 0136135161

<https://www.fib.upc.edu/en/studies/masters/master-innovation-and-research->



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informatics/curriculum/syllabus/SOA-MIRI

Grading:

- ⊙ The grading scale for this course is:
 - 95 - 100 A+ Passing
 - 90 - 94 A Passing
 - 85 - 89 B+ Passing
 - 80 - 84 B Passing
 - 75 - 79 C+ Passing
 - 70 - 74 C Passing
 - 0 - 69 F Failing
- ⊙ Final grades will be determined based on the following components:
 - . 60% Semester Work
 - . 40% Final Exam
- ⊙ Students may not do any additional work for extra credit nor resubmit any graded activity to raise a final grade.
- ⊙ Late submissions will not be accepted for any graded activity for any reason.
- ⊙ Students have one week to request the re-grading of any semester work.

Students should attend 80% of the overall course hours taught in the semester as per the University regulations.

Attendance Policy:

If a student fails to achieve this portion, he/she shall not be allowed to appear in the final exam and shall be awarded “DN” grade and repeat the course.

The instructor will use several manual and automated means to detect cheating and/or plagiarism in any work submitted by students for this course.

Cheating and Plagiarism Policy:



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When a student is suspected of cheating or plagiarism, the instructor raises the issue to the disciplinary committee.

Communications: Registered students will be given access to a section of the Learning Management System (LMS) for this course. LMS will be used as the primary mechanism to disseminate course information, including announcements, lecture slides, assignments, and grades.

Communication with the instructor on issues relating to the individual student should be conducted using CIS email, via telephone, or in person.