IIC2173 ARCHITECTURE OF SOFTWARE SYSTEMS

Credits and contact hours: 10 credits / 10 hours (3h Lecture; 1.5 Assistantship; 5.5 Individual learning experience (project))

Instructor’s name: Rosa Alarcón

Course coordinator’s name: Rosa Alarcón


Course Catalog Description: This course teaches the patterns and techniques used in practice to design software systems at the architectural for organizations from non-functional requirements.

Prerequisite Courses: IIC2143 Software Engineering

Co-requisite Courses: None

Status in the Curriculum: Required

Course Learning Outcomes:
1. Designing and developing software architectures at a high level of abstraction considering as a basis the non-functional requirements.
2. Designing distributed software.
3. Designing software using COTS (commercial off-the-shelf) components.
4. Designing a wide variety of software considering frameworks and architectural styles.
5. Designing and implementing software using middleware technologies.

Relation of Course to ABET Criteria:
a. Knowledge of mathematics, science and engineering
e. Identify, formulate, and solve engineering problems
k. Techniques, skills, and modern tools for engineering practice.
**Topics covered:**

1. Modeling and designing flexible software at the architectural level.
2. Foundations of model-driven architecture.
3. Architectural styles and patterns.
4. Frameworks and middleware for applications.
5. Configuration and configuration management.
7. Designing software using commercial off-the-shelf (COTS).