PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
COLLEGE OF ENGINERING
DEPARTAMENT OF COMPUTER SCIENCE
ABET COURSE SYLLABI

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
Textbook:	Software Architecture, Foundations, Theory and Practice, Richard N. Taylor, Nenad Medvidovic, Eric Dashofy, 2010.
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.
6. Software product lines.
7. Designing software using commercial off-the-shelf (COTS).