SCHEDULE

Week	Course Lecture Topic	Laboratory activities	Project activities	Deliverables
W1	OO Concepts Review, SOLID	Revision exercises (OOP, UML)	Discuss projects / choose project	
W2	GRASP, Package Design Principles	Database connection and operations – exercises	Final deadline for choosing the project **Project Deliverable 1** – presentation and discussion **- Inception:** Software Requirements, Vision, Use Case Model, Supplementary Specification, Glossary	**L1_Revision Homework:** all problems resolved
W3	Arhitectural Patterns (Layers, Client-server, Broker, MVC)	Package and class design principles – exercises **Assignment pr**esentation and discussion	**Project Deliverable 1** – progress and discussion	**L2_Database_Operations**: Database diagram + sql script to create the database + unit tests for each DB operation
W4	BLL – **Domain** driven design (Entities, services, repositories, aggregates), Intro to Services (Soap, Rest)	Architectural patterns and styles – **A1 –** exercises **Assignment A1 –** progress and discussion	**Project Deliverable 2** – presentation and discussion **Elaboration – Iteration 1.1:** Domain Models, Architectural Design (architectural patterns and styles, package design, component diagrams, deployment diagrams)	**Project Deliverable 1:** Vision, Use Case Model, Supplementary Specification, Glossary documents
W5	SOA - **Volatility** driven design (iDesign)	Architectural patterns and styles	**Project Deliverable 2** – progress and discussion	**Assignment A1**
W6	Data access (DAO, Data Mapper, Lazy load, identity map)	SOA exercises **Assignment A2** – presentation and discussion		**Project Deliverable 2:** Domain Model, Architectural Design, Component and Deployment diagrams
W7	Live coding session	XML basics – exercises **Assignment A2 –** progress and discussion	**Project Deliverable 3** – presentation and discussion **Elaboration – Iteration 1.2:** Design Model (UML sequence, collaboration diagrams, UML class diagrams, design patterns), Data Model	
W8	Concurrency (Optimistic/Pessimistic) Presentation patterns (Page/Front contoller, Template/Transform View)	Front-end exercises	**Project Deliverable 3** – progress and discussion	**Assignment A2**
W9	Creational DP	Creational design patterns – exercises **Assignment A3** – presentation and discussion		**Project Deliverable 3:** Design Model, Data Model

W10	Structural DP (Composite, Decorator, Proxy, Bridge),	Structural design patterns – exercises **Assignment A3** – progress and discussion	**Project** – presentation and discussion **Elaboration – Iteration 2:** Package design refinement, Design model refinement (class design principles, more GoF patterns)	
W11	Behavioral DP (Strategy, State, Command, Chain of Responsibility)	Behavioral design patterns – exercises	**Project** – presentation and discussion	**Assignment A3**
W12	Quality Attributes			**Project Final Presentation:** Design and Implementaon
W13	Exam Review, Q&A			**Project Final Presentation:** Design and Implementattiion
W14	De rezerva daca vor Midterm			**Late Assignments and Projects**

- **Laboratory policy**
  - **Laboratory sessions are compulsory – no more than 3 absences are allowed.**
  - **Assignments and project deliverables must be presented when established. One delay/semester is accepted, while the other delays are penalized as following:**
    - **You have a delay of 1 week then you lose one point of the assignment final grade. (Not applied if is the first delay in the semester.)**
    - **You have a delay of 2 weeks then you lose two points of the assignment final grade.**
    - **You have a delay of 3 weeks then you lose four points of the assignment final grade.**
    - **You have a delay of > 3 weeks then you do not pass the assignment.**
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  - **A single assignment can be presented during a laboratory session.**
  - **No migration between groups is allowed**

- **Grading**
  - **Assignment grading: 0.5 * Documentation_grade + 0.5 * Implementation_grade**
  - **Project grading: 0.1*Deliverable1 + 0.1*Deliverable2 + 0.1*Deliverable3 + 0.3*Final Design + 0.4*Implementation**