

## LABORATORY SCHEDULE

Week	Course --- Lecture Topic	Laboratory activities	Project activities	Lab & Project Deliverables
W1	OO Concepts Review	Revision exercises (OOP, UML)	Discuss projects / choose project	lab 01.03
W2	Class design principles (SOLID, GRASP) Package Design Principles	Revision exercises 2 (OOP, UML) Class design/package design principles Database modeling exercises	Final deadline for choosing the project <b>Project Deliverable 1</b> – presentation and discussion <b>- Inception:</b> Software Requirements, Vision, Use Case Model, Supplementary Specification, Glossary	<b>L1_Revision Homework:</b> all problems resolved  deadline 07.03 20:00 sent on email lab 08.03
W3	Architectural Patterns (Layers, Client-server, Broker, MVC)	Architectural patterns and styles – <b>Assignment A1</b> presentation and discussion	<b>Project Deliverable 1</b> – progress and discussion	lab 15.03
W4	Architectural Patterns (Microkernel, Service-based, Cloud?)	Architectural patterns and styles <b>Assignment A1</b> – progress and discussion	<b>Project Deliverable 2</b> – presentation and discussion <b>Elaboration – Iteration 1.1:</b> Domain Models, Architectural Design (architectural patterns and styles, package design, component diagrams, deployment diagrams)	<b>Project Deliverable 1:</b> Vision, Use Case Model, Supplementary Specification, Glossary documents  <b>Assignment A1 - documentation</b>  deadline 21.03 20:00 on github lab 22.03
W5	Architectural Patterns (Mobile, Onion?)	Architectural patterns and styles	<b>Project Deliverable 2</b> – progress and discussion	<b>Assignment A1 – final doc + implementation</b>  deadline 28.03 20:00 on github lab 29.03
W6	Live coding	ORM exercises <b>Assignment A2</b> – presentation and discussion		<b>Project Deliverable 2:</b> Domain Model, Architectural Design, Component and Deployment diagrams  deadline 4.04 20:00 on github lab 05.04
W7	Patterns for Enterprise Application Architecture [Fowler] Intro, Business Logic (Transaction Script, Domain Model), Concurrency	*discuss creational patterns (course 8) <b>Assignment A2</b> – progress and discussion	<b>Project Deliverable 3</b> – presentation and discussion <b>Elaboration – Iteration 1.2:</b> Design Model (UML sequence, collaboration diagrams, UML class diagrams, design patterns), Data Model	<b>Assignment A2 - documentation</b>  deadline 11.04 20:00 on github lab 12.04
W8	Patterns for Enterprise Application Architecture [Fowler] Presentation Patterns, Design Patterns (Creational - Factory method, prototype, abstract factory, singleton, builder)		<b>Project Deliverable 3</b> – progress and discussion	<b>Assignment A2 - final doc + implementation</b>  deadline 18.04 20:00 on github lab 19.04

<b>W9</b>	Structural DP (Composite, Decorator, Proxy, Bridge),	<b>Assignment A3</b> – presentation and discussion		<b>Project Deliverable 3:</b> Design Model, Data Model  <b>deadline 25.04 20:00 on github</b> <i>lab 26.04</i>
<b>W10</b>	Behavioral DP (Strategy, State, Command, Chain of Responsibility)	<b>Assignment A3</b> – progress and discussion Design patterns – exercises	<b>Project</b> – presentation and discussion <b>Elaboration – Iteration 2:</b> Package design refinement, Design model refinement (class design principles, more GoF patterns)	<b>Assignment A2 - final doc + implementation</b>  <b>deadline 02.05 20:00 on github</b> <i>lab 03.05</i>
<b>W11</b>	Service Oriented Design (SOAP, REST)		<b>Project</b> – presentation and discussion	<i>Project implementation – first code review (no grading, just suggestions / change requests)</i>  <i>lab 10.05</i>
<b>W12</b>	Quality Attributes, Basic SD metrics	SOA – exercises		<b>Project Final Presentation:</b> Design and Implementation  <b>deadline 1<sup>st</sup> full project commit: 16.05 on github (minimum 80% complete (doc + code))</b> <i>lab 17.05</i>
<b>W13</b>	Exam Review			<b>Project Final Presentation:</b> Design and Implementation  <b>deadline 2<sup>nd</sup> full project commit: 23.05 on github</b> <i>lab 24.05</i>
<b>W14</b>				<b>Late Assignments and Projects</b>  <b>deadline for closing situation 30.05 20:00 github</b> <b>FINAL date – no exceptions</b> <i>lab 31.05</i>

- **Laboratory policy**

- o Laboratory sessions are compulsory – **no more than 3 absences are allowed**. Absences have to be caught up by the end of the semester.
- o Assignments and project deliverables must be presented when established. A delay of max 2 weeks is allowed with a penalty of 1 point/week.
- o A single assignment and/or project deliverable can be presented during a laboratory session.
- o No migration between groups is allowed
- o Only one assignment and/or project deliverable can be submitted in the make-up session

- **Grading**

- o Assignment grading:  $0.4 * \text{Documentation\_grade} + 0.6 * \text{Implementation\_grade}$
- o Project grading:  $0.1 * \text{Deliverable1} + 0.1 * \text{Deliverable2} + 0.1 * \text{Deliverable3} + 0.3 * \text{Final Design} + 0.4 * \text{Implementation}$
- o Bonus & Malus points will be given based on activity

Attendance & grading available for group 30432 at

[https://docs.google.com/spreadsheets/d/1ApGptGUDw5\\_2XexFEp67ymz8\\_GobG8YynoDnl13CxBc/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1ApGptGUDw5_2XexFEp67ymz8_GobG8YynoDnl13CxBc/edit?usp=sharing)