

CSP 586: Software Modeling and Development with UML

Texts

- Jim Conallen. *Building Web Applications with UML*, Addison-Wesley
- Pierre-Alain Muller, *Instant UML*

Objectives

- Students will obtain a significant exposure to the UML technology.
- This will include exposure to modeling, model-driven development, executable models, and round-trip engineering.
- These technologies will be explained at the application level.

Prerequisites

- CS 487 or CS 445.

Syllabus

• Introduction to Software Modeling	3 hours
• Introduction to OO-Design and Analysis	3 hours
• Introduction to UML	1 hour
• The Unified Software Development Process	2 hours
• UML Common Notation Conventions	1 hour
• Use Cases	1 hour
• Class Diagrams	4 hours
• Collaboration Diagrams	1 hour
• Interaction Sequence Diagrams	2 hours
• Activity Diagrams	1 hour
• State Diagrams	3 hours
• Implementation Diagrams	1 hour
• Code Generation from UML Models	4 hours
• Round-trip Engineering	4 hours
• Executable UML	4 hours
• Model Validation and Testing	4 hours
• Components and Frameworks with UML	3 hours
• UML for Web Design	3 hours
Total	45 hours