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