CS630
Object-Oriented Systems Analysis and Design

Les Waguespack, Ph.D.
Course Title: **Object-Oriented Systems Analysis and Design**

**Course Description:**

This course prepares the student for systems development in the object-oriented paradigm. Students learn the theory and methods of the object-oriented modeling and the fundamentals of object-oriented development process models. The focus is on requirements analysis, systems analysis and domain analysis, and their documentation with standard object-oriented specification tools (particularly the Unified Modeling Language). Hands-on projects give the students an opportunity to practice their modeling skills and illustrate an effective integration of various modeling techniques throughout an iterative, object-oriented software project life cycle.

**Prerequisites:** CS 603 and CS 605

**Texts:**


All Course Materials may be accessed at [CIS.Bentley.EDU/LWaguespack](CIS.Bentley.EDU/LWaguespack)
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What’s Not Here!

* You cannot become a fully competent modeler using UML-2 in one semester!

* This is a graduate academic course rather than a training course.

* Modeling in UML-2 is used to explore the OO paradigm to reach understanding.

* The focus is on the architect rather than the carpenter!
Traditional Computer Information System Development Path

- Business Model
  - Business
  - Business Visionary
  - Business Process Modeler
  - Business Process Reengineer

- Business Process Model
  - Systems Analyst
  - Business Process Reengineer

- Software Models
  - Professional Operations
  - Computerized Operations
  - The Business

- Systems Professional
  - System Specification

- Traditional Computer Information System Development Path
  - Professional Operations
  - Computerized Operations
  - The Business
Agenda

* Modeling in UML-2
  * what is OO modeling and UML-2 as the tool.

* Requirements Engineering
  * what needs to be modeled and why?

* Object-Oriented Database Review
  * how do OO and ER relate?!

* Object-Oriented Systems Engineering
  * why choose to use the OO paradigm for systems?

* Object-Oriented Systems Design
  * why do we make any particular modeling choices in designing systems?

Grade Component Weights:
Test 1:10%, Test 2:20%, Final: 30%, Homeworks: 30%, Attendance & Participation: 10%
Synchronization

- Course overheads will be made available 36 hours prior to class via the course website: cis.bentley.edu/lwaguespack
- EMail may be sent to LWaguespack@Bentley.edu
- Include “CS630” in the subject line
- Makeup exams are not possible without prior arrangement
- Absences are assumed to reflect a lack of commitment to the course