

# CS3342

# Software Design

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## Instructor and Other Contact Info

### ◆ Course Instructor

- Dr W.K. Chan [wkchan@cs.cityu.edu.hk](mailto:wkchan@cs.cityu.edu.hk)

### ◆ Course Tutor

- Dr Raymond So [raymoso@cityu.edu.hk](mailto:raymoso@cityu.edu.hk)

### ◆ Website

- the blackboard learning system -> CS3342

### ◆ Newsgroups

- Use the discussion board in blackboard

Details in the **Blackboard**

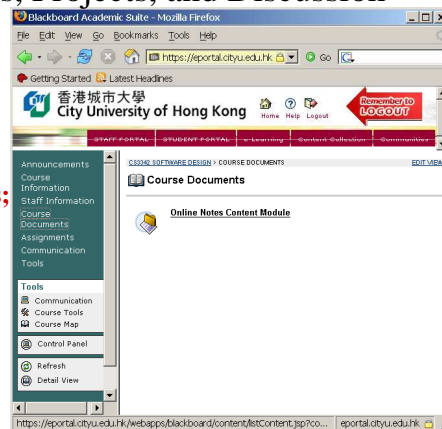
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## Sign on the Blackboard Learning System

### ◆ Lecture Notes, Tutorial Notes, Projects, and Discussion Board

#### ◆ <https://eportal.cityu.edu.hk>

- sign on to the eportal;
- click the **My CityU** tab;
- search **my blackboard course sites**;
- click **CS3342 Software Design**



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## Course Outline

- ◆ Introduction
- ◆ Fundamentals in relation to software engineering
- ◆ Software engineering process
- ◆ Object-oriented analysis
- ◆ Dynamic and activity modeling
- ◆ Object-oriented design
- ◆ Introduction to OO design principle
- ◆ User interface design
- ◆ Introduction to software testing

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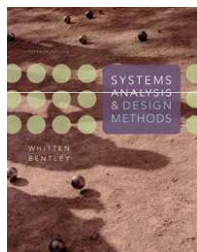
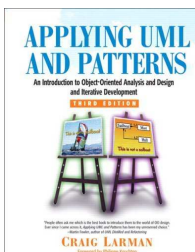
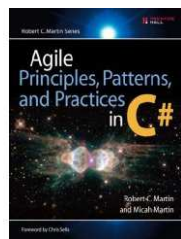
# No Textbook & Four Main References

## Textbooks

- Nil

## References

- ◆ J.L. Whitten and L.D. Bentley, *Systems Analysis and Design Methods*, McGraw-Hill, New York, NY (2007)
- ◆ Bernd Bruegge and Allen H. Dutoit, *Object-Oriented Software Engineering: Using UML, Patterns and Java. 2<sup>nd</sup> Edition*, Prentice-Hall (2003)
- ◆ Craig Larmen, *Applying UML and Patterns*, Prentice Hall (2005)
- ◆ R.C. Matain and M. Martin. *Agile Principles, Patterns and Practices in C#*, Prentice Hall (2006)



*Unified Modeling Language: Superstructure, Version 2.1.1*, Object Management Group, Needham, MA (2007), available at <http://www.omg.org/docs/formal/07-02-03.pdf>

# Tentative Schedule (Daytime Class)

	Lecture	Tutorial (hrs)	Coursework Due
Week 1	Fundamentals	Play a Game (2)	Form your team
Week 2	OOA	Use Case ex. (2)	
Week 3	(holiday)	Project Interview (0.5)	<b>Interview</b>
Week 4	OOA + Structure modeling	Class Diagram ex. (2)	
Week 5	Dynamic modeling	Comm/Activity Diagrams ex. (2)	
Week 6	OOD	Design objects ex. (1)	
Week 7	Dynamic modeling	Sequence Diagram ex. (1)	<b>OOA Report</b>
Week 8	Dynamic modeling	State machine ex. (1)	<b>Review of OOA report</b>
Week 9	Design principle	Design principle ex. (1)	
Week 10	Design principle	Design principle ex. (1)	
Week 11	<b>Quiz</b>	(no tutorial)	<b>OOD Report</b>
Week 12	User interface design	User interface design ex. (1)	<b>Review of OOD report</b>
Week 13	Testing + Revision	Presentation (0.5)	<b>Presentation</b> 7

# Tentative Schedule (Evening Class)

	Lecture	Tutorial (hrs)	Coursework Due
Week 1	Fundamentals	Play a Game (2)	Form your team
Week 2	OOA	Use Case ex. (2)	
Week 3	OOA	Project Interview (0.5)	<b>Interview</b>
Week 4	Dynamic modeling	Class Diagram ex. (2)	
Week 5	(holiday)	(holiday)	
Week 6	OOD	Comm/Activity Diagrams ex. (2)	
Week 7	Dynamic modeling	Design objects ex. (1) Sequence Diagram ex. (1)	<b>OOA Report</b>
Week 8	Dynamic modeling	State machine ex. (1)	<b>Review of OOA report</b>
Week 9	Design principle	Design principle ex. (1)	
Week 10	Design principle	Design principle ex. (1)	
Week 11	<b>Quiz</b>	(no tutorial)	<b>OOD Report</b>
Week 12	User interface design	User interface design ex. (1)	<b>Review of OOD report</b>
Week 13	Testing + Revision	Presentation (0.5)	<b>Presentation</b>

# Assessments

- ◆ Group Project 35%
  - OOA Report 10%
  - OOD Report 10%
  - Peer-Review of OOD Report 5%
  - Presentation 10%
- ◆ Individual Quiz 15%
- ◆ Examination 50%