CSE 5324. SOFTWARE ENGINEERING I
SPR 2008

General

Lectures:	TuTh 2:00pm-3:20pm 109NH
Instructor:	David C. Kung, 332 NH, 817-272-three 627
Office Hours:	3:30pm-4:30pm TuTh, or by appointment
Email:	kung at uta doe edu, Fax: 817-272-3784
GTA:	TBD
GTA Office Hours:	TBD

Course Objective in Catalog:

5324. SOFTWARE ENGINEERING: ANALYSIS, DESIGN, AND TESTING (3-0). Motivations, principles, and goals of software engineering; technical aspects of software projects, including: review of structured analysis and structured design, emphasis on object-oriented methods of requirements analysis and specification, design, and implementation; software testing concepts; team project. Prerequisite: CSE 2320 and 3315 (or concurrent enrollment), or consent of instructor.

Textbook

Craig Larman, "Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development" (3rd Edition), Prentice Hall, 2005. (You can save money by using an older edition.)

About FTP

You will need to download lecture notes, homework, project descriptions, and project related materials, etc. from the ftp site.

You can ftp off-campus by installing VPN on your personal computer. After installing VPN, configuring and establishing connection it should work. Here is the link on how to install and configure a vpn client on personal computers:

`http://www.uta.edu/oit/clientservices/network/vpn/pc/vpn_pc.html`

Reference Books and Articles

For UML:
G. Booch, J. Rumbaugh and I. Jacobson, "The Unified Modeling Language User Guide," 2nd Ed., Addison Wesley, 2007.

For Java:
Cay S. Horstmann and Gary Cornell, "Core Java 2, Volume 1: Fundamentals," 6th Edition, Prentice Hall, 2002.

Tentative Schedule

See Table 1.

Date	Class Activity	Assignment (due date)	Due
1/15	introduction to course		
1/17	the agile unified process		
1/22	use cases, project 1	P1 UC,UD (1/29)	teams formed
1/24	use case diagram		
1/29	project 2, use case steps		P1 UC,UD
1/31	use case derivation steps	P2 UC,UD (2/7)	teams adjusted
2/05	OO concepts, domain model		
2/07	class diagram	P1 DM (2/14)	P2 UC,UD
2/12	class diagram		
2/14	domain modeling steps	P2 DM (2/21)	P1 DM
2/19	domain modeling steps		
2/21	object interaction, sequence diagram	P1 SD (2/28)	P2 DM
2/26	interaction modeling steps		
2/28	assign responsibilities to objects		P1 SD
3/04	GRASP design patterns	P2 SD (3/11)	
3/06	OO design, design class diagram	P1 DCD (3/11)	
3/11	DCD derivation steps	P2 DCD (3/13)	P1 DCD, P2 SD
3/13	reserved	P2 inc1 TP (3/27)	P2 DCD
3/18	Spring Break		
3/20	Spring Break		
3/25	Java, compilation and resources	P1 CG (4/3)	
3/27	reserved		P2 inc1 TP
4/01	teams 1-4 presentations		
4/03	teams 5-7 presentations	P2 inc1 CG (4/15)	P1 code
4/08	discussion of presentation	P2 inc2 TP (4/24)	
4/10	reserved	P2 inc2 CG (5/1)	
4/15	introduction to design patterns		P2 inc1 code
4/17	review for final exam		
4/22	more design patterns		
4/24	final exam (30 minutes)		P2 inc2 TP
4/29	teams 7-5 presentations		
5/01	teams 4-1 presentations		P2 inc2 code
5/0?	official final exam date & time		

Teams will be formed by the TA and instructor. UC=specification of all use cases and use case diagrams. DM=domain model; P1,P2=project 1,2; CG=code generation (skeleton, pseudo-code generation only, executable is good but not required); SD=sequence diagram; DCD=design class diagram. TP=team presentation, slides include requirements, use case-requirements matrix, use case to increment allocation, inc. UC, inc. DM, inc. SD, inc. DCD, implementation order, and task assignment, but presentation will focus on UC, DM, SD, DCD, and implementation order.

Table 1: Tentative schedule

Workload

- One semester team project P2 of two increments: 50%, which include 2 peer evaluation form submissions of 1% each.
- One team project P1 of only one increment: 15%. The peer evaluation is included in the peer evaluation of P2 increment 1.
- One final exam 25%. The final exam is 30 minutes, 20 questions, each requires the student to circle the best answer, not just the correct answer, from 4 choices.
- Pop quizes 10%. There will be an unknown number of quizes, which can take place any time during the class and on any class day. Each quiz is about 2%. If there is less than 5 quizes, then remaining points will be given to either project P2 or final exam.

  The quizes are included to ensure that students attend the classes and on time. Experiences show that without attending the classes you won't be able to perform well in the team project work.

Grade Distribution

Total Score	>= 85	>= 70	>= 60	>= 50	< 50
Grade	A	B	C	D	F

The grades are computed by a program according to your scores. If you get 84.95 then you will get a "B", not an "A" even if the score is so close to 85.

General Grading Criteria

The projects will be graded according to two main criteria:

1. Number of correct items. This is measurement of the number of correct items, depending on the work artifact, identified or produced. In particular:
   - For use cases, this is the number of use cases correctly identified and specified (abstract use case; high level use case and expanded use case if applicable).
   - For domain model, the number of classes, relationships, important attributes, and important multiplicities correctly identified and specified.
   - For sequence diagram, this is evaluated according to the correctness and quality of the sequence diagrams specification. See specification evaluation criteria below.
   - For design class diagram, the number of classes, relationships, important attributes, and important multiplicities correctly identified and specified.
   - For implementation order if applicable, the correct algorithm applied.

   A specification can be good or poor, it is evaluated according to the following:

Level L5. 100-90 points. Proposed solution is adequate and valid and significantly exceeds expectation, the solution is well-orgnized and clearly described, assumptions are clearly stated.

Level L4. 89-80 points. Proposed solution is definitely adequate and valid, the solution is organized and described, assumptions are stated.

Level L3. 79-70 points. Proposed solution is somewhat adequate and valid, the solution is somewhat organized and partially described, some but not all assumptions are stated.

Level L2. 69-60 points. Proposed solution is only marginally adequate or valid, the solution is poorly organized or difficult to understand, important assumptions are not stated.

Level L1. 59-0 points. Proposed solution is incorrect or far from adequate and valid, the solution is impossible to comprehend.

2. Number of incorrect items, this is evaluated negatively according to the number and/or percentage of incorrectly identified items. In particular:

   - For use cases, number of identified use cases that are not use cases.
   - For domain model, number of incorrectly identified or incorrectly included classes, relationships, attributes.
   - For design class diagram, number of classes, relationships, or attributes that are incorrectly included in the design class diagram.

Assignment Rules

1. Late assignments will be accepted before the explanation of the homework assignment in class. Late assignment are subjected to 10% deduction and additional 10% deduction for every 24 hours passing the deadline. After the explanation, no assignment will be accepted. This rule will be consistently applied to every student in all cases, regardless whatever good reason you may have.

2. You are encouraged to discuss homework with your classmates but not allowed to copy the solutions from or share the solutions with anybody. If you violate this rule, then you will receive no credit for that assignment unless you can prove that you are not involved.

3. The GTA will do most of the grading. If you do not agree with the result, contact the GTA first. Please contact the instructor if you cannot reach a consensus. This would help the GTA improve her/his grading skill and avoid inconsistency due to improper interference of the instructor.

4. To be fair to the other students, no special assignment will be provided for any student to improve her/his grade.

Go Home Early Request

Requests for permission to go home before the final exam date will not be granted except for medical reasons and with a proof from a doctor.

Team Member Evaluation Form

Enclosed at the end of this syllabus is a team member evaluation form which must be submitted by every team member after each increment. This syllabus is also available from the ftp site.

Use this form to appraise those team members that you feel their contributions should be credited and provide the instructor information about team members who need improvement. I will keep this confidential.

Class Email Alias

I will broadcast important messages, homework assignments, project descriptions etc. to students of the class. The messages will be delivered to your omega account. If you do not receive such messages, please contact me immediately so that I can add you to the list. It is your responsibility to contact me when your omega account has changed.

Your Standing and Class Statistics

After each assignment or test has been graded, I will distribute to each of you your scores and grade up to that assignment or test. You will also receive class performance statistics. Timely distribution of such information requires that the TA email me the scores in time. Please help me to remind the TA to email me such information.

Library Information

(817) 272-3000, ext. 4938; email lsmith@library.uta.edu
http://www.uta.edu/library/research/rt-cse.html for CSE research information.

Project Team Member Evaluation Form

Please submit hardcopy or fax to David Kung 817-272-3784, no email

Most team members perform well in a project team. However some members perform extremely well and some very poorly. It is constructive to encourage the outstanding members and inform those who need improvements. This form allows you to provide your peer evaluation to the instructor. You feedback may be used to adjust the individual project performance scores. You feedback will be kept confidential.

Member name					
Team Player (20 points)					
Dependability (20 points)					
Work Quality (20 points)					
Comm. Skill (20 points)					
Leadership (20 points)					
Overall (100 points)					

Comments: (use additional sheets if needed)

Name: _____ Signature: _____ Date: _____

Please fill the course info, read, sign and return this statement to the instructor. Thanks.

Statement of Ethics
Student Confirmation
(CSE_____, Spring [], Summer [], Fall [], Year of _____)

The following is an excerpt from the College of Engineering's statement on Ethics, Professionalism, and Con-duct of Engineering Students. The notes are modifications appropriate for Computer Science and Engineering courses. Read the statement carefully, sign it, and return it to your instructor. A copy of the original policy is available for examination in the Computer Science and Engineering office. Additional copies of this statement can be obtained from your instructor or the Computer Science and Engineering office.

Statement on Ethics, Professionalism, and Conduct of Engineering Students
College of Engineering, The University of Texas at Arlington

The College cannot and will not tolerate any form of academic dishonesty by its students. This includes, but is not limited to 1) cheating on examination, 2) plagiarism, or 3) collusion.

Definitions:
A. Cheating on an examination includes:
1. Copying from another's paper, any means of communication with another during an examination, giving aid to or receiving aid from another during an examination;
2. Using any material during an examination that is unauthorized by the proctor;
3. Taking or attempting to take an examination for another student or allowing another student to take or attempt to take an examination for oneself.
4. Using, obtaining, or attempting to obtain by any means the whole or any part of an unadministered examination.
B. Plagiarism is the unacknowledged incorporation of another's work into work which the student offers for credit.
C. Collusion is the unauthorized collaboration of another in preparing work that a student offers for credit.
D. Other types of academic dishonesty include using other student's printouts from the ACS labs or students' disk, etc.

Notes:
1. The use of the source code of another person's program, even temporarily, is considered plagiarism.
2. Allowing another person to use your source code, even temporarily, is considered collusion.
3. In this class, the specific exceptions given below are not considered scholastically dishonest acts:
A. Discussion of the algorithm and general programming techniques used to solve a problem
B. Giving and receiving aid in debugging
C. Discussion and comparison of program output
4. The penalty assessed for cheating on a given assignment will be twice the weight of the assignment and will include notification of the proper authorities as stipulated in the UTA Handbook of Operating Procedures and on the web at http://www2.uta.edu/discipline
5. You may be entitled to know what information UT Arlington (UTA) collects concerning you. You may review and have UTA correct this information according to procedures set forth in UT System BPM #32. The law is found in sections 552.021, 552.023 and 559.004 of the Texas Government Code.

I have read and I understand the above statement.

Student's signature:_____

Student's name (printed):_____

Student's ID number:_____