INSY 560: Advanced Software Engineering

Computer Science & Information Systems Department Andrews University School of Business Berrien Springs, Michigan 49104

Winter 1997

Instructor: Mr. Daniel E. Turk

Office:

This course is being taught remotely this quarter with several intensive weekend visits, so no regular faculty office is available for meeting with the instructor; however, CSH 215 is the suite for the CSIS department where questions, contact information, and general assistance may be obtained.

Office Hours: by e-mail, phone, and arrangement on weekend visits

Phone Numbers:

AU CSIS Office: (616) 471-3516 AU SBA FAX: (616) 471-6158 Atlanta: (770) 984-2359 before 9:00 p.m., and not on Friday evenings or Saturdays Atlanta FAX: (404) 651-3840

> **Internet**: turk@andrews.edu WWW: http://www.andrews.edu/~ turk

Class:

CSH 208

2:15-4:15pm,Fri, Jan 10 10:15am-12:00pm, Sun, Jan 12 8:30am-12:20pm, 1:30pm-4:20pm, Fri, Jan 24 and Feb 21 8:30am-12:20pm, 1:30pm-5:20pm, Sun, Jan 26 and Feb 23 6:30-10:20pm, Mon, Feb 10 (First Test) 7:30-9:20pm, Mon, Mar 17 (Second Test)

This Syllabus Provides a General Plan for the Course; Deviations May Be Necessary.

Course Description and Prerequisites:

"An advanced study of applied software product development issues. Specific topics include requirements analysis, system and software design methodologies, software implementation and testing, software reuse, language, tool, and hardware selection, software project planning models (e.g., COCOMO, etc.), software economics, productivity management, risk management, statistical process evaluationand control, etc. This course builds upon INSY 460 and other classes taken within the program. Prerequisites: INSY 460, MATH 182, STAT 285."

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Textbooks and Other Required Reading:

Humphrey, Watts S. (1995). *A Discipline For Software Engineering*. New York: Addison Wesley. ISBN 0-201-54610-8.

Grade Breakdown & Weights:

Breakdown		Weights:	Weights:	
95	А	Homework	45%	
90	A-	Tests	45%	
87	B+	Misc	10%	
83	В			
80	B-			
77	C+			
73	С			
70	C-			
60	D			

NOTE: This breakdown indicates lower limits of the letter grade you will receive if you earn at least the score given in the chart.

Teacher-Student Communications (Internet E-Mail and the WWW):

The best way to contact me is via Internet e-mail. Send e-mail to the address listed on the first page of this syllabus and I will probably respond within 24 hours of receiving your note. (Mostly likely within just a few hours — I check mail several times a day almost every day of the week!) I assume that you have an Internet e-mail address and will be using it regularly throughout this class. (If you do not have an account, apply for one right away!) I will expect to be able to send e-mail to each of you and to get prompt replies.

If there is an emergency which necessitates your speaking with me more quickly than

what sending e-mail might allow, call one of the phone numbers listed on the first page of the syllabus.

I will use e-mail and the WWW to post notices, schedule changes, etc. Numerous handouts, course objectives, and assignments are distributed in electronic form (non-paper) through e-mail and Web pages which I continually update throughout the quarter. You will want to visit them frequently.

Participation:

While participation is not directly taken into account when determining course grades, it is expected both during lecture visits and via e-mail. This course may involve new ideas and almost certainly requires learning new skills and behaviors with respect to your software development habits. Thus participation in class is anticipated to be beneficial and full involvement is expected.

Tests:

There will be two tests, one approximately half-way through the course, and one at the end. These will not be "comprehensive" as such, although some concepts may be cumulative, and in that sense the tests may have some comprehensive nature to them.

Homework:

The homework for this course involves working through 7-10 assignments from the textbook. These will be completed and submitted on approximately a weekly basis. Given that the course is begin taught as an intensive with several weekend visits by the professor, it is imperative that the student carefully plan and manage his/her time and keep on track with the assignments. This is also especially important since the assignments all build on each other, using what was learned on earlier assignments in order to complete later ones. You do not have the luxury of skipping an assignment and going on to a later one. You must do each one in turn. You must keep up.

Because of this progressive nature, with assignments building throughout the quarter, late work will be severely penalized, if accepted at all. Plan your time wisely and get working turned in on schedule.

These assignments will be submitted primarily via e-mail. Details will be discussed as the quarter progresses. A master floppy disk with forms which may be used for homework submissions is available for copying at the CSIS office.

Level of Quality Expected

All work turned in for a grade should be done to the same level of quality as would be expected in a professional/work environment. This means that all submissions should

be neatly typed, use proper grammar and punctuation, have correct spelling, follow standard writing style guidelines, give credit when material is quoted, used, and/or referenced, etc. (See more detailed explanations below under *Individual Work* and *Professional Standards of Scholarship*.)

Individual Work:

There is always a balance which must be achieved between doing work solely on your own and drawing from other sources¹. In fact, one good way to make progress is to build on what has already been done by others. Good scholarship even *requires* that we, in the process of developing our own ideas, reference the works of others that have inspired, guided, and influenced us. However, others' material must be used and referenced appropriately; thus my comments about individual work and giving credit where it is due.

All work turned in for credit must be done *solely by the person whose name is on it and is receiving a grade for it.* Two people, even if they work together to help each other understand the homework, should produce unique work -- you are unique individuals. Make sure the assignments you turn in are YOUR unique work. Source code sharing/copying is NOT appropriate. The code you turn in is to be your own creation not partly or totally gotten from others.

Even though you will be turning in only work that you have done yourself, it is recognized that you will need, in fact be required, to draw on previous work done by others, and, in fact, to interact significantly with other class members. Thus you should give appropriate credit when this is the case². Your textbook and assignments refer to appropriate ways to work together and how to document that fact. However, *in all cases you will be required to have completed a first pass on each assignment / task on your own before conferring with you classmates*. Conferring with others should be used to get *feedback on what you have already done*, not to help you do your original work. The work you turn in should clearly indicate what you did first, what feedback you got, and what the final result was after you did more work on each assignment.

Answers should be in *your own words* - NOT your friend's and NOT just direct quotes from the textbook! Reword the answers so I know that you know what you are talking about! I am not interested in your just copying from someone else.....!

Professional Standards of Scholarship:

¹ Compare what is said here with what is said in the section entitled *Professional Standards of Scholarship*.

² For details see section entitled *Professional Standards of Scholarship*.

Professional standards of scholarship require that any time an individual relies on another's work, proper credit must be given. This means that any time one directly uses textual material that it must be placed within quotes and referenced properly; other non-textual material must be shown with proper credit given citing the original source of the work. When material is not used in exact form (paraphrased, major ideas relied on or referred to, etc.) it should still be given credit as well, although it is not put within quotes. *Always give credit to ideas or materials that are not yours*³. If in doubt, give credit.

Violations of these standards are *highly* disapproved of, and appropriate academic action will be taken depending on the situation. Be professional, give credit where it is due, turn in work that is your own, and you will be fine.

IF YOU ARE UNCERTAIN ABOUT HOW TO DEAL WITH THESE ISSUES, PLEASE TALK WITH ME. I AM HERE TO HELP YOU LEARN AND TO HELP YOU WHEN YOU ARE UNCERTAIN ABOUT WHAT TO DO. DO NOT HESITATE TO ASK QUESTIONS!

Besides expecting professional standards of scholarship, generally accepted U.S. standards for written work will applied to documents turned in for this course. This means that grammar, punctuation, spelling, and citation of references should follow standard guidelines. APA (American Psychological Association) or another common standard is acceptable for work submitted for this course. Be consistent; be neat; be professional.

You are receiving a degree from an American university, which you and the University want to be well-respected. Thus you will be held to relevant American academic standards.

³ This includes software source code as well. Always give credit when you rely on someone else's ideas, examples, algorithms, source code, etc.