

SYLLABUS
SWE 620-001 SOFTWARE REQUIREMENTS SPECIFICATION AND
MANAGEMENT
Summer 2012

Note: This course is delivered to the Internet section online by MIST/C. Students in all sections will have accounts on MIST/C can get system instructions and software downloads:
<http://netlab.gmu.edu/moodle> and can play back the lectures and download the PDF slide files.

PROFESSOR: Dr. Frank Armour

OFFICE HOURS: Via Skype at set times during the summer.

PHONE: (202) 251-3554

INTERNET: frank.armour@att.net

COURSE

DESCRIPTION: In-depth study of methods, tools, notations, and validation Techniques for the analysis, specification and management of software requirements. Students participate in a group project on software requirements.

CLASS HOURS: Online

TEXT: : Leffingwell, D, and Widrig, D., Managing Software Requirements: A Use Case Driven Approach, Addison Wesley Longman, Reading, MA, 2003. ISBN: 032112247X

Armour, F and Miller G. Advanced Use Case Modeling , Addison-Wesley, Reading, Massachusetts, 2001.ISBN 0201615924

GRADES:

- 30 % - Exam #1
- 30 % - Exam #2
- 20% - Article Writeups
- 20% - Homework

Tests: Two in-class exams covering the lecture and readings. .

Article write-ups: Students have two options:

Select two contemporary articles on requirements engineering and write a two to three page critique of each.

Homework. There will multiple individual homework assignments during the semester

Honor Code

You are expected to abide by the honor code. All assignments and exams are individual efforts. Information on the university honor code can be found at:

<http://jiju.gmu.edu/catalog/apolicies/honor.html>

NOTE: For this Summer Session, individual students can accelerate this schedule, however, the dates listed below for the assignments and the Tests are the latest dates that assignments can be turned in on time and without penalty.

CLASS SCHEDULE:

Week of May 24 > Background; Introduction,

Week of May 31 > Lecture: High level Analysis and Elicitation Techniques; Leffingwell Chapters 1,3,4,5,6; Armour Chapter 3

Week of June 7 > Lecture: Facilitation Leffingwell Chapters 7,9,10,11,12,

Week of June 14 > Lecture: Intro to Use Cases, Armour Chapters 1,2,4; Group: **Homework #1 due**

Week of June 21 > Lecture: Expanding the Use case model: Armour Chapters 7, 8. Leffingwell Chapters 14

Week of June 28 > **Test Number 1 [Covers chapters in Leffingwell and Armour, class lectures, handouts and notes**

Week of July 5 > Lecture: Further Elaborating the Use Case model; Armour Chapters 9, 10. **First set of article write-ups due**

Week of July 12 > Lecture: Business Process Models; .SRS **Homework #2 due**

Week of July 19 > Lecture; and Nonfunctional requirements, Leffingwell Chapters 22 Armour Chapter 11; Group: Requirements SRS. **Second set of article write-ups due**

Week of July 26 > Lecture: Requirements Specifications. Leffingwell Chapters 23,27 **Homework #3 due**

Week of August 2 > Lecture: Validation, Quality requirements and Prototyping; Leffingwell Chapters 13, 29 Group: Requirements SRS; Article Presentations

Week of August 9 > **Test Number 2 [Covers chapters in Leffingwell Armour, class lectures, handouts and notes since test 1**

Literature Review for Article Critiques

The field of requirements engineering and prototyping is changing rapidly. Therefore, students will be required to conduct literature searches to find a current article(s) in this field. Students will be required to write critiques of the articles and make oral presentations of their findings (optional). The articles should be taken from refereed journals.

Instructions for Literature Review

1. Literature should be reviewed for the last several years only. Since the search deals with most recent periodicals, you would be better off checking the "current periodicals" shelves in the library in addition to a computerized search.
2. The topic of the articles must be directly related to the content of this class.
3. The content of the article should be such that it contributes to the class (e.g. new theory, interesting application, applications with important practical lessons). The content should supplement the textbooks, not repeat information.
4. Prepare a two to three page review (one page, if doing presentation) (typed, single spaced) of each article assigned. Each summary must include:

Abstract: What the article is about.

Justification: Why did you select that article, what is unique about it?

Critique: Your opinion on the article.
5. You must submit your write-ups and a copy of the articles to me on the due dates.