

Software Engineering I – EMTM 601

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Texts: Sommerville, I., Software Engineering, 9th Edition, Addison-Wesley, 2011, ISBN:978-0-13-703515-1. (S), Brooks, F.P., The Mythical Man-month: Essays on Software Engineering, 20th Anniversary Edition, Addison-Wesley, ISBN: 0201835959. (Br)

- ◆ Session 1 – Saturday, September 7th
 - Software Engineering Overview
 - Software Process Models
 - Capability Maturity Model and The Software Engineering Institute
 - Software Engineering Micro and Macro Aspects
 - Project Management
 - Software Engineering Certification
 - Readings: S: Chapters 1, 2 & 26; Br: Preface and Chapters 1, 7, 10 & 14
- ◆ Session 2 – Saturday, September 21st
 - Requirements Elicitation
 - Requirements Representation
 - Risk Management
 - Software Project Estimation
 - Readings: S: Chapters 4, 22, 23, 25; Br: Chapters 2 & 8
 - Case Study 1 distributed
- ◆ Session 3 – Saturday, October 5th
 - Case Study 1 discussed
 - Software Architecture
 - Software Design
 - Object Oriented Approach
 - Readings: S: Chapters 5-7; Br: Chapters 3-6, 9 & 13
 - Case Study 2 distributed
- ◆ Session 4 – Saturday, October 19th
 - Case Study 2 discussed
 - Testing
 - Quality
 - Software Maintenance
 - Software Factories
 - Readings: S: Chapters 8, 9, 24 ; Br: Chapters 11 & 15

- ◆ Session 5 – Saturday, November 2nd
 - Logbooks Due
 - Computer Human Interaction
 - Software Engineering and the Web
 - Micro Software Engineering
 - Review for final
 - Readings: none ;
- ◆ Session 6 – Saturday, November 16th
 - Brooks in Summary
 - Light Weight Methodologies
 - Open Source Software
 - Reliability, Fault Tolerance, Trustworthy Systems
 - Software Archeology
 - Outsourcing
 - Readings: S: Chapter 3, 11, 12; Br: Chapters 15 – End
 - Final

Supplemental Readings

Parnas, D.L. and Wurges, H. "Response to undesired events in software systems." In D. M. Hoffman and D.M. Weiss, Software fundamentals: Collected papers by D.L. Parnas, 2001.

Hunt, A. and Thomas, D. The Pragmatic Programmer: From Journeyman to Master, Addison-Wesley, 2000, ISBN:0-201-61622-X

Grading Policy

Each student will be required to keep a logbook that records on a weekly basis your thoughts on Software Engineering either from the lectures, readings and exercises or your experience as a software engineer for other class or work related projects. This logbook will be worth 40% of your grade. Thirty-five percent of your grade will be based on class participation and case study critiques. A final on the last day of class covering the entire semester will be worth 25% of your grade.