

CmpE 58D SP.TOP.IN CMPE:REQUIREMENTS ENGINEERING Syllabus

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Course Description: The course provides students with in-depth knowledge on the field of requirements engineering (RE). The course is inevitably interdisciplinary, for RE is intended to elicit the vague, informal needs from the stakeholders and build a precise, formal specification for a software system to build.

Upon completion of the course, the student:

- Knows the phases of the RE process and understands their interplay
- Can choose the most suitable technique for a given phase depending on the needs
- Is able to express requirements in different formalisms, ranging from agile to safety-critical systems
- Can execute automated reasoning techniques for analyzing requirements
- Can read and comprehend state-of-the-art literature in the RE field

Text Book:

There is no mandatory textbook for the course. The instructor will provide reading material for the course each week.

Evaluation (subject to change):

- Individual Work
 - Midterm Exam (30%)
 - Final Exam (%35)
- Group Work
 - Project (details later) (%25)
 - Presentation (%10)

Topics to be covered:

- The RE process and its activities
- Standards and tools
- Agile RE, userstories
- Requirements elicitation
- Linguistic aspects of natural language requirements
- From requirements to architectures
- Requirements prioritization

- Maturity assessment
- (Verification of) formal specifications
- Release planning
- Requirements traceability
- Crowd RE

Notes:

- The midterm and final examination will be “closed books and notes”.
- You can follow the announcements about the course from Moodle.
- Attendance to group presentations, submitting to project, taking the final and the midterm exams are obligatory. You will fail the course even if you receive sufficient grade if you fail to do so.
- Attendance for lectures is not obligatory. But you are responsible from lectures’ contents.