CSCI_3509 SYLLABUS

Basic Information

- **ADA University, Fall Semester, 2017**
- **CSCI 3509 Introduction to Software Engineering [6 credits]**
- **Sec-A → Mon, Wed 10:00 AM - 11:15 PM B-303**
- **Sec-B → Mon, Wed 11:30 AM - 12:45 PM B-303**
- **Instructor: Emil Abbasov [M.S. in Computer Science]**
- **How to contact instructor**
  - In-person drop-in office hours: **Mon & Wed 2:00 PM – 4:00 PM | B-217**
  - Online office hours: ANY time
  - E-mail address: eabbasov@ada.edu.az
  - Phone numbers: (012)437 32 35 + ***ext* 424**
  - Preferred mode of communication: email

    Optional: if drop-in hours don't work for you, we can set up an appointment via email

Course Description

- **Prerequisites:**
  - Junior Standing
  - CSCI 1202 (Preferably)

- **Technology requirements:**
  - Software: ArgoUML http://argouml.tigris.org/ or Visual Paradigm (community edition) http://www.visual-paradigm.com/ to be used for UML modeling. Additional requirements may be provided by instructor during the classes

- **Overview of course:**

  Students will receive practical experience in the generation and analysis of various software artifacts as part of the software engineering process through hands-on, group-based projects. Methods to effectively address software development in a team will be introduced and practiced. Each of the major steps of the development process, including specification, design, implementation, testing, and deployment will be covered in this course. Students will be introduced to scenarios and their use in system specification. Object-oriented analysis basics of the use of UML for systems modeling will also be covered. Group projects will include requirements gathering, specification, and system design tasks, and the development of tests.

- **Student learning objectives:**

  To learn software-engineering techniques that can be applied to practical software projects.
  - a) Understanding of the full "Software Engineering" effort and alternative approaches
  - b) Technical emphasis on requirements, design, development, measurement, and modeling
  - c) Understanding management issues including software cost estimating and project management
  - d) Understanding process applicable to the software development/integration cycle and maintenance
  - e) Impact of technology changes on quality and development activities

- **Methods of instruction:**
  The primary method of instruction is lectures supplemented with related readings, and projects. There will be some assignments for this course. There will also be a term project presentation in the end of the semester, which is going to be based on groups of 3-4 people.

- **What is the format of the course**
  The material is presented in two 75 minutes lectures per week. Lectures will include homework and assignment discussions as well.

Materials

- **Primary or required books/ readings for the course:**
  - ***Software Engineering, A Practitioner's Approach***, 7th Edition by R.S Pressman, Ph.D.
  - ***Essentials of Software Engineering***, 3rd Edition by Frank Tsui, O. Karam and B. Bernal

  (available through ACM membership)

  In addition to the textbook, the instructor may distribute additional material.

- **Supplemental or optional books/readings**
  - ***The Unified Process – An Introduction*** by Kruchten,Philippe, Addison Wesley Longman, New York, 1999.
  - ***Essential Scrum*** by Rubin, Kenneth, Addison Wesley, New York, 2013
  - ***Succeeding with Agile*** by Cohn, Mike, Addison Wesley, New York, 2013
  - ***Introduction to the Personal Software Process, SEI Series in Software Engineering*** by Humphrey Watts S., Addison Wesley Longman, New York, 1997.

Requirements

- **Exam and quizzes:**
  - 2 exams: Midterm and Final.
  - 1 group project presentation
  - All tests will be **CLOSED book** tests!

Policies

- **Grading procedures:**
  - Midterm: **30%**
  - Final Exam: **30%**
  - Term Project Assignments **20%**
  - Term Project Presentation: **20%**

- **Grade mapping:**

A+ -> 98.0	B+ -> 86.5	C+ -> 76.5	~~D+ -> 66.5~~
A -> 93.5	B -> 82.5	C -> 72.5	~~D -> 59.5~~
A- -> 89.5	B- -> 79.5	*C- -> 69.5 PASS*	

- **Attendance, Late Policy and Participation**
  - Starting from the 2nd week of the semester attendance will be checked **5-10 min** after the start time of each class. That means students have extra FIVE min to make it to the classroom in order to be marked as 'present', otherwise he/she will be marked as 'absent'. However student still can enter the class. Also, students may also leave the classroom only for FIVE min during the class. Otherwise, it will be marked as 'absent'!
  - ***NO excused absences*** will be tolerated for this course (with very few exceptions such as doctor's reference letter)
  - As mentioned above, attendance will be checked, however **NOT GRADED**. Due to the state regulations a student must be present at least in 75% of the class hours.

- **Missed assignments, Late assignments/extensions Policy**
  - Throughout the semester students will have **ONE** chance to submit an assignment late, (1 chance gives 24 hours).
  - No penalties will be applied if a student uses a late chance. Use it wisely!
  - No missed assignments will be accepted late, if a student already used the late chance.

- **Disruptions in class**
  - During the semester a student will have ***two*** chances to get a warning if he/she disrupts class in any way (such as talking when not allowed to, disturbing classmates or the instructor, making noise during class and so on so forth with a similar action).
  - *First warning* will be an ***oral warning*** only.
  - With the *second warning*, the student will have to leave the classroom immediately and get a ***written warning.***
  - With the *third warning*, student will be sent to "Code of Conduct" and subsequently be punished with an ***administrative withdrawal*** from this course.

- **Extra credit opportunities**
  Depending on the performance of the students, there ***might*** be given some opportunities for gaining extra credits.

- **Standards for academic honesty and penalties for infractions**
  Existing policies forbid cheating on examinations, plagiarism and other forms of academic dishonesty. This kind of actions is absolutely against the school policies and will not be tolerated!

Statement on Accommodation

- **A request that students see the instructor to discuss accommodations for:**
  - Physical disabilities
  - Medical disabilities

Schedule

Week No	Topics	Readings
Week 1	Course Info, Introduction	Ch.1
Week 2	Life Cycle Models. Agile Development	Ch.2,3
Week 3 Project Team Selection Forms	Requirements and Analysis	Ch.5,6
Week 4 Project Proposals	OO Software Engineering	Appendix 2
Week 5	Design with UML	Appendix 1 Ch.7,8,9
Week 6	Implementation	-
Week 7 Business Specification	Quality assurance. Testing with Metrics	Ch 14-19, 23
Week 8	**Midterm Exam** (Oct 26-Nov 1)	-
Week 9 Requirement Specification	Open Sources & COTS	-
Week 10	Estimating and Sizing	Ch.24,25,26
Week 11 Analysis	Scheduling and Risk Management	Ch.27,28
Week 12 Initial System Design	Responsibilities of an Engineer. Software Evolution	-
Week 13	Project Presentations	Project Presentations
Week 14	Project Presentations	Project Presentations
Week 15	**Finals** (Dec 15-22)	-

Disclaimer: Course schedule is subject to change