

# EE382C

## Software Architectures

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Textbook: Software Architecture in Practice by Bass, Clements, Kazman

**Course Objective:** This course will teach students

- The importance of system architectures,
- The different types of system architectures and purposes for these respective types of architectures,
- Methods for deriving and specifying architecture models, and
- Methods for analyzing system architecture properties

The course will teach students about system architectures, architectural model specification techniques and analysis techniques offered by the research community as well as those architectures, model specifications and analytical methods commonly used in industry.

### **Course Evaluation:**

Students will be evaluated to determine: (1) their grasp of knowledge concerning the state-of-the-art and state-of-the-practice for system architectural model types, specification methods and analysis techniques and (2) their ability to apply fundamental knowledge about system architecture demonstrating they know when to use a respective system architecture type, how to derive and specify the respective architecture and how to best leverage the architectural model to insure development, testing, maintenance and system evolution efforts remain on target.

### **Course Schedule:**

What is an architecture?  
Who are the customers and producers of an architecture?  
What are the different types of architectures?  
How do you derive an architecture?  
How do you specify and communicate an architecture?  
How do you judge the quality of the architecture?  
Why define an architecture? What utility does an architecture serve?

### **Course Grades:**

Course deliverables and grades assignment will be finalized by the 1<sup>st</sup> day of Spring 2018 class but current plans follow:

- Course Project: (Requirements collected by group; three architectures specified by each individual student)
- Final Project Report and Presentation: Group Presentation
- Architecture Business Case Presentation: Group Presentation
- Class Participation

Students will form groups and select the application domain for which they will specify their architectures. Student groups will collectively gather and specify the requirements for their selected application domain (i.e. Home Animation). Subsequently, students will work individually to specify the three types of architectures

designed to satisfy the collected requirements. As a group, students will collectively evaluate the architectures developed by individual students in the group, make modifications, and select best-in-class for presentation.

**Late Policy:**

The course late policy follows:

- Course project milestone deliverables are due at the end of class on the assigned due date.
- 10% automatic deduction if received by 5pm CST two days following the due date. Typically a letter grade deduction.
- 20% automatic deduction if received by 5pm CST 3 to 5 days immediately following the due date.
- Course project milestone deliverables will be not accepted if received after 5pm CST on the 7<sup>th</sup> day after the due date.

Additional Information related to this course:

Academic Dishonesty. This course and all its students will respect and follow the University Honor Code: <http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html> .

Accommodations for religious holidays. By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, <http://www.utexas.edu/safety/> :

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Behavior Concerns Advice Line (BCAL): 512-232-5050
- Link to information regarding emergency evacuation routes and emergency procedures can be found at: [www.utexas.edu/emergency](http://www.utexas.edu/emergency)