CSCE 4460/5460 (Spring 2020)
Software Testing and Empirical Methodologies

Course Information

Professor:	Hyunsook Do
Office:	NTDP F244
Office Hours:	Tuesday/Thursday 1-2pm, or by appointment (please email)
Email:	hyunsook.do@unt.edu
Class Hours:	Tuesday/Thursday 10-11:20am
Location:	NTDP B157
Credit:	3 credit hours
Class Textbook:	1. Introduction to Software Testing, Paul Aummann and Jeff Offutt, Cambridge, 2008;
	2. Experimentation in Software Engineering: An Introduction, Wohlin et al., Kluwer Academic Publishers, 2000 (supplementary)
Course Documents:	Lecture Notes and Course Documents will be found in *Canvas*

Course Description and Learning Objectives

This course addresses recent advances in the field of software testing, including empirical methodologies that provide a systematic way to investigate various software engineering techniques and methodologies. Students will learn various fundamental testing techniques and the state of the art in testing techniques, and understand how to design, conduct, analyze, and write up empirical studies of software engineering technologies.

Readings from current literature regarding software testing and empirical studies will be discussed and evaluated. Over the course of the semester, students will present the results from one particular paper in class, and then lead in-class discussion of that paper.

In addition to these paper readings and presentations, students will perform a term project (an individual project for graduate students) that investigates specific software testing research topics: (1) implements an existing (or new) algorithm or methodology including a preliminary empirical evaluation; (2) performs a survey on testing tools or techniques; or (3) performs a formal empirical evaluation of testing tools or techniques. Evaluation will be based on class participation, individual assignments, paper presentation, exams, and class project.

Prerequisite

CSCE 3444/4444/5430 or strong programming skill

Grading Criteria

- o Project   35%
- o Paper presentation   15%
- o Assignments   20%
- o Exams   30%

Grade Assignments are made based on the following:

A = 90-100%	C = 70-79.9%	F = less than 60%
B = 80-89.9%	D = 60-69.9%	

Course Policies

- o All assignments will have specific due dates and penalties will be given for the late submissions (10% deduction per day up to a maximum of three days).
- o No make-up exams will be given unless a written medical excuse is provided.
- o **Violation of Academic Dishonesty/Plagiarism**:
  - ✓ The student will fail the course and the plagiarism case will be reported to the CSE department and the office of Academic Integrity.

Academic Dishonesty/Plagiarism:

Cheating will result in failure in the course. Please reference the UNT academic integrity policy for more information on cheating. We emphasize that individual work such as homework assignments and pop quizzes must be done on your own and that cheating will result in failure of the course. Do not discuss solutions or share copies of individual work. Unacceptable collaboration will be considered a violation of a Code of Student Conduct, and will result in a failing grade for the course. In addition, the incident will be reported to the CSE department, in accordance with the CSE department policy on academic integrity. Please make sure if you obtain ideas from others you give credit to your source. If questions arise during the course of working on a problem, please feel free to contact the instructor for a clarification.

Special Needs

Any student in this course who has a disability that necessitates accommodation should contact the instructor as soon as possible to discuss the appropriate accommodations necessary to complete the course requirements.