

3460:689 T: Software Evolution (SEVO) Fall 2017

Section 001 77319 Tuesday and Thursday 1:45 - 3 pm Arts & Sciences (CAS) 135

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Office Hours: Posted on the instructor's homepage. Also available by scheduled appointment.

Course Description This course focuses on the research issues in software evolution and maintenance. Topics include reverse engineering, design recovery, program analysis, program transformation, refactoring, traceability, program understanding, and mining software repositories.

Learning Objectives Students successfully completing the course will be able to:

- Discuss the various parts of software evolution, including reverse engineering, design recovery, program analysis, program transformation, refactoring, traceability, program understanding, and mining software repositories
- Write a research paper or large system analysis in the general topic of software evolution.
- Present the main points of a research paper in software evolution, and initiate discussion.

Prerequisites The course assumes a solid background in software engineering. 3460:680 Software Engineering Methodologies, very good grades in 3460:480/580 Software Engineering, or a very strong software-engineering background is required.

Credits 3

Textbooks

Selected conference and journal papers. Typically, 4 papers will be covered each week.



Grading Scale: A (93%), A- (90%), B+ (87%), B: (83%), B- (80%), C+ (77%), C (73%), C- (70%), D+ (67%), D (63%), D- (60%), F

Participation In-class participation is the most important part of the course, and is worth 35% of your overall score. Participation will include reading of the assigned papers, class discussion of the papers, and possible paper reviews.

Presentation Students will present papers in class. The number of papers presented will depend on the number of students in the course, and the number of papers covered. Students who are presenting will receive full credit towards class participation for that class meeting. Presentations will be worth 20% of the overall score.

Project A semester project is required for all students and will count for 35% of the overall grade. The project will result in a 10-page IEEE proceedings format paper. Project topics must be approved. Possible approaches include: Empirical studies, in-depth literature surveys, and software prototypes. Projects can be done individually or in groups of 2 - 3 students. Students will make presentations of the topic of their paper near the end of the semester.

Final Exam The final exam is worth 10% of your overall grade. It will be held in the regular classroom on the day/time determined by the University. Consult your schedule in My Akron for exact day/time.

Policies The class will be taught using a variety of sources. Notes will be from web sources, the instructors own web pages, and written on the board. Examples may be entered by the instructor and discussed during class. Attendance is necessary for complete understanding of the material, and therefore expected.

In order that work can be graded and returned promptly late assignments will not be accepted without a valid excuse. It is up to the student to make up any missed material. Make-ups of any work for this class will only be given in the case of an excused absence or a documented, valid emergency. I encourage you to contact me if an emergency arises.

Students whose names do not appear University's official 15-day class list will not be permitted to participate (attend class, take exams, or receive credit.) Consult University information for specific dates and policies regarding the withdrawal policy.

Academic Honesty All submitted work must be your own. Submission of work that is entirely or partly not yours will be reported to the Office of Student Conduct.

Special Notice Any student who feels she/he may need an accommodation based on the impact of a disability should contact the Office of Accessibility at 330-972-7928. The office is located in Simmons Hall, 105.

The University of Akron is committed to providing an environment free of all forms of discrimination, including sexual violence and sexual harassment. This includes instances of attempted and/or completed sexual assault, domestic and dating violence, gender-based stalking, and sexual harassment. Additional information, resources, support and the University of Akron protocols for responding to sexual violence are available at uakron.edu/Title-IX