

3460:480 Software Engineering (SE) Fall 2017

Section 001 77322 Tuesday and Thursday 10:45 - Noon Leigh Hall (LH) 510

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

Course Description A comprehensive overview of the software process including requirements, analysis, design, implementation, testing and validation, release, and maintenance. The focus is on the methodologies and tools. Standard software process models, including agile development, will be covered. The course will strongly focus on the use of these tools and approaches during the evolution of software, including development and maintenance.

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

- Fully explain and contrast all steps of the agile and waterfall process models
- Demonstrate the ability to work and collaborate on a team project using standard software development techniques including project planning, issue tracking, version control, etc.
- Create a project plan with requirements documents such as user stories and use cases
- Discuss the role of analysis, design, and implementation in the software development process
- Design and perform software validation and testing
- Evaluate the role evolution, including refactoring and concept location, plays in the software development process

The course will be used to collect data for Learning Outcome 5: "An ability to function effectively on teams to accomplish a common goal" as part of the *Department of Computer Science Degree Program Assessment Plan* for all undergraduate C.S. degrees.

Prerequisites Minimum C- in 3460:210 CS II

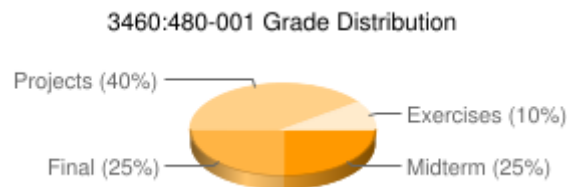
Credits 3

Textbooks

Pilone, Miles, Head First Software Development, O'Reilly, 2007 ISBN 978-0-596-52735-8

Rajlich, Václav, Software Engineering: The Current Practice CRC Press, 2011 ISBN 9781439841228

Grading



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

Exercises To provide immediate practice of material presented in class, exercises will be assigned periodically throughout the semester and will count for 10% of your overall grade. They may be integrated into the lecture, i.e., assigned and completed during a class period, or be assigned as homework.

Projects There will be at least 4 projects. They will include the creation of artifacts of the software engineering process, and the performance of software engineering tasks including corrective and adaptive maintenance. Project grades will depend on the correctness, readability, design style, quality of design, and application of the concepts presented in the course. Many of the projects will include controlled collaborative work with other students in the course.

Midterm The midterm counts for 25% of your overall grade, and will be given after the 8th week of the semester. The specific date will be announced at least one week prior.

Final Exam The final exam is comprehensive and is worth 25% of your overall grade. It will be held in the regular classroom on the day/time determined by the University. Consult ZipLine for exact day/time.

Policies The course involves collaborative team activities. These will be conducted during class time on a frequent basis, and be reflected in the Exercises and Projects. For this reason, class attendance will be required to get full credit for Exercises and Projects.

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.

Any of the code created for this course will be committed as it is developed into a version-control repository. The work must appear in the repository in order to be graded.

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 (assignments and tests) 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