



SAN ANTONIO CAMPUS - MATH AND SCIENCE
Syllabus for CSCI 3365 – Software Engineering

Sample from 3365 3-hour course last year as example only. This course will be 1 hour comprising the "first parts" of this, such as agile vs waterfall, tool setup, and a simple practice project.

1. Mission Statement: Wayland Baptist University exists to educate in a learning-focused and distinctively Christian environment for professional and humankind.
2. Course: **CSCI 3365** – 01, Software Engineering
3. Term: Winter 2019
4. Instructor: Dr. Paul Parker, Asst. Professor of Computer Science
5. Office Phone and Email Address: 210.826.7595 Ext 291, **paul.parker@wbu.edu**. **You may also contact me with Remind text messages, which go directly to my iPhone.** You may call and text me at 210-460-0499, via Google Voice; calls and texts will be forwarded from Google Voice from 9 am to 5:30 pm weekdays and 10 am to 4 pm on Saturdays, and otherwise will be silently dropped. **Again, the best ways to contact me are Remind for short messages and email for long ones, or calling me at 210-460-0499 during the day.**
6. Office Hours and Location: **TBD**. Other hours available by appointment, and can usually include screensharing/Skype/FaceTime/etc. Note also the opportunities for text messaging above.
7. Class Meeting: VC with mandatory meetings and mandatory group meetings.
8. Catalog Description: Introduces theory and practice for software engineering. Topics include software life cycle, requirements, specification and analysis, software architecture and detailed design, and testing.
9. Prerequisites: CSCI 2365.
10. Required Textbook and Resources:
Beginning Software Engineering, Rod Stephens, 2015, 1st edition, WROX Press.
https://www.amazon.com/Beginning-Software-Engineering-Rod-Stephens/dp/1118969146/ref=mt_paperback (\$30)
No materials will be required for purchase via normal textbook channels. Instead, student will purchase various materials and subscriptions helpful for learning software engineering and the project, limited to a maximum of \$75.
11. Optional Materials:
Code Complete: A Practical Handbook of Software Construction, Steve McConnell, 2nd Ed, 2004.
<https://www.amazon.com/Code-Complete-Practical-Handbook-Construction/dp/0735619670>
Despite its age, many people consider this the best single book on good programming practice and software development. 900 pages.

12. Course Outcome Competencies:

Upon completion of this course the student should be able to:

- Describe agile approach to software development
- Describe “waterfall” approach to software development
- Use a version control system
- Demonstrate at least one way they tested their product
- Practice basics of Agile methodology
- Work in a team successfully on a software project

13. Attendance Requirements: All students are expected to attend virtually all of the required meeting sessions, including meetings with client and/or professor and meetings scheduled by the group. Any student missing more than 25% of the meetings will fail the course.

14. Course Requirements and Grading Criteria:

Mini project – 10% of course grade. Credit shall be assigned by instructor according to completeness of work and instructor’s evaluation of each student’s relative contribution, as influenced by self and peer report of contribution.

Project – 60% of course grade. Credit shall be assigned by instructor according to completeness of work, satisfaction level of client and instructor’s opinion of each student’s relative contribution, as influenced by self and peer report of contribution.

Attendance – 30% of course grade – tutorial sessions (aka client meetings) and team meetings

Deliverables for this class:

- **Mini project.**
- **Term project.**
- **Attendance at client meetings and proof of team meetings.**
- **Demonstration of project at last meeting with client.**

The professor reserves the right to add a final exam separate from the project and adjust the grade breakdown accordingly.

Grading Criteria: A standard grading scale shall be used in the course: A = 90-100%, B=80-89%, C=70-79%, D=60-69%, F= <60. There is no guarantee of any rounding.

15. Tentative Schedule:

**COURSE OUTLINE/CALENDAR
(TENTATIVE)**

1st week of class (May 26-June 2)

- Wed meet, kickoff.
- Learn about waterfall (the traditional sequential model) vs agile development, including reading the textbook:
 - Ch 1 (overview)
 - Waterfall (p. 270-272, part of the Predictive Models chapter, so called because to estimate time and cost you have to predict in advance how long each piece will take)
 - Ch 13 - Only thru section 2 Iterative vs Incremental. Figure 13-2 should make the topic clear.
 - Ch 14 - Only thru Agile (up to but not including XP).
 - Also: The Rules of Egoless Programming (p. 190, note refactoring code that needs to be refactored is fine; they are talking about unnecessary changes. Also, changes to meet coding standards are fine.)
 - The book is fascinating and you can learn a ton from it, but those cover the essentials.
- Start setting up tools. I would recommend choosing a single email address that you’ll use for most work on the project.

- KanbanFlow (create an account)
- GitHub (create an account)
- JetBrains (recommend apply for student all-access pack, currently at <https://www.jetbrains.com/student/>. WebStorm and IntelliJ IDEA Ultimate are the most likely products to use in this class.)

2nd and 3rd week (June 2-9, 9-16)

- Wed meet, complete small practice project to practice version control and working together as a team
- Begin meeting twice each week as team. Scheduled Wed full meet can be counted as one of the meets.

4th and 5th week (June 16-23, 23-30)

- Wed meet. Kickoff actual project and begin first 2-week sprint of work
- Continue meeting twice each week as team.

6th-10th week (June 30-Aug 5)

- Continue 2 week sprints. Meet with client at end of sprint.
- Continue meeting twice each week as team.

11th week (Aug 5-11th)

- Final meeting with client. **Demonstrate project for client at this meeting.** Professor reserves right to have possible final exam separate from project.

16. Additional important information:

Any directives concerning class will be sent to your Wayland email account. It is imperative that you monitor that throughout the semester.

Other information:

Disability Statement: In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291- 3765. Documentation of a disability must accompany any request for accommodations.

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.