Software Engineering
Course Calendar

Review of Student Learning Outcomes

In the syllabus we identified that on the successful completion of this course we will be able to:

- Compare and contrast various software development processes (lifecycles) including Waterfall, Iterative, and Agile
- Understand how Agile delivery techniques can be effectively utilized with teams of various sizes
- Understand Scrum and the basics of Scaled Agile
- Participate as a valuable and engaged team member of a (self-organizing) Scrum team
- Play a Scrum Master and/or Product Owner role within a Scrum team
- Participate and/or Lead key Scrum rituals including Daily Standup, Sprint Planning, Backlog Development/Grooming, and Sprint Retrospectives
- Play a Scaled Agile role of Product Manager, Project Manager, Architect, and/or User Experience (UI) Designer role across multiple Scrum teams
- Elicit and analyze requirements for a proposed application and turn them into effective Epics, Features, and User Stories
- Utilize industry standard development tools and techniques for Source Code Control (Git & GitHub), Configuration Management, and Cloud Based hosting services (Microsoft Azure) to deliver a product
- Understand and participate in unit, integration, and user acceptance
- Understand diagrams to model class and Web Service Application Programming Interfaces (APIs)
- Use techniques to produce self-documenting code and Web Services APIs
- Understand the techniques used to test non-functional requirements such as performance, scalability, and security
- Understand software licenses and open-source
- Develop and execute an Agile software delivery project schedule
- Deliver two product releases utilizing an Agile and Scaled Agile delivery models

Course Calendar & Anticipated Weekly Activities

Using our Learn/Practice/Execute/Demo philosophy, our initial weekly activities schedule is included below. Note that activities will be updated during the semester as we reflect on what is working best for us (Retrospectives) and enhance our plan (Continuous Improvement).

	Themes, Topics, and Activities	Readings & Materials
Week 1	Organizing Teams of People with Agile Processes: Software Development Lifecycles (SDLC) Agile and Scrum "Scrum-ify" Ourselves Install and Utilize Git Client Complete Quiz 1	Chapter 1 Chapter 10 Video: Introduction to Scrum in 7 Minutes [link]

	Themes, Topics, and Activities	Readings & Materials
Week 2	Managing Work with Scrum and Highly Productive Tools: Backlogs and User Stories Sprint Planning, Daily Standups, and Retrospectives Configuration Management using Git and GitHub **Sprint Planning** (for Sprint 1 which will start in Week 3) **Backlog Grooming** **Setup an Individual GitHub Accounts** **Complete Quiz 2**	A.6
Weeks 3 & 4 (Sprint 1)	Delivering Products (SaaS and Cloud Computing): Internet/Web Architectures Software as a Service (SaaS) JavaScript (browser) **Create a Team GitHub Project** **Setup Azure with Powershell or Bash shell** **Verifiably Complete Scrum Ceremonies** **Verifiable Complete Scrum Artifacts** **Complete Quiz 3**	Chapter 2 Chapter 6 MEAN vs. LAMP for your next programming project [link] MEAN vs. LAMP vs Ruby on Rails [link]
Weeks 5 & 6 (Sprint 2)	Delivering Work: Configuration Management Release Management Releasing software utilizing Internet/Web JavaScript/Node JS (server) **Setup Team GitHub Accounts/Projects** **Create Personal and Team Static Websites** **Demo All Stories at Team Level** **Demo One Story at Product Level** **Complete Quiz 3**	
Weeks 6 & 7 (Sprint 3)	Defining Products & Work Across Teams: Scaled Agile Project Management Requirements Class Project Definition **"Scaled Agile-ify" Ourselves** **Complete Quiz 4**	Chapter 7
Weeks 8 & 9 (Sprint 4 / Release 1)	Releasing Team Level Products Testing Product Planning **Deliver Release 1 to Production** **Test Your Team's**	Chapter 8

	Themes, Topics, and Activities	Readings & Materials
Weeks 10 & 11 (Sprint 5)	Maintenance Verifiably Perform ALL Scrum and Scaled Agile Processes	Chapter 9
Weeks 12 & 13 (Sprint 6)	Design Patterns Verifiably Perform ALL Scrum and Scaled Agile Processes	Chapter 10 Chapter 11
Weeks 13 & 14 (Sprint 7)	Performance, Releases, Reliability and Security Verifiably Perform ALL Scrum and Scaled Agile Processes	Chapter 12
Weeks 15 & 16 (Sprint 8 Release 2)	Final Project Hardening Sprint Verifiably Perform ALL Scrum and Scaled Agile Processes Present Scrum Team and Product Team Presentations	