

CptS 423

Software Design Project II

Spring 2015

Instructor : Sakire Arslan Ay, Ph.D.

Instructor:

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Office Hours: Tu, Th, F, 11am-12pm

For other times, please make an appointment via phone or email.

No Teaching Assistant

Course Overview

- Students integrate their software engineering knowledge and produce a useful engineering artifact.
- They practice major activities in software development process, including communication, planning, modeling and design, construction, and deployment.
- Students get experience in working as teams, participating in project planning and scheduling, writing reports, giving presentations, and dealing with uncertainties in a professional manner.
- It serves as a final preparation for students entering into industry.

Course Overview

- This is the second step of the two-semester senior design sequence: CptS 421 and 423
- In CptS 423, you will:
 - ✓ Complete the design and implementation of your project
 - ✓ Beta prototype
 - ✓ Test your beta prototype
 - ✓ Write a final report
 - ✓ Prepare a poster
 - ✓ Present your senior design project at the EECS Open House on April 24th.
 - ✓ Aim to be the winner of the Spring 2015 poster competition

ABET Outcomes for CptS 421

- a. An ability to apply knowledge of computing and mathematics appropriate to the discipline.
- b. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- c. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- d. An ability to function effectively on teams to accomplish a common goal
- e. An understanding of professional, ethical, legal, security and social issues and responsibilities
- f. An ability to communicate effectively with a range of audiences
- g. An ability to analyze the local and global impact of computing on individuals, organizations, and society
- h. Not applicable
- i. An ability to use current techniques, skills, and tools necessary for computing practice

ABET Outcomes for CptS 421 and CptS423

- Team design project [a,b,c,d,e,g,i]
- Weekly oral progress evaluation of teams by instructor and industry mentors [d,e,f]
- Written reports on project description, solution approach, alpha prototype, beta prototype, test plans and results [a,b,d,f]
- Formal final presentation to instructor and industry mentors [d,e,f]
- Senior design poster and poster presentation judged by industry panel. [d,e,f]

Please complete the survey

Course Information

Homepage:

- The home page for this course is hosted at the WSU, EECS Socialcast platform.

<https://eecs-wsu-edu.socialcast.com/>



- The class syllabus is also available at <http://www.eecs.wsu.edu/~arslanay/CptS423/>

Course Information

Class Meeting Times:

- TU,TH 13:25pm-14:40pm in EME 52.
- CptS 423 class will meet only once during the first lecture.
- The instructor will also meet with each individual team weekly.
The team mentors will join these meeting through conference calls.
- Weekly meetings will start next week.

Weekly Meeting Locations:

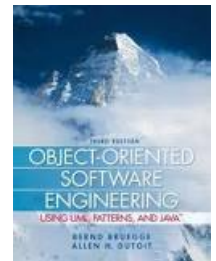
- EME 107 can be used by the CptS421 Senior Design teams.
- There will be some additional space in Sloan353 (TBA)
- Weekly meetings will take place in one of the following rooms:
 - EECS conference room (EME 102A),
 - Instructor's office (EME 102D),
 - CptS423 classroom (EME-52).

Course Information

Text Book & References:

There is no required textbook for CptS421. The recommended textbooks/references are:

- "*Object Oriented Software Engineering Using UML, Patterns and Java*", 3rd Edition, by Bernd Bruegge and Allen H. Dutoit, Prentice Hall, 2010.
- "*How We Test Software at Microsoft*", by Alan Page, Ken Johnston, Bj Rollison, Microsoft Press, 2008.
- IEEE Standards for Software Engineering
- Any other book or reference specified by your mentor



CptS 423 Writing Assignments

1. Test Plans for Beta-Prototype

- Documents the approach ,scope, resources, and schedule of testing activities for the beta-prototype.
- Identifies the requirements and the components to be tested.

2. Test Case Specifications and Results

- Provides test case specifications for the beta-prototype and reports the test results.

3. Final Report

- Covers everything about your senior design project

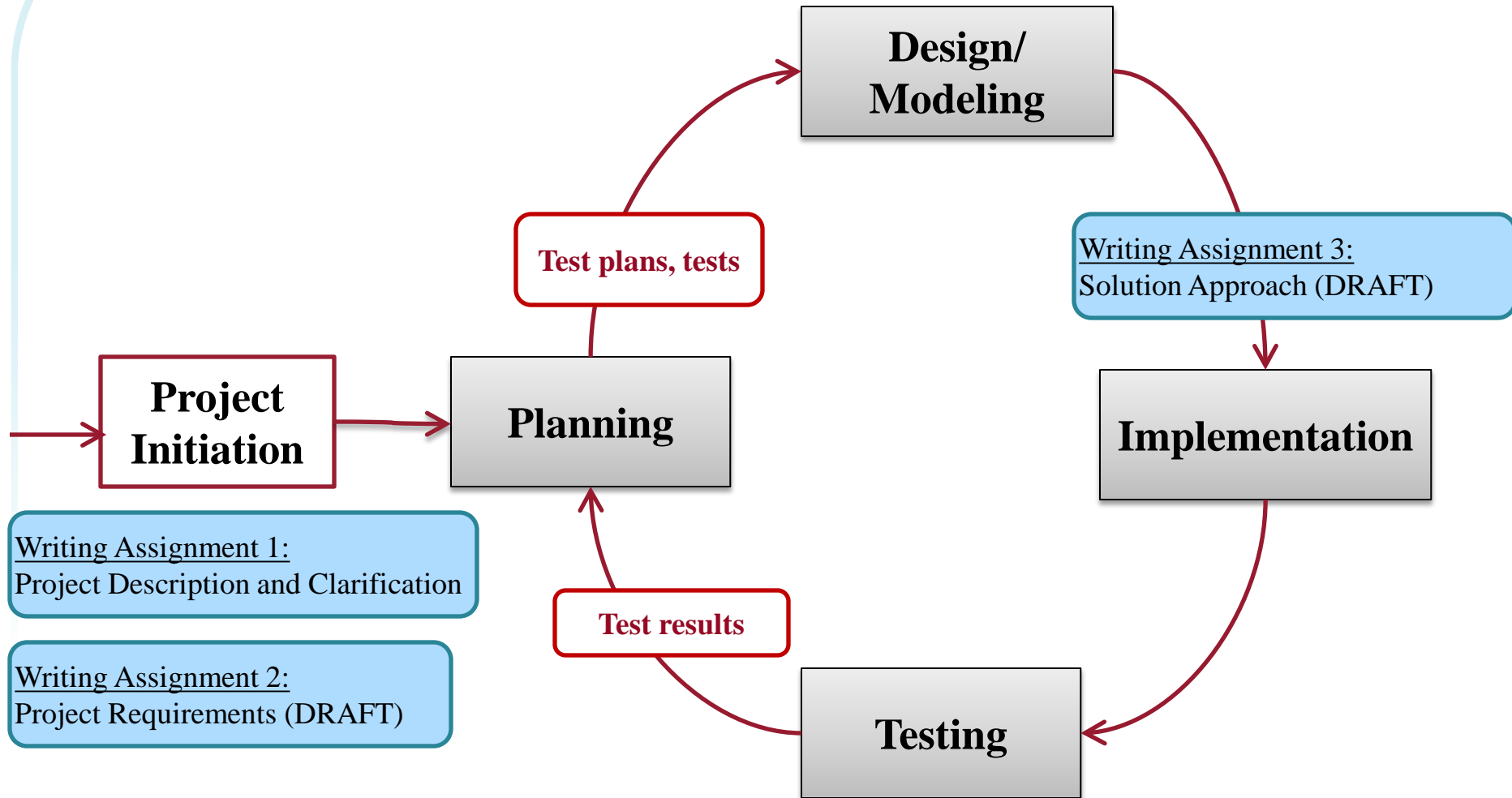
Senior Design Poster and Poster Presentation

- CptS423 poster presentations will be at the annual EECS Open House on **April 23rd, 2015**
- Hundreds of practicing engineers attend the EECS Open House
- A team of judges from industry will evaluate all EECS senior design posters. This year the CS and EE posters will be evaluated separately by 2 judging panels.
- Winners of the CS poster competition will be announced in the evening at the EECS awards banquet
- Detailed guidelines on the poster preparation and poster session will be available on Socialcast.
- Your poster will mainly be evaluated based on the quality, content and design of your poster.
- A percentage of your poster grade will be based on your teams' performance during the poster presentation session. The instructor will evaluate and grade your presentations.

CptS 423 Assignments – Tentative Deadlines

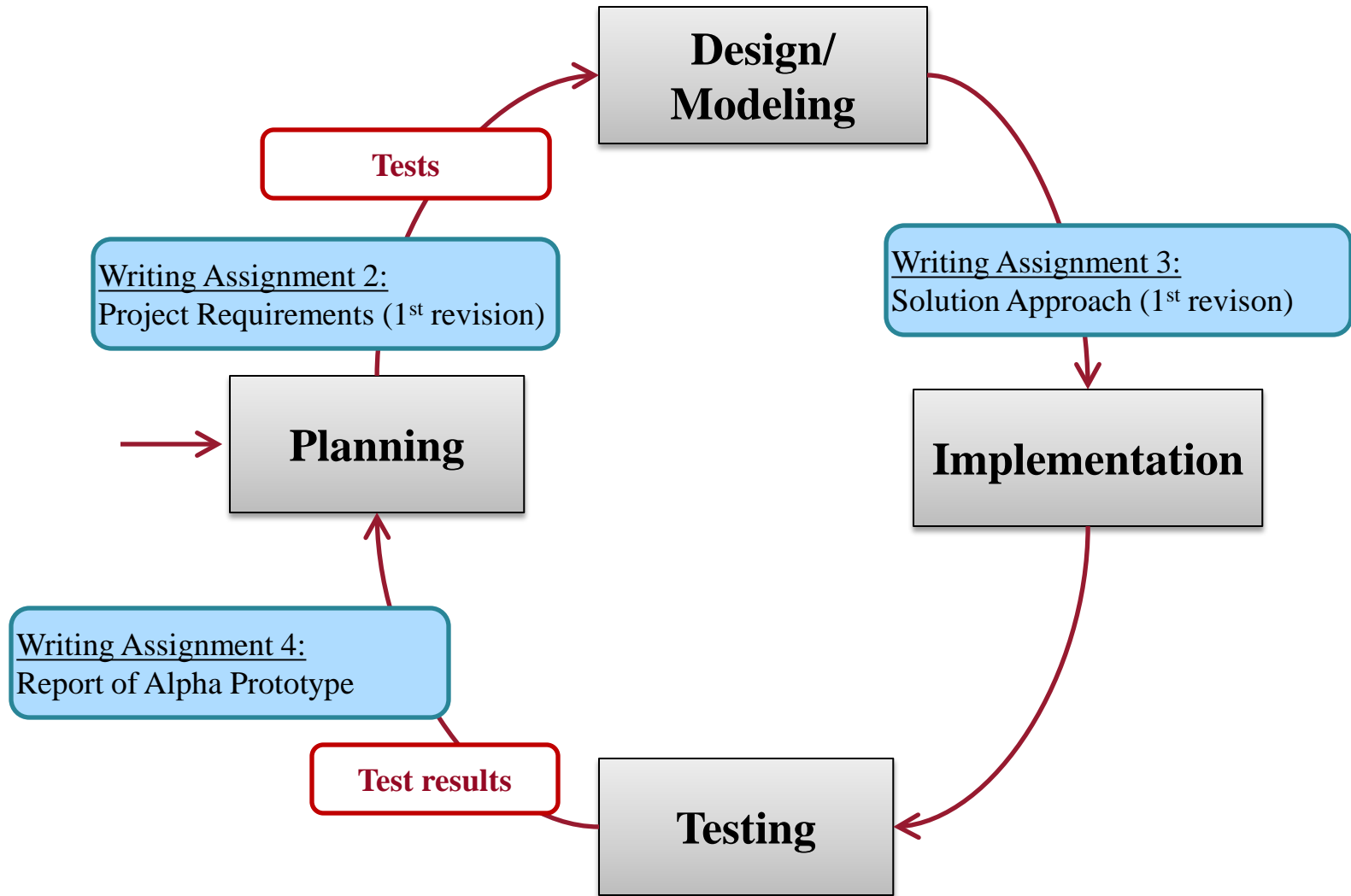
Assignment Generic Name	Assignment Descriptor	Tentative Deadline	Average number of pages
Writing Assignment 1	Test Plans for Beta-Prototype	Feb 6 th	3 pages + appendices and images as needed
Writing Assignment 2	Solution Approach- 2nd Revision	Feb 20 th	5 pages + appendices and images as needed
Writing Assignment 3	Test Case Specifications and Results	March 9 th	6 pages + appendices and images as needed
Writing Assignment 4	Final Report	May 4 th	10 pages + appendices and images as needed
Presentation Assignment	Poster Presentation	April 23 rd	Power Point Poster

Project Milestones Summary – Past Semester



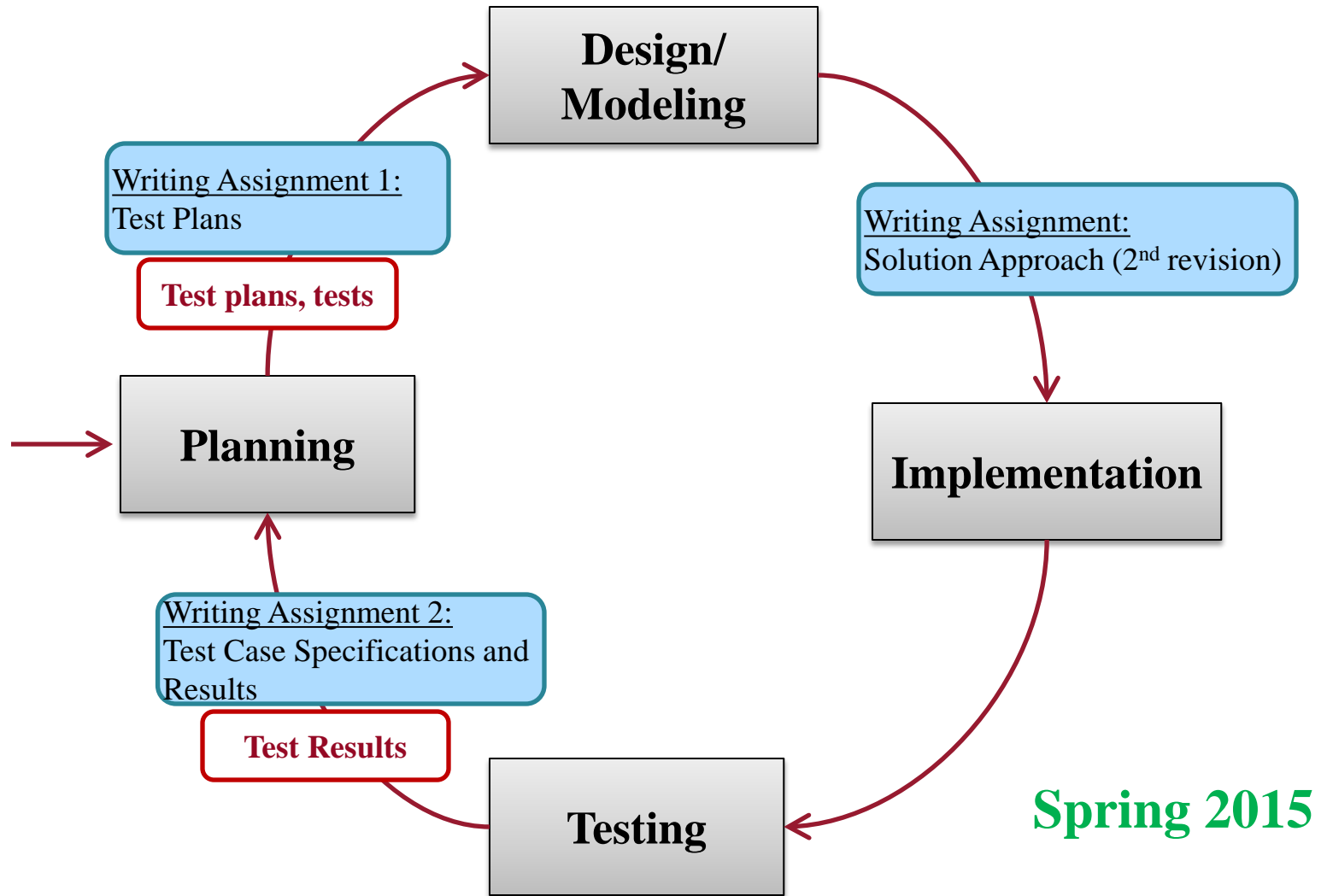
Software Development Model
Iteration-1 (CptS 421)

Project Milestones Summary – Past Semester(cont.)



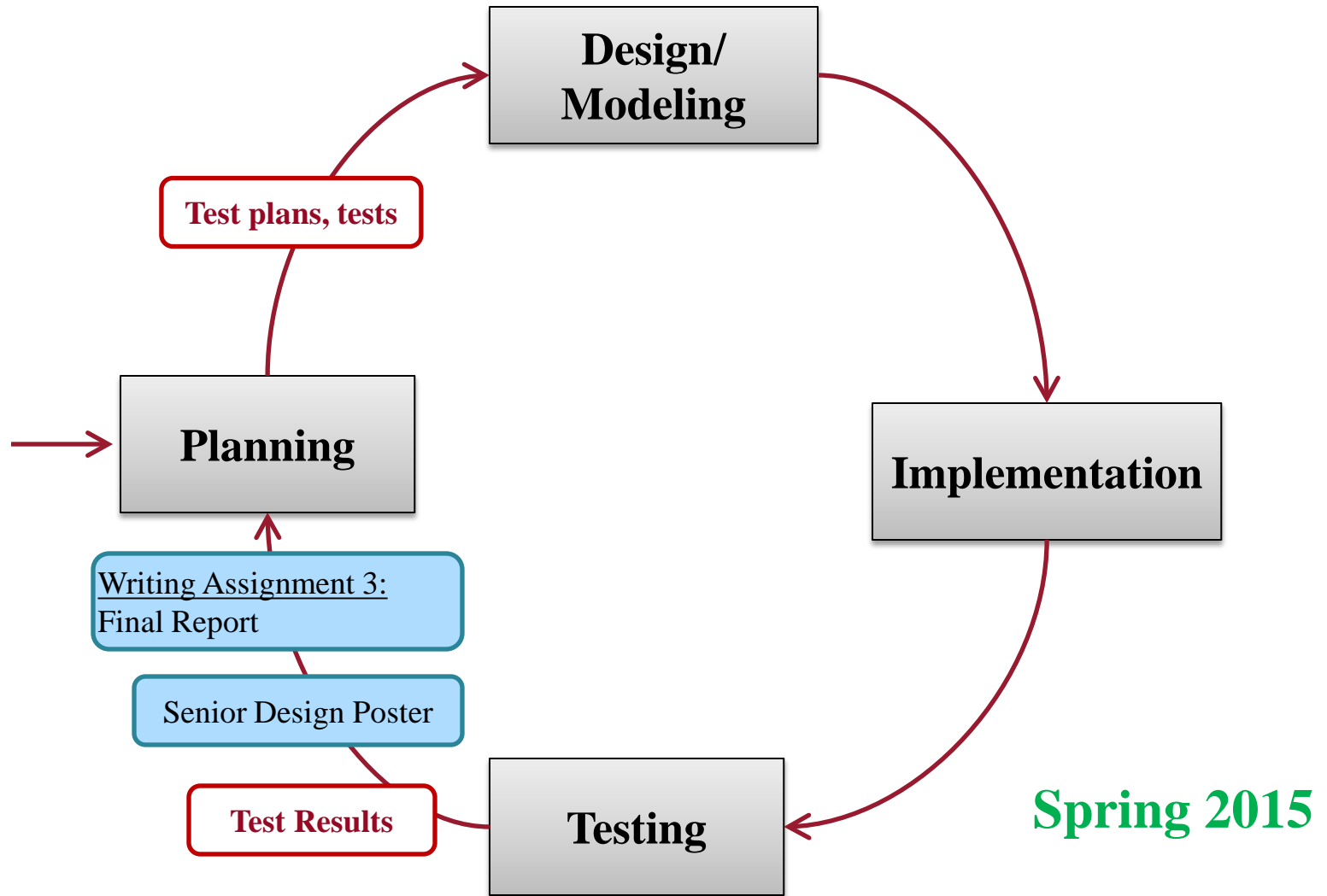
Software Development Model
Iteration-2 (CptS 421)

Project Milestones Summary



Software Development Model
Iteration-3 (CptS 423)

Project Milestones Summary



Software Development Model
Final Iteration (CptS 423)

Version Control

- Each project team need to maintain their software on a repository where team members and the project mentor will have access to.
- You will maintain your software on EECS's GitHub server under organization "**2013-fall-421-423-arslanay**"
— <https://github.eecs.wsu.edu/>

Weekly Progress Evaluations

- Each team will meet once a week with the instructor and the project mentor, where all team members will report the progress for the past week and present the plan for the upcoming week.
- Each team member will prepare 1 or 2 slides summarizing the progress for the past week and the plan for the upcoming week.
- The team leaders should upload the slides onto Socialcast as a single file.
- The instructor will evaluate and grade the progress of the students based on their performance in weekly meetings and their Socialcast and GitHub activities.

Weekly Progress Evaluations (cont.)

- If a team member cannot attend the meeting due to a valid excuse, s/he should notify the instructor and report his/her progress on Socialcast.
- Skipping a meeting without notification would result in a score of “0” for that week’s evaluation. Students with more than three unexcused absence in weekly meetings will receive a course grade of “F”.

Grading

- 1. Writing Assignment #1: Test Plans for Beta Prototype10 % (Team Grade)
- 2 Writing Assignment #2: Solution Approach – 2nd Revision3 % (Team Grade)
- 2. Writing Assignment #3: Test Case Specifications and Results.....15 % (Team Grade)
- 4. Writing Assignment #4: Final Report25 % (Team Grade)
- 5. Presentation: Senior Design Poster and Poster Presentation20% (Team Grade)
- 6. Weekly Progress Evaluations by the Instructor.....15 % (Individual Grade)
- 7. Mentor Evaluations.....12% (Individual Grade)

- **Peer Grading:**
 - Each student will fill-in and submit a “peer evaluation” form.
 - The assignment scores will be adjusted according to peer evaluations:
$$\text{adjusted assignment grade} = \text{team assignment grade} * \text{percentage of contributions}$$
 - The instructor reserves the right to adjust the peer evaluation scores if the instructor and the mentor agree that the scores were prejudiced (either too high or too low).

Grading Scale and Letter Grades

- All CptS421 material will be graded based on a scale from **1** to **5**.
- **5** means your work satisfies the expectations.
- Above **5** is to recognize exceptional work.
- Extra credit will be given up to 0.5 points

Total Score	Total Score Percentage	Letter Grade
4.65-5.00	93% - 100%	A
4.50-4.65	90% - 93%	A-
4.30-4.50	86% - 90%	B+
4.15-4.30	83% - 86%	B
4.00-4.15	80% - 83%	B-
3.80-4.00	76% - 80%	C+
3.65-3.80	73% - 76%	C
3.50-3.65	70% - 73%	C-
3.30-3.50	66% - 70%	D+
3.00-3.30	60% - 66%	D
0.00-3.00	0% - 60%	F

Student Work Load

- CptS 421 is a 3-credit course.
- Student is expected to spend:
3hrs ("lectures") + 6hrs ("homework") = 9 hours per week

Weekly Meetings Schedule

- Instructor's available times for weekly meetings are listed in the following google document.
 - <https://docs.google.com/spreadsheets/d/ccc?key=0AoalbNbmlkOodGVXbTZseHI5ZDVSemNLMU5OYWVkmM3c&usp=sharing#gid=0>
- OR
- <http://goo.gl/4JPGAh>
- Each team should decide on three 1-hour meeting slots they prefer. Teams should contact their mentors and confirm their availability as well.
- List the slots that your team prefers in order of preference (most to least) in the above shared document (until Friday, Jan 16)
- Instructor will assign the meeting times according to teams' preferences.
- Instructor will arrange the meeting rooms and announce the final schedule by Monday Jan 19th.

Socialcast & GitHub Activity Evaluations

- Team dynamics
 - i.e., Do all team members participate with meaningful comments in Socialcast threads and GitHub issues?
- Frequency of Socialcast/GitHub interactions and GitHub commits
- Technical and professional content of Socialcast/GitHub interactions
- Response to instructor and prompts/posts

Upcoming Deadlines

- | | |
|--|--|
| Friday, Jan 16 th * | Decide on the preferred meeting slots and write them on the google document. |
| Jan 19 th –Jan 23 th | Weekly meetings start |
| Friday, Feb 6 th * | Writing assignment-1 due |
| Friday, Feb 20 th * | Solution Approach- 2 nd revision due |

*Due 11:59pm , on the specified deadline.

Looking back to Fall 2014...

- Best GitHub Repository : Team Wookie
 - <https://github.eecs.wsu.edu/2014-fall-421-423-arslanay/Wookie>
- Best Socialcast Page: Team Skywalker
 - <https://eecs-wsu-edu.socialcast.com/groups/111554-2014fallarslanay421423skywalker>
- Best Weekly Presentations: Team Wookie
 - (add the link)

Questions?