Agile Methods

**Module 2: Challenges Teaching Agile**

- Conceptual
- Logistic
- Establishing a Rhythm
Challenges Teaching Agile

• What are some of the challenges you foresee with:
  1. Getting students to internalize Agile
  2. Properly apply Agile methods in their projects?
Challenges: Internalizing Agile

• Lecturing on agile, like most all software methods, only provides descriptive knowledge
• Even project-based learning may occur in a sanitized environment, not providing real context
• Students do not bring in foundational knowledge in *empirical process control*.
Agile methods in student projects

- Students lack experience – projects or agile
- Tool support
- Space constraints
- Only 1 of 5 courses
- Tend to be deadline-driven
- Not good at self-regulation and self-empowerment. Or, “how does this affect my grade?”
- Who is the Product Owner?
- Even industry teams take 6 mos – 2 years to get good at Agile
Scheduling Scrum Activities in a Semester

• 1 Project Kickoff Day
• 1 Release Planning
• 3 week Sprints – 3 +1 (deploy) + 1 (warranty)
  – Deploy one is special, moving parts
  – Suggest a warranty sprint to address sponsor issues
  – We recommend a “2 week module, 1 week Scrum” schedule
• 3 per week of:
  – Standups, Code Commits, Scrumboard updates
• Three final events
  – Two with Product Owner
  – One for the Learning Process
Setting Student Expectations

Students are milestone-driven
- When do your students start a coding assignment with a deadline 2 weeks out?
- You say “semester project” they hear “busy April”

Agility requires establishing a **rhythm**
- Each of the timelines represent a rhythm level
- Use class time to remind them of expectations
- Set project workload expectations (8 hours/week)

Teaching versus Learning process
- See handout
Rhythm

• The semester schedule and the activities schedule should reinforce the need for rhythm
  – Agile teams need rhythm
  – Learning processes in PBL need rhythm

• Interactive:
  – What other student engagement activities require a rhythm?
  – Techniques for establishing a learning process rhythm with your students