

PRIMER: Final Design reviews (FDR's)

*EE Senior Design
Spring 2019*

Final Design Review

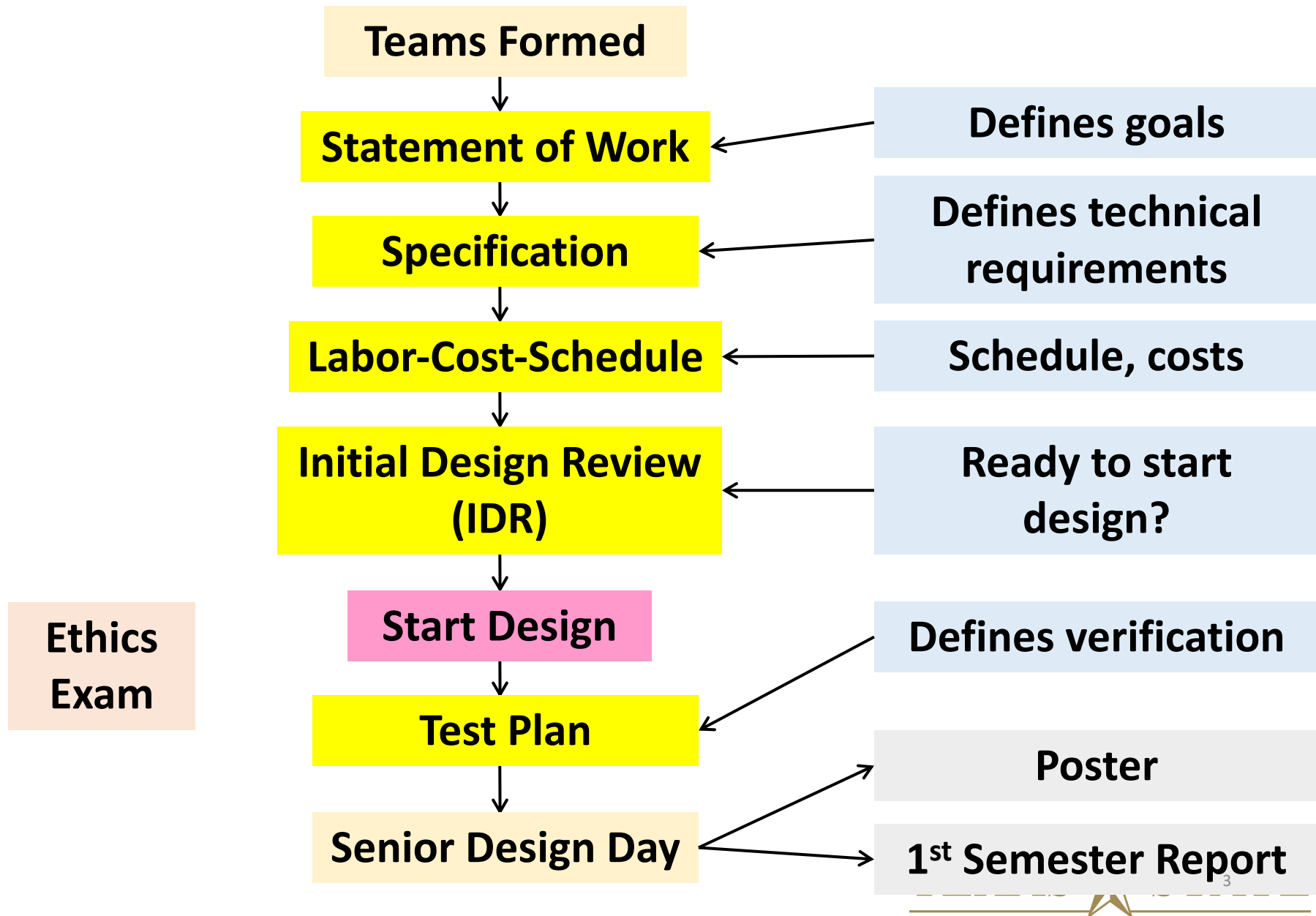
Engineering focused but multi-disciplined technical review to ensure that a system:

- meets performance requirements defined in the Functional Specification
- has followed the development process, ready to advance
 - characterization data collected
 - deficiencies are documented

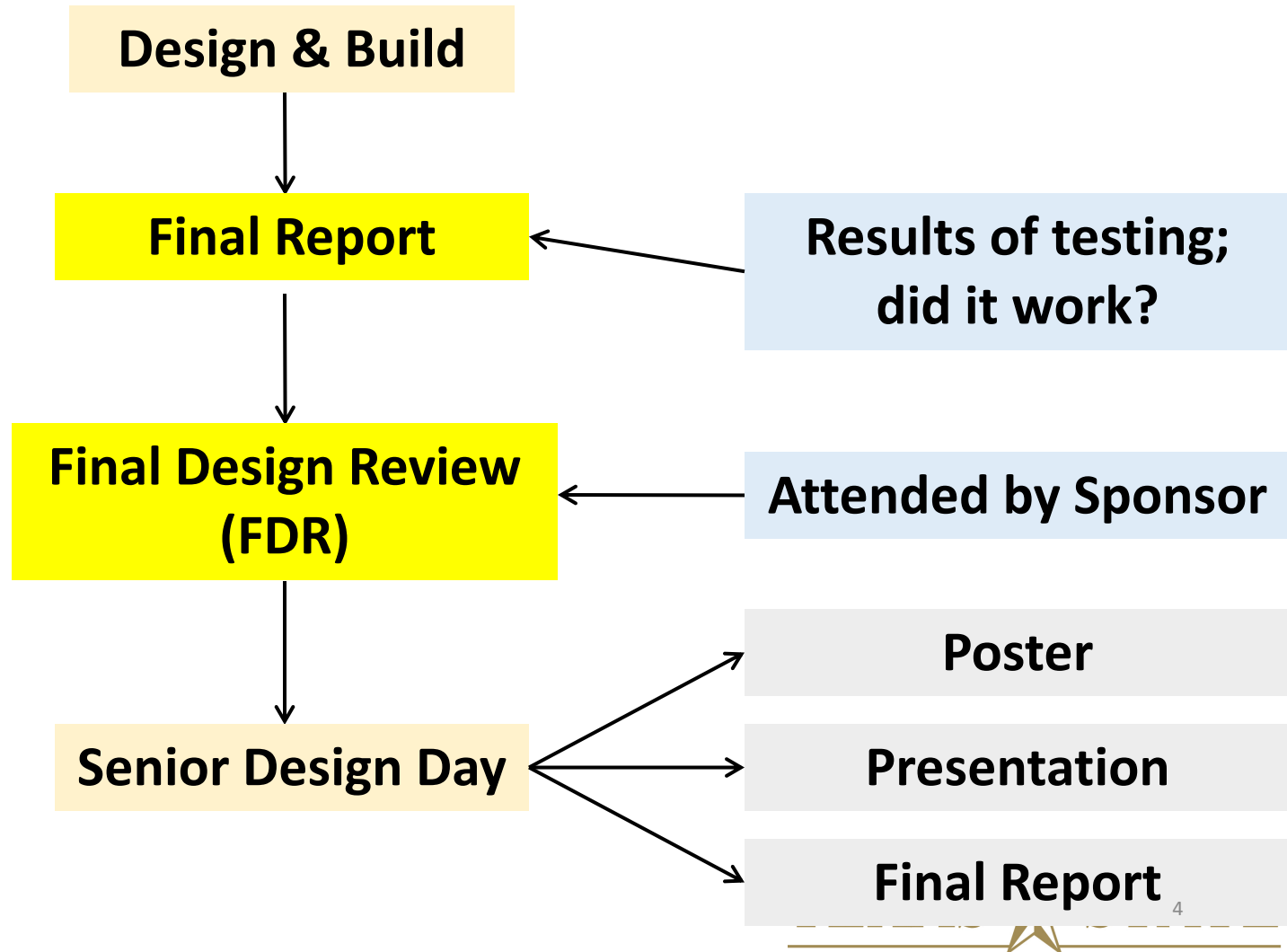
The FDR is a phase-gate; conducted during the Engineering & Manufacturing Development (EMD) Phase.

The FDR along with the final report and Senior Design Day performance heavily influences your course grade.

1st Semester Summary



2nd Semester Summary



Overview

- The FDR typically demonstrates that the maturity of the design is appropriate to proceed with manufacturing.
- The Review shows whether or not you've met overall performance requirements within the identified cost and schedule constraints.
- Progress against management plans, budget, and schedule, as well as risk assessment, are presented.
- The FDR takes place near the end of the second semester.
- Your Sponsor is invited but so are other members of our Industrial Advisory Board

An FDR should

- Determine that detail design of the configuration item under review satisfies cost (for cost type contracts), schedule, and performance requirements.
- Establish detail design compatibility among the configuration item and other items of equipment, facilities, computer software and personnel.
- Assess configuration item risk areas (on a technical, cost, and schedule basis).
- Assess the results of producibility analyses conducted on system hardware.
- Review preliminary hardware product specifications.
- Determine the acceptability of the detailed design, performance, and test characteristics of the design solution, and on the adequacy of the operation and support documents.

Italicized = EE Senior Design objectives

Student Outcomes

- Prepare you for similar design reviews in your professional career
- Receive an in-depth review of the outcomes of your project from your Sponsor and other attendees
- *Practice your presentation for Senior Design Day*

Behaviors

- You are expected to dress professionally, e.g., business casual although more is better
- Each person on the team MUST orally present
The entire team will be penalized if this does not occur
- The first time a person speaks during the oral presentation, he or she MUST state your name: *“I’m Sally Supreme, responsible for the user interface, and I’m going to talk about blah-blah.”*
- You must provide a means for the characterization data to be reviewed, e.g., hardcopies available at the FDR.
Remember – more than just your Sponsor may attend!

Sequencing

- Your Sponsor should receive a softcopy of your powerpoint at least 3 business days in advance of the FDR
- The PM starts the presentation
- **FDR's are 20 minutes**
 - **NOTE: SDD is 15 minutes**



- The FDR template is the *same* as your SDD presentation template!

Common FDR Mistakes

1. Too little or too much time spent introducing your project.
Give your elevator pitch – 30 seconds or so to set stage. What is your project and why should your audience care?
2. Failing to state each performance requirement and proving how your characterization data shows that the requirement was met.
3. Lack of supporting detail - you must bring characterization data and speak to the testing done.

Wireless communication = **PASS!**



Not enough detail!

4. Running out of time*
5. Lack of rehearsal and organization – this is a serious event

* everyone had the same amount of time

Common Presentation Mistakes to Avoid

1. Talking to a slide when the content appears later
 1. It's human nature to want to talk to a slide.
 2. Don't.
 3. Practice talking only to the slide so you can move on.
2. Reading the slide instead of paraphrasing it
 1. Everyone can read the slide.
 2. They can read it faster than you can say it.
 3. Paraphrase the content
3. Speaking too softly and/or too quickly
 1. You must be clearly understood
 2. Recall how your favorite instructor speaks – clarity, intensity – strive for this
4. Lack of rehearsal and organization
 1. It's painfully obvious when a presentation hasn't been rehearsed
 2. Rehearse at least 3 times
 3. Make sure everyone knows the sequence & plan

Presentation Skills

- Presentation skills are extremely important
 - You're promoting your ideas
 - You're promoting yourself and/or others
- Good presentation skills can make the difference between a mediocre and a superior performing employee
- The best way to improve your presentation skills is to
 - Practice in front of a live audience and seek feedback
 - Video record yourself and critique
 - Actively work towards better skills