# *Test Readiness Review Assignment*

*ASEN 4028, Senior Projects 2: Design Practicum*
*Spring 2015*

## 1.0 Document Purpose

This document outlines the objectives and deliverables for the Test Readiness Review (TRR) assignment.

## 2.0 TRR Objectives

The TRR serves as a formal interim review on the status of the project. Since the project is primarily in the testing phase, this aspect will dominate, but a complete picture of the project at its current state should be communicated. Accordingly, the TRR presentation should have the following structure:

### Overview (10%)

- Brief top level overview of your project purpose and specific, quantitative objectives (levels of success), including a brief overview of the project CONOPS and FBD.
- Review of the critical project elements, along with any updates on critical issues from CDR, FFR, MSR etc.

### Schedule (20%)

- Review the whole project schedule, showing overall progress toward goals. Highlight any major changes in the project schedule since MSR.

### Test Readiness (60%)

- Describe the scope of the testing tasks in the project: what tests are being planned, specifically what is being tested for, what models will be validated, the design of the test fixtures, what test equipment and facilities are needed, and an overview of the test procedures.
- Describe the status of the testing tasks, showing engineering details as needed to convey a solid understanding of the design, requirements to be verified or validated, and what V &V is most important for project success.

### Budget (10%)

- Provide an update on parts/materials procurement status and the financial budget status.

In this presentation, "testing" encompasses all those elements that you are verifying and validating in the design, including verification of mechanical components, electrical components, and software components, as well as integrated functional validation. Since all projects have these key components, all should be covered. However, use your time wisely to dwell on the most important aspects for success in your project.

The PAB must understand the state of your project relative to its goals. Realize that this understanding can't be conveyed by simple statements like "we are on track" or by superficial graphics that show boxes checked, etc. You must convey your engineering understanding of the design details along with the status of component testing in order for the PAB to assess the true progress toward overall project goals. Said another way, progress is shown by testing, but without conveying an improved understanding of the engineering details of the design through logical identification of required tests and specific measurement needs, the test plans and results are meaningless. Remember, tests should not just show "it works", but characterize "how well" and relate results to your modeling predictions and functional/design requirements.

At this point in the project, it is expected that many of the subsystem verification tests have been done. The major validation tests are probably not complete, but your team should be ready for all of these, including clear plans with the engineering details of how the test will be set up, how it will be carried out, and how its results will be used to verify and validate the project requirements. Since there are usually many tests to describe and time is short, think carefully about how to organize the discussion starting from the top levels and delving into those details that are necessary to convey a solid engineering grasp on your design and its testing.

## 3.0 Deliverables

The TRR will be an oral presentation in front of the PAB only. You may attend other group's TRRs, but attendance is necessary only at your own. The presentation will be limited to 30 minutes total, including questions. You should plan for about 20 minutes worth of presentation. In the interest of time, clarification questions may be asked by the PAB at any time. Answer these questions as clearly and directly as possible, but do not become sidetracked. If a point cannot be clarified immediately, move on or decide to omit less important discussion later so you can convey the critical engineering aspects in your project in the time allotted. As in previous presentations, time management and good planning are essential. Do not jump immediately into details without first providing the overview/definitions/context needed to understand the design architecture, terminology, and engineering details. Confusing descriptions/graphics only raise questions that will detract from your valuable presentation time. You may bring components to show, but do this judiciously, as this can sometimes distract the PAB from the understanding you wish to convey.

As in the first semester, all group members must contribute to the oral presentations sometime during the term, but not all must speak at every presentation.

Also, as in the first term, all presentation materials are due at the same time, before presentations begin, submitted on D2L. Hardware for show and tell does not have to be submitted beforehand.

Hard copies of the presentations are due at the time of presentation, as before. Nine copies are required, with six slides per page.

Customers are welcome to attend. If customers have time constraints, contact the course coordinator to try to schedule an appropriate presentation time for our group.

A team grade is given to each group. Self and peer evaluations will conducted for the period in the Spring term up to the TRR. Differential grading of TRR within the group will occur as in the Fall term, based on Advisor assessment of individual performance. PAB members will post their comments on D2L soon after the presentations. Grades will be determined according to the weightings shown in the TRR objectives section above.