Lessons Learned is part of the general process of “continued improvement” used in a variety of industries. The general idea is to keep from making the same mistakes. The specific goal of this lessons learned is to improve the lab component of ENGR-221. Because the intent is to make positive changes to the labs it is important that specific actionable recommendations be made for each issue that is raised, see below.

Excerpted from: http://www.nickmilton.com/2009/05/what-is-lesson-learned.html downloaded 03/12/2013

A Lesson Learned is a change in personal or operational behavior as a result of experience.

Let's look at the steps a lesson has to go through before it can be considered to be "Learned".

1. Reflect on Experience. Think back (and discuss as a team) what happened.
2. Identify learning points. Where was there a difference between what was planned, and what actually happened? Either a positive or a negative difference.
3. Analyze. Why was there a difference? What were the root causes?
4. Generalize. What is the learning point? What should be done in future activity to avoid the pitfall, or repeat the success? At this stage we have a Lesson Identified. It will be a useful lesson, if others can learn from it, and for others to learn from it, it needs to be instructional.

At this stage, let me have a short digression on "What makes a good Lesson". We tend to use the phrase "Specific Actionable Recommendation to describe a good lesson.

• A lesson needs to be specific enough that you can learn from it. Let's have none of the "Well, Duh!" lessons, please. I read a Lesson last week that said "To do X properly will require time, resources and effort". Well, Duh! And there was me, thinking it could be done in no time, with no resources or effort!

• It needs to be actionable - people need to be able to take action. So none of the woolly waffles such as "A better system for Y needs to be in place". How Better? What sort of Better? What elements need to be better? Who needs to put it in place?
• Finally it needs to be a recommendation, rather than an observation. I went through some documents recently which were purported to be lessons learned documents from an absolutely crucial project, and half of the "lessons" were observations. They had not got past step 2 above. They were statements such as "The team encountered great difficulty in Z, blah blah". Well, why did they encounter difficulty? What was the root cause behind that difficulty? And what would their recommendation be for other teams, to avoid that difficulty? There has been no analysis, so there can be no specific actionable recommendation.

My conclusion is that a Lesson Identified needs to be "A recommendation, based on analyzed experience, from which others can learn in order to improve their performance." We are still not at a "Lesson Learned" as there needs to be one more step - step 5.

5. Take action. As I explained here, a lesson needs to be accompanied by an action if it is to be considered Learned. A document, a procedure, a policy, a structure, a budget, or an order, needs to be changed. Then this change needs to be communicated, so working practices can be changed as a result. If nothing changes, nothing has been learned.

Proposed Lab Components to be improved:

Individual Labs

Overall Structure of the Labs

Goals of the Labs