Lab/work manual development

Laboratory/workshop practice or experiment is essential parts of component in the field of engineering course delivery. It is actually the process of application of theoretical knowledge acquired in lecture and reading. Moreover, it is experiment to a defined theory to prove or reject whether it works in the real situation. Its end goal is to familiarize students with practical skills.

As can learn from others' experiences lab/workshop activities without manual are nothing but confusion and wastage. Subsequently, we can say probably the most important tool to achieve education quality is having standardized lab/workshop manual for each course lab or workshop practices stipulated in the respective curriculum. Its vitality is justifiable by reasons beyond feelings:

1. Enhances clarity of a procedure involved in the activity and as a result, increases students' interest and confidence for execution of the procedure.
2. Reduces burden from respective lab/workshop assistances.
3. Enhances an instructor's knowledge and skills in a particular course and practices.
4. Minimizes variations in execution, as a result of a change of an instructor for a particular course.
5. Lastly, enhance quality of educational delivery and ultimately raise graduates' competency in the respective profession.

For the same end, all courses supported with lab or workshop practices needs to have manual for each lab practice, for instance, if the course has five labs throughout a semester, there should be a complete manual for each lab/workshop practices. The manual development includes clearly description of inputs in quantity & rate, tools and equipment, safety rules and the required lab conditions such luminance, temperature), operational procedure, objectives, expected outputs and return of equipment/tools to its place after use (find Table-1: Lab Manual Development Template).

There are two alternative approaches to prepare the manual in our case. In the first option, an instructor who taught a course for the past two years or lately is given the opportunity to prepare the manual. If two instructors are involved in the teaching course both have to take up the duties, in the coordination of the latest instructor. Technical assistants have mandate to work with instructors in the manual development process. In the second option, a group of chair members are assigned as s summer task to develop the manual with remuneration manageable within allocated budget for the same. Priority will be given to volunteers whom organized themselves *inclusively* for the same purpose on the first come and first serve basis. Any interested group can apply through e-mail or conventionally in writing till June 09.

Tentative deadline: each instructor is expected to submit the draft manual on August 20, and the draft manual is finalized by September 18.

The enclosed templates are prepared this purpose in order to standardize the assignment, and subject to review when need raises.

Table-2: Lab/Workshop Manual Development Template

No	Course Name and Code Lab #	Module Category: No:	Quantity
1	Lab Inputs (describe details)	The following materials required for lab # ___: • (e.g.) alumni sheet •	
2	Tools and equipment including software		
3	Safety rules		
4	Required lab conditions (if necessary)		
5	Specific objective(s)		
6	Operational Procedure		
7	Equations used for analysis (if necessary)		

8	Expected output(s)		
9	Where to return equipment/tools used for lab execution		
10	Disposal Techniques: if any disposable materials at the end of the lab		

Table-2: Lab Report Template

Module Category: **No:** **Course Number and Name:**		
Semester and Year:		
Name of Student (s):		**Name of Lab Instructor:**
No		
1	Lab Objective(s)	
2	Inputs used/materials	
3	Tools/equipment used	
4	Applied Procedure	
5	Equations used for analysis (if any)	
6	Output(s)	
7	Conclusion	
8	Date of Report Submitted:	Grade: