

Fire Science Laboratory

Advisor Checklist for Experimental Plan

The purpose of this checklist is to help the advisor determine whether a students' Experimental Plan is an appropriate and safe experiment.

Note that steps 1 through 9 are concept and planning issues while steps 10 through 15 are logistical issues dealing with implementing the concept steps.

Concept and Planning (steps 1 through 9)

1. Background

The reason for doing project?
What has been done before and problems encountered?

2. Objective

What is the scope?
What are the data to be obtained?

3. Process flow and instrumentation diagram (PID)

Are all the activities included that are required to meet the objective?
Is the approach valid?

4. PID Components

Is all the equipment that is required listed?
Is waste disposal accounted for?
Does the lab have everything needed or is there a way to buy items?
Where are experiments going to be conducted?

5. Safety issues

Does it list the materials and chemicals and how to handle them?
What does the MSDS say ?
What Protective Personal Equipment will be worn?

6. Failure Possibilities

Have they considered all reasonable failure possibilities?

7. Checklist

Is there a checklist?
Pre-test, test and post-test procedures?

8. Checklist specifics

Is notification method valid?
Are the “trouble” indicators?
Are there enough people to run this experiment?

9. Emergency shutdown

Are definitions of an emergencies or shut down situations included?
How will they monitor them?
Will they shut down without causing more problems?
What safety equipment could be needed?

Logistics (steps 10 through 15)

Have they made plans or thought about:

how to check out the apparatus?
how to do a team review?
how to inform others of imminent testing?
how to check validity of data?
clean up afterward?