**Mechanical Engineering SOP Instructions and Process**

The goal of the Standard/Safe Operating Procedure (SOP) is to help the experimenter identify and understand the hazards involved in performing their experiment or using a particular piece of equipment. It also serves as a training device so that new users may quickly come up to speed on how the equipment/experiment is used and the hazards related to it.

The SOP process should start well in advance of the work to be done. Almost without exception, this is an iterative process where the author produces a draft which is then examined and critiqued by the Faculty Advisor (FA), the Departmental Safety Officer (DSO), and others as needed. The draft is then discussed and revised to incorporate the best elements of the initial draft and the critique.

The following steps outline the process to generate your SOP in the fastest possible manner so that work can proceed in a timely fashion.

1. As soon as the experiment or piece of equipment is *planned*, start the SOP process. Do not wait until equipment arrives or experimental parts are ordered as they may change significantly.
2. Identify the **initial** hazards of you experiment/equipment.
3. Arrange a meeting with your FA and the DSO.
   1. At the meeting, you will explain your experiment/equipment and the hazards associated with it.
   2. During the meeting, your FA and DSO will likely identify additional hazards and help you develop a plan to address them safety
4. Use the feedback from your meeting with the FA/DSO to generate your SOP DRAFT
5. Send the draft to the FA and DSO for review and comment
6. Discuss/incorporate feedback and modify the SOP as required.
7. Continue the process until the FA and DSO agree that the project can be performed safely and effectively if the SOP is followed.

It is strongly suggest that you follow the general outline above. You are free to draft the SOP prior to meeting with the FA and DSO, but it may change dramatically after the meeting and the FA and DSO will often give guidance that will minimize your time generating the document.

**Department of Mechanical Engineering**

**North Dakota State University**

**Project title:**

**Primary investigator:**

**Graduate research assistant:**

**Intended workplace:**

**Standard Operating Procedure**

1. **Introduction:**
2. **Objectives**:
3. **Procedures:**
4. **Equipment to be used**
5. **Materials to be used**
6. **Possible hazards**
7. **Hazard mitigation:**
8. **Wastage disposal:**
9. **Project timeline:**
10. **Start date:**
11. **Signatures**

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| --- | --- | --- | --- |
| Principal Investigator: |  | Date: |  |
| Graduate Student(s): |  | Date: |  |
|  |  | Date: |  |
|  |  | Date: |  |
|  |  | Date: |  |
|  |  | Date: |  |
| Depart. Safety Officer: |  | Date: |  |
| Department Chair: |  | Date: |  |