

## ME328 Machine Design Project DID 3 - Establishing a plan

This document discusses the work that needs to be completed for DID 3 and it also discusses roles and responsibilities for the semester.

You have each done some basic background work on the Uganda project (and “Phase 1: proof of concept” which is the work that will be completed in ME328). DID 3 is for you to come together as a team:

- Establish a time for weekly meetings (allow for at least 1 hour, preferably 2 hours, but you may not always take that much time).
- Establish team leadership schedule (details below)
- Establish Knowledge Gap (KG) schedule. A DID is required for each KG. See list of KGs on the course web page.
- Establish leadership schedule for test work (details below)
- Establish criteria as a team for the Uganda project and separate criteria for “Phase 1” (ME328 work: proof of concept).

### **Establish team leadership schedule**

Each engineer (student) will be the team lead engineer for at least 2 consecutive weeks. For DID 3, create the schedule for leadership (determine dates each engineer will be lead engineer).

Assume the project will run through the last week of class. Duties of the lead engineer are to:

- Call and run at least one team meeting:
  - create the agenda for the meeting (at least 48 hours in advance), send an email meeting notice **TO** the team and **CC** Lulay (send it **TO** the team, **CC** me). The email subject line should state: *Team XYZ (XYZ = the ID I give you), meeting notice.*
  - Run the meeting – use the agenda to keep on task
    - Discuss open action items (AI’s), discuss them, assign new AI’s
  - After/during the meeting, create meeting notes including updating the ACTION ITEM log, and email the minutes and AI log **TO** all team members and **CC** me. Subject line: *Team XYZ meeting minutes from MM/DD/YEAR (date)*
- Help individuals stay focused and make sure they complete their AI’s.

### **Establish a schedule for when each DID, associated with each KG**

Each team is to create its own schedule for completing the DIDs (a DID is required for each of the KG’s – see course web page). The team will be held accountable for meeting their own deadlines (penalty for late submission). The schedule must spread the work throughout the semester – one DID should be due near-weekly.

### **Establish leadership schedule for test work**

During the semester, each team will have to conduct at least 4 distinct tests. Each engineer will be responsible for at least one of these tests. For DID 3, create the schedule (identify individuals and approximate dates for completion). Duties of the test engineer are:

- Familiarize yourself with the resources available (test facilities, etc.) for testing.

- Create a test plan (a very much shorter version of what is described on pp 13-19 of <http://faculty.up.edu/lulay/MEStudentPage/labbooklet-Rev19D.pdf>)
  - Concisely explain the purpose of the testing
  - What will be done. ‘Bullets’ rather than complete sentences may work best for describing what will be done. Photographs may be helpful. Concise but complete!
  - Create a data sheet with labeled “blank spaces” to enter the data (**see page 18 in the above link**).
  - A place for each team member to sign indicating their approval.
- Provide a copy of the test plan to all team members at least 24 hours prior to testing and cc a copy to me. All team members are to provide any necessary feedback but eventually sign-off on the test plan (literally, sign it indicating your approval).
- Select at least one team mate to help conduct the test.
- Conduct the test (fill in the data sheet).
- Create and submit to the instructor a DID to document the work:
  - Compile the above documents
  - Write a meaningful conclusion explaining the results and their significance. It must be clear how the test results will be used in the design process.

### **Establish criteria as a team for the Uganda project and separate criteria for “Phase 1”**

As the VP of Engineering (*I always wanted to be that, so let me pretend*), I am suggesting you spend about 15-30 minutes on defining criteria as a team – focused on the task. Discuss the criteria you each created for the Uganda project. Do not make this personal, but as a team identify what you believe are appropriate criteria. I would expect about 6-10 specific criteria for the Uganda project. Repeat this for the Phase 1 criteria (the work you will be doing for ME328). These may be very very different than the Uganda project. The purpose of Phase 1 is to demonstrate the team’s ability to design a transmission to meet specific requirements (even though those requirements have not yet been established). I would expect at least 3 important criteria. When submitting the team’s criteria, also ATTACH ALL INDIVIDUAL CRITERIA TABLES. Criterion: singular; Criteria: plural.

### **What to submit for DID 3:**

- Time set aside for team meetings (what day of the week and at what time)
- A schedule for team leads (who will be lead on what dates)
- A schedule for when each DID, associated with each KG, will be submitted. The team will be held accountable for meeting their own schedule.
- A schedule for testing (identify individuals and established completion dates)
- Two criteria tables – one for Uganda project, one for Phase 1.
- All criteria tables by all team members submitted in DID2.

### **ALL DIDS MUST INCLUDE:**

- Team ID (the number assigned to you by the instructor)
- Names of all team members
- Due Date and Date Submitted (should be the same)
- Class number and SECTION (ME328 A or B)
- Meaningful “title” – very briefly, a few words that describe the DID