Senior Design Project Accountability – Spring 2016

In the senior design project courses ECE 186 A and ECE 186B sequence, students are expected to design and build a project upon previous courses and knowledge that they have learned. In the first course the ECE 186A emphasis is placed on the project team formation, project identification and the team feasibility study to develop required technical skills for their engineering problem and project initiation. The specific activities for the ECE186A include: team professionalism and expectations, regular weekly meeting, project management, project research and analysis, creative problem solving, project plan, peer evaluations, oral presentation and a formal written project proposal. The proposal includes problem statement and the proposed design solution, timeline schedules, responsibility of team members, a real dollar budget and the project master plan to include all other resources that will be needed for the project execution. In the second course the ECE 186B in the next semester, you will enter into completing the execution phase of your project to create a design prototype and deliver a complete formal project report, project poster, project eportfolio and deliver a more formal presentation.

It is very important that by the end of the semester, you address key issues that demonstrate the validity of the conceived project idea and high probability of success in implementing it. You must show the concept of your project with clear outcomes and the footwork needed to insure its completion and implementation on schedule through a work breakdown schedule. Major hardware and software components must be ordered and tested for validity before the end of the spring semester.

Project Life Cycles
Collectively, project phases are usually referred to as the project life cycle. Each project phase provides a deliverable upon completion. Deliverable are tangibles, verifiable work products such as minutes of your meetings, detailed plans, project proposal report, prototypes, or finished product. The overall project will be a composite of the following phases.

Phase 1: Initiation – This phase of the project is the pre-planning phase; it usually results in a brief problem statement, detailed objectives and tasks for the project. A feasibility study is carried out to determine the project of interest, what the accomplishments should be, and a general definition of the project scope. The initial phase is the entry point for the senior design project management process.

Phase 2: Planning – Project planning defines the individual project activities, tasks delegation for both team leader and members and required resources. Schedules, including goals and deliverables, are created and budget is developed during this phase of the project. Planning also includes the identification of objectives to be met by project team members during the course of the project. A number of computer tools are available for this phase, including the various charting schemes used to graph the project plan. For extra credit I would advice you to consult with the instructor for guiding you to incorporate them into your project.

Phase 3: Executing – The execution phase of any project involves the coordination of project recourses in order to complete each task outlined in the planning phase. The team leader must provide leadership for project team, guide the team, and make sure that all tasks are completed within the prescribed criteria for time, budget and quality.

Phase 4: Controlling – This phase involves the overseeing by the team leader of all aspect of the project. The project team leader must monitor progress toward the objectives and take corrective action if any deviation from the plan occurs. The team leader is responsible for monitoring resources, time, team members, costs, and technology.

Phase 5: Closing – Every project must eventually come to an end. The final phase of the project involves the steps required to finish or close out the project. A project review is usually undertaken to measure and compare the project outcomes with the objectives outlines in the project plan. A final formal project report to include all phases of the

project, a project poster, an oral project presentation and project eportfolio will be the deliverable by the end of the ECE 186B.

Important Parts of the ECE 186A Project

1. **Project Journal:** It is mandatory that a day-to-day journal be kept throughout the project. Purpose of the project journal (project diary) is for each team to capture and organize a chronological history of all activities with dates and time noted in conjunction with the senior design project. The journal should be kept as neat as possible. It must be started with all thoughts from the decision of the project topic through the completion of the project. The journal must contain the development of the thinking of the investigators (Team) through the project, all weekly minutes, activities, responsibilities, design decisions, schematic diagrams, investigations, vendors, parts, and other activities that play a significant role in completion of the project. All information must be updated in chronological order as you go along, in order to help you and the instructor to monitor and assess work done on the project. Finally, in the event that project results in a potentially valuable intellectual property, the journal could be used as an evidence of the project Intellectual Property.

2. **Weekly Meetings --** An important skill in handling projects is regular weekly meetings. Therefore, it is required that each team meet regularly in the official class period and outside of the class weekly. The team leader will set the standard for the preparedness expected of all team members. It is very important to define a clear cut goal for each meeting, create an agenda, and distribute the agenda to each student at least a one day before the meeting. This will allow them to target their own preparations. The team leader must specify before everyone leaves the meeting that what is accomplished in that meeting and what action each student is accountable for the next meeting. The project meeting outcomes can be used as a tracking and control both for the student as well as the instructor. If it is done well, project meetings can effectively uncover problems and solve them in a timely manner. One student from each team will be responsible to record

discussions, actions and what happen in each meeting in the form of minutes in the project journal. There are two keys to a useful and productive meeting.

a.   The first is to have a clear-cut goal for each session.

b.   The second is what exactly do you expect to accomplish in each session

You may use the following sample minutes format to prepare your meeting minutes as well as documenting it into your project journal.

Name of Team
Day & Date Time Location

PRESENT: Names of all those present at the meeting

Excused: Names of team members who have contacted the team leader if to unable to attend the meeting

ABSENT: Names of team members who DID NOT contact the team leader to let him know that they won't be in attendance

1. **CALL TO ORDER/OPENING REMARKS**
     Time that the team leader called the meeting to order
     Any opening remarks summarize here

2. **Approval of the minutes from (date) with making a motion to approve the**
    minutes of the previous meeting.
     Motion**:** To approve the minutes of (DATE) as circulated
     Motion By: Name of person who made the motion
     Seconded By**:** Name of the person who seconded the motion
     Carried or Defeated

3. **ADDITIONS TO THE AGENDA** (If anyone has an item that they would like to be added to the agenda they would bring it up.)

4. APPROVAL OF THE AGENDA
     Motion: to approve the agenda as circulated
     Motion By: name of person who made the motion
     Seconded By: name of person who made the motion
     Carried or Defeated

5. **BUSINESS ARISING OUT OF THE PREVIOUS MEETING**
  a. Outstanding Items or unfinished business from the previous meeting that need to be updated or discussed further

6. **NEW BUSINESS - ITEM # 1 TO BE DISCUSSED**

- Put a summary of the discussion around the topic
- If a motion was made put the information in here
- If further information is needed agree on who is to do the follow up and put their name and a timeline that this information will be completed

Task: put who is to do it and when it is to be completed by (DATE)

7. **NEW BUSINESS - ITEM #2 TO BE DISCUSSED**
   - Put a summary of the discussion around the topic
   - If a motion was made put the information in here
   - If further information is needed agree on who is to do the follow up and put their name and a timeline that this information will be completed

   Task: put who is to do it and when it is to be completed by (DATE)

8. **ADDITIONS TO THE AGENDA**
   a. Added agenda Item # 1
   Task: Put a summary of the discussion around the topic and who is to do it and when it is to be completed by (DATE)
   b. Added agenda Item # 2
   Task: Put a summary of the discussion around the topic and who is to do it and when it is to be completed by (DATE)

9. **ADJOURNMENT** (Record the time and adjourned the meeting.)

10. **NEXT MEETING (DATE)** (The next meeting date should be decided before everyone leaves the meeting.