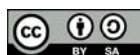




Project Proposal Template		Date:	Evaluation criteria:		
Team Name/mission statement		Academic/Industry Mentor	1.Innovation (15)		
		Name:	2.Final Design Report (25)		
		E-mail:	3.Completeness(10)		
		Tel.:	4.Practicality(25)		
			5.Complexity(10)		
			6.Design working in H/W(10)		
			7.All-undergrad team(5)		
Team Member	e-mail	Role/Responsibility			
Problem statement: What problem it solves? Or, what feature does it improve?					
Measure of success: How will you know you have achieved your goal?					
Proposal (100-200 words): How will your device solve the problem described, or improve the feature selected?					
Activities/Timeline	January	February	March	April	May
Req'ts					
Design					
Task Assignment					
Specification					
Test Plan					
Implementation					
Verification					
Deliverables	[Project Proposal]	[Progress Report]		[Final Report]	[CCECE]

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Project Planning Suggestions

Putting together a team

Most teams probably start with a few students that share friendship or a common interest in participating. The advice given by Kathleen Melymuka, writing in Computer World, will probably help you put together a team. We have edited her list as follows:

- Small teams do better due to lower communication overhead (Brooks' law)
- Look for people with positive attitudes.
- Extend beyond your group of friends: counterbalance.
- Set clear ground rules at the very start. Set clear achievable, unambiguous and mutually attainable team and individual goals.
- Hold individuals accountable to team and committed to project.

Selecting a goal

Starting with a clear objective will be key, your team may select a challenge based on affinity, or knowledge in an area that can be used on WE CARE Solar's system; regardless of the reason, it is of first importance to get team to commit to a problem to solve before planning can really start.

Selecting a development process

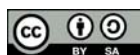
One of the initial meetings the team should have is a planning meeting to help all team members become familiar with HIC's Student Humanitarian Design competition: objectives, requirements, timeline, deliverables and evaluation criteria. The purpose of this meeting is to agree on a formal or informal development process that will be followed throughout the solution development; this process should clearly define, for example: who will keep the project documents up-to-date, how often updates shall be reported back to the team, what means will be used to communicate (Google docs, email, etc).

Brainstorming

Another key initial meeting is a brainstorming session; it may be combined with the planning meeting. Its purpose is to generation as many ideas as possible, the creation of a reservoir of ideas to draw from as the projects forms. There are four basic rules in brainstorming: focus on generating the most numbers of ideas; withhold criticism until a later 'critique stage'; welcome unusual ideas; combine and improve ideas. A brainstorming session could be structured as follows:

1. Provide context information to participants.
2. The facilitator may use lead questions to stimulate creativity
3. The facilitator ensures that ground rules are followed:
 - a) May run a warm-up session, for novice participants.
 - b) Presents the problem and gives a further explanation if needed.
 - c) Asks the brainstorming group for ideas.
 - d) If no ideas are forthcoming, uses a lead question to encourage creativity.
 - e) All participants present their ideas, and the idea collector records them.
 - f) To ensure clarity, participants may elaborate on their ideas.
 - g) When time is up, organizes the ideas and encourages discussion.
 - h) Ideas are categorized.
 - i) The whole list is reviewed/critiqued to ensure understanding by all.
 - j) Duplicate ideas and obviously infeasible solutions are removed.
4. Usually, in its final stage, the team will select one idea.

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Task definition, scheduling and work distribution

Finally, once an idea is selected, it is key to identify the steps (tasks) needed to accomplish it; these must then be assigned to team members within the framework of a schedule. We will describe the Gantt chart technique to manage a project: the technique used is not important, but adopting a proven project management technique will significantly increase the chances of success. Tasks are significant activities the group will need to perform to accomplish its goals. They are given:

- a name/description
- an estimate of the amount of calendar time required
- a list of other tasks (if any) that must be completed before this task can begin

In a Gantt chart, the horizontal axis is (linear) time; each task is given its own horizontal band where the calendar duration of the task is indicated by a box, line, or other object with a variable horizontal dimension. Tasks are often grouped into categories, and each category can be treated as a summary task whose duration spans all the tasks within that category. Tasks are generally listed from top to bottom in the order they will occur; if there are groups of tasks, the tasks are chronological (by starting date) within a group, and the groups ordered by starting date. A vertical line is usually placed on the chart to show the current date. Other important milestones can be noted (and labeled) with dotted vertical lines at the appropriate dates. What follows is one way of creating a Gantt chart.

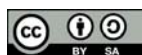
1. List all known milestones, deadlines, and deliverables (papers, presentations, etc.)
2. List all outside constraints on time (holidays, exams, etc.), money, equipment, etc.
3. Create a list of tasks (brainstorm).
4. For each task in the list: time (in person-hours, then estimate calendar); dependencies (other tasks); resources (money, parts, equipment); who will be doing it
5. Organize the task groups, and tasks within groups, by starting date
6. Use Excel or other tool to create the Gantt chart
(<http://www.vertex42.com/ExcelTemplates/excel-gantt-chart.html>)

We hope these simple project planning suggestions will allow you creativity and talent come through.

Student Project Planning Suggestions References

- http://en.wikipedia.org/wiki/Brooks_law
- [How to Pick a Project Team](#)
- [Building your project team](#)
- <http://en.wikipedia.org/wiki/Brainstorming>
- [An overview of Gantt, PERT, and CPM charts](#)

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