Project Planning

Date

Project Name

Team members

Executive Summary:

Briefly introduce the project, and “what” problem this project is solving. This section may include major

deliverables, business objectives, or technical objectives. Generally, the narrative simply provides a

broad overview of the intended use for the project. Typically, this section is 1 or 2 paragraphs.

Scope:

The scope section addresses the major activities and deliverables of the project. Include technical

assumptions, ground rules, and relevant technical data necessary to bound the tasks and activities. The

reader needs to understand the technical scope of the project. Typically, this section varies from 2 to 5

paragraphs.

Legal and Ethical Analysis:

Many engineering products have the potential to be misused, or used for a purpose other than

intended. It happens more often in this data-connected world we live in. The project needs to be

analyzed from this view. Who would have thought a fitness app exposed the location of military

personnel while they were overseas? What needs to be considered, or added to the design, to prevent

unethical or other-than-legal use of the project?

This is the ABET grading for the section:

From ABET SO-4 (EE/CE): Informative and accurate description. Analysis clearly identifies

potential product negative impacts where product may be used for alternative purpose(s),

product failure having a negative impact on societal norms, economics, environment, etc. impact

analysis includes determination of design criteria to implement safeguards or product

protections to prevent undesirable outcome.

Informative and accurate description. Analysis clearly identifies product failure, misuse, or

feature incorporation that potentially generates an action at law with negative consequences.

Analysis includes specific design criteria, process, or risk mitigation necessary to avoid potential

legal issue.

From ABET SO-4 (CS): Informative and accurate description. Analysis clearly identifies potential

negative impacts where poor product performance or software architecture may result in

product failure having a negative impact on customer. Impact analysis includes determination of

software design criteria to implement safeguards or product protections to prevent undesirable

outcome.

Informative and accurate description. Analysis clearly identifies risks associated with software

failure, or feature incorporation that potentially generates an action at law with negative

consequences. Analysis includes specific software design criteria, process, or risk mitigation

necessary to avoid potential legal issue.

Team Analysis:

From ABET SO-5 (EE/CE): Analysis of team composite skills clearly identifies where the team has

gaps (shortages) in technical skills; clearly identifies where the skills shortage would impact

requirements gathering, requirements analysis, system design, technical implementation,

prototype build, integration testing, and requirements validation/verification. Analysis of team

composite skills identifies where the team has residual skills that may be utilized for additional

concurrent activities, and acquire (learn) new skills to fill identified technical gaps.

The planning document covers the first semester of senior design. The narrative of the

document: 1) clearly identifies the task level work statement from requirements gathering to

prototype validation; 2) correlates work statement tasking to requisite skills needed to

accomplish the task; 3) clearly identifies when the task needs to be complete; 4) clearly

articulates the expected outcome of the task when complete; and 5) clearly identifies how the

progress of the task is reported to the team.

From ABET SO-5 (CS): Analysis of team software skills clearly identifies where the team has gaps

(shortages) in software development and implementation capabilities; clearly identifies where

the skills shortage would impact computing system design, technical implementation, prototype

build, and integration testing. Gaps in the depth of software knowledge are clearly identified to

the team as a risk to the project development.

The planning document covers the first semester of senior design. The narrative of the

document: 1) clearly identifies the task level work statement for the development of software

requirements; 2) correlates work statement tasking to requisite software skills needed to

accomplish the task; 3) clearly identifies when the task needs to be complete; 4) clearly

articulates the expected outcome of the software task when complete; and 5) clearly identifies

how to measure software development activities and report progress to the team.

Tasks and Deliverables:

This section is the actual work instruction of the project. Identify the tasks and deliverables for each

phase of work. A typical product development lifecycle will include a number of phases. Depending on

the type of project, phases of the project may include:

• Project Management (over the project life)

• Research Phases (requirements, design compliance, safety, etc.)

• Design Phases (initial prototype, lab test, pre-production, etc.)

• Build and Construction

• Integration and Test

• Implementation

• Final Testing

• End User Training

Deliverables generally fall into two main categories (business or technical). A business deliverable often

includes formal documentation required by a project sponsor (e.g. Bill of Materials, User Manual, and

Administration Manual). Technical deliverables are often product development or product testing

related. Some teams may choose to track when internal deliverables are completed (e.g. development

environment set up, first code-base release to other developers, schematics created, etc.)

Example deliverables scheduled may include:

• Design phases start or complete

• Interim work products available

• Specific test plans generated

• Specific tests completed

• Project milestones reached

• Specific project reviews completed

• Required technical reports generated

• Analysis accomplished

• Etc.

Note: Include a brief description of each deliverable. For a plan that has many deliverables, a table is

typically produced in this section. This is usually a lengthy section of the document. Remember to

identify “what” work to do, not “how” to do the work. Depending on the granularity of the tasking, this

section can range from 2 to 5 pages long.

Integrated Schedule:

This section identifies when specific work needs to take place, and when specific deliverables are

required to be available. Meetings, design reviews, first article testing, (etc.) are scheduled to manage

project risk. This section is generally 1 to 3 paragraphs and includes an itemized list (or table) of

scheduled events.

Acceptance Criteria:

This section of the plan defines both “how” deliverables will be validated (tested to the requirements),

and “when” the tests will take place. Many projects will perform testing during the development

process... This implies a test plan is created that a team member will execute. Suggested activity is to

schedule time to create the test plans.