# Milestone 1: Prep (Planning Phase)

**Objective:** The goal of the project proposal plan is to identify the purpose of the project, outline the work to be done, and design a timeline for completing the work. The project proposal plan will contain a management plan, technical approach, and resources needed to complete the project tasks within the allocated time and budget. In addition, the project proposal plan should contain a cover page, containing at a minimum a project title, author, course number, instructor name, document revision number, and date along with a 3-5 sentence abstract that provides an overview of the project and introduces the reader to the document.

All project proposals must be approved by the currently designated advisor/mentor before project development can occur. Once Milestone 1 is approved by a designated mentor/advisor, another mentor/advisor should not contradict that decision. A Project Proposal template can be found in the class resources.

**Deliverable:** Submission of the [Capstone Project Proposal Form](#_C_apstone_Project)

Refer to the information below for additional details on each section of the capstone proposal form.

General Information

The general information section of the Project Proposal Form should list the following:

* Cover Sheet: Project name, author, course number, instructor name, document revision number, and date the project proposal form is submitted
* Project Abstract: 3-5 sentence abstract that provides an overview of the project and introduces the reader to the document
* Project organization, if applicable
* Project manager, if applicable

Project Overview and Project Objectives

The *Project Overview and Project Objectives* section of the Capstone Project Proposal Form states the business case or the problem that this project will be solving.

Example: The purpose of this project is to develop an online voter registration application that allows citizens to register to vote from any location where web access is available. The goal is to develop a secure application that is easy to access and use so that a wider population will have the ability to register to vote.

Background is one of the key characteristics of a project to explain why the project should be initiated, what the prerequisites are, and what results are supposed to be obtained at the successful completion.

Add a few sentences about the high-level business need or justification for the project, as well as how it originated and other background information. While this information may be obvious to you and the project sponsor, you should be aware that a scope of work is often distributed well beyond the immediate project audience. This background clarifies the usefulness of the project to someone who is not familiar with the project.

Example: Fabrikam, Inc. is migrating its current fabrication design system to new hardware and software platforms. Fabrikam, Inc. employees designed and developed the current Fabrikam-D system, which uses Fortran and runs on obsolete hardware. The Fabrikam-D system produces schematics and bills of material for fabrication jobs.

This project plan is a reference for all project personnel to guide the project through its successful completion to achieve Fabrikam, Inc.'s business and system objectives. After individually reviewing this version of the project plan, Fabrikam, Inc. stakeholders will meet to approve the approach before the project begins.

Project Scope

The *Project Scope Section* of the Capstone Project Proposal Form states the scope of the project. Include details about the project, such as:

* Is it a real time system?
* Is it all screen-based?
* What reports can be produced?
* Where does the information come from?
* What manipulation is required for the data?
* Does it store data?
* How will the system manage security?

Project Completion

The *Project Completion Section* of the Capstone Project Proposal Form describes what measures will be used to calculate project success to include completion criteria, assumptions, and constraints.

Completion criteria are explicit goals that must be attained to call an element of a project, or the entire project, "complete."

Example: Successful Project Measurements for the Online Voting System

1. Developed within the time allocated
2. Developed within cost
3. Meets the desired performance/technology level
4. Utilized the assigned resource effectively and efficiently
5. Customer approval and acceptance
6. No disruption to the main workflow of the organization
7. Coincides with the corporate culture

**Important Notes:** There can be projects in which performance is irrelevant because the main accomplishment is a product's completion (i.e., an algorithm). Therefore, the issue of measuring performance versus product completion must be decided and expectations set at this time. In other cases, students will work on projects just for themselves so there will be no approving party for the acceptance test final report. The instructor should help the student address and document this before moving to Milestone 2.

Project assumptions are events and circumstances that are expected to occur during the project life cycle for successful implementation and completion. Although assumptions are the driving force that determines project success, typically they are outside the total control of the project team. Project assumptions are accepted as true, often without any proof or demonstration.

Example: The online voting system is a new website; it is anyone's guess what the demand will be. What should the performance goal be in terms of concurrent users? The server must be able to handle the load for the number of concurrent users while maintaining performance.

Constraints are limitations affecting the project. Examples include timelines, resource availability, funding, and other important factors that affect project success.

Project assumptions and constraints tend to exist around project resource availability or competence. That is why, when developing a description of assumptions and constraints, try to give extra consideration to project cost, timing, and human-related issues.

Example: There is an unknown delivery timeframe for a key project component that would directly impact the scheduling critical path.

**Important Note:** There can be projects in which performance is irrelevant because the main accomplishment is a product's completion. Therefore, the issue of measuring performance versus product completion must be decided and expectations set at this time.

Acceptance by whom is also an issue that must be decided in the proposal phase. Many students will work on projects just for themselves, so there will be no acceptance. The mentor/advisor should address this question early on in the project.

Project Controls

The Project Controls Section of the Capstone Project Proposal Form defines the potential risks and lists steps to prevent the risk from occurring, or the steps to minimize the chances of it happening.

This section describes how the end user will be involved in the software development. Include relevant information about meetings, reviews, and presentations.

Project Schedule

The *Project Schedule Section* of the Capstone Project Proposal Form sets a schedule by implementing work breakdown and task time estimates. It will be essential in this section to create a timeline (or Gantt chart) with dates for completion of key components of the project.

Issue Log

The *Issue Log* section of the Capstone Project Proposal Form creates and maintains an issue log to identify and monitor project issues.