

Senior Capstone Project Proposal Guide and Outline

Objectives

The capstone project facilitates a student's transition from ISDTU to an industry career through development of a high-quality software product for customer needs. Students address challenging problems in the scoping, design, development process, quality, schedule and management of their projects. Working with industry partners, students may be required to rapidly learn new software development technologies, roles, tools and lifecycles, perhaps even in an interdisciplinary team where they find themselves the computer science experts.

Guidelines for Pilot Student Projects

1. The capstone project provides the student development team with an opportunity to specify, design, implement and test their first software tool, application or product for a customer. Suitable projects include:
 - a. A software tool or application to enhance the efficiency or quality of the customer's business
 - b. A software product to enhance, promote or compliment the customer's existing product line may sometimes be suitable
 - c. An ideal project enriches but is not critical for the customer's business
2. The scope of the project must allow the student team to finalize the specification in one semester, and complete the design and its implementation in the following semester.

Pilot Capstone Project Proposal Template

The project proposal need not be a detailed specification. The proposal merely introduces the project to the student development teams, and provides the up-front information necessary for the team to developing a specification.

Project Definition: *Briefly describe the tool, application, product or solution to be developed/ constructed (hereafter simply referred to as the “product”).*

User Needs: *Describe the end users of this product and their needs. Needs may be written as User Stories (i.e. “As a <role>, I need <goal or desire> so that <benefit>”) if the customer prefers.*

Prior Art: *Briefly describe existing solution(s) and the ways in which they do and especially do not address the User Needs identified above. Is there any feature of an existing solution that must be preserved? Abandoned?*

Proposed Solutions: *Describe any proposed solutions, if known, indicating any mandatory technologies, code, data, features or frameworks. If unknown, indicate this will be a “green field” project granting the development team considerable room to innovate.*

Deliverables: *Describe the required deliverables (e.g. client-side application, server-side application, web service, installers, documentation, security architecture etc).*

Lifecycle: *The project lifecycle (e.g. waterfall, agile, etc) may be specified by the customer or by the student team, subject to the instructor’s approval. Identify the success criteria for the end of the project.*

Timetable: *Determine and present a week-by-week plan – the “when” – that you can follow to balance the workload and assure that preliminary needs are met early on.*