



# **IDE 400**

## **Senior Innovation I: Project Planning**

Charles V. Schaefer, Jr. School of Engineering and Science  
Fall 2024

### **Overview**

This course supports students in working on their senior projects by identifying project topics, forming teams, and creating a project charter. IDE 400: Project Planning focuses on techniques required to identify customer segments, interview potential stakeholders, and develop a set of technical requirements for their capstone design project.

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### **Introduction to Course**

Engineers are involved in the creation of novel technological solutions and their transformation into products and services. This course enables students to define their senior design project and manage it from the initial idea to detailed planning stages. Students will engage in activities to identify and prioritize the needs of customers or stakeholders and translate these needs into technical requirements. They will learn techniques to scope projects, identify risks, and analyze markets to ensure their projects meet both technical and market expectations. By the end of the course, students will have defined the scope of their senior design project and laid the groundwork for future development in subsequent courses.

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## Learning Outcomes

After completing this course, students will be able to:

- Identify stakeholder needs and translate them into design requirements for their senior design project.
  - Develop a professional scope for a design project.
  - Conduct a comprehensive market analysis for a potential design project.
  - Perform a risk analysis for a potential design project.
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## Pedagogy

This course combines short lectures, class discussions, and team-based work on specific deliverables. Class sessions are designed to introduce foundational concepts and then transition into workshops where students apply these concepts to their team projects. During workshops, students will work together on assignments, receive feedback from the instructor, and collaborate on developing key project deliverables. Active participation is essential, and the learning process is highly collaborative.

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## Required Text(s)

No textbook is required. All materials used in this course are provided on Canvas.

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## Recommended Readings

- William D. Bygrave, ed., *The Portable MBA in Entrepreneurship*, 4th Edition. (New York: John Wiley & Sons, 2009).
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## Assignments

The course assignments consist of several key deliverables:

1. **Discussions**

Participation in discussions is essential to enhance the learning experience. Attendance in class sessions is a key component of this grade. Everyone is expected to have read the assigned materials and participate actively in discussions.

2. **Stakeholder Table & Voice of the Customer**

Teams will develop a comprehensive list of the project's stakeholders. Interviews with stakeholders will be conducted to gather their needs and verify the project's requirements.

3. **Scope Statement**

Teams will create a project scope based on stakeholder interviews, clearly defining the project's boundaries and deliverables.

4. **Risk Analysis**

Teams will identify potential risks, analyze their impact, and propose mitigation strategies for their design project.

5. **Market Analysis**

Teams will conduct a quantitative and qualitative market analysis to assess the size, customer segments, competition, and economic environment related to their project.

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## Letter Grade Scheme

Grade	Percentage Range
A	1000 – 950
A-	949 – 900
B+	899 – 867
B	866 – 834
B-	833 – 800
C+	799 – 767
C	766 – 734
C-	733 – 700
F	699 – 0

**Note:** The instructor reserves the discretion to significantly grade down for poor writing, poor team participation, and delayed submission.

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## Attendance Policy

Attendance is a crucial component of this course due to its workshop-based format, where team collaboration and participation are vital for success. Each student's presence is essential not only for their own learning but also for the success and morale of their project team. The following attendance policy will be enforced:

- **Unexcused Absences:** For every unexcused absence, a student's final course grade will be reduced by one full letter grade.
  - 1 unexcused absence: Final grade drops by one letter (e.g., A to B).
  - 2 unexcused absences: Final grade drops by two letters (e.g., A to C).
  - 3 or more unexcused absences: Automatic course failure.
- **Excused Absences:** Excused absences must be documented and approved by the instructor in advance whenever possible. Examples include medical or family emergencies, religious observances, institutional responsibilities, legal obligations, or pre-approved academic/professional opportunities.
- **Solo Work for Missed Classes:** Students who miss a class will be assigned solo work to ensure they catch up on missed material and contribute effectively to their teams upon return.

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## Ethical Conduct

Enrollment into the undergraduate class of Stevens Institute of Technology signifies a student's commitment to the Honor System. It is the responsibility of each student to become acquainted with and uphold the ideals set forth in the Honor System Constitution. Specific responsibilities include:

- Maintaining honesty and fair play in all aspects of academic life.
- Writing and signing the pledge on all submitted academic work.
- Reporting any suspected violations to an Honor Board member or the Dean of Student Development.
- Cooperating with the Honor Board during investigations and hearings.

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## Pledge of the Honor System

The pledge signifies that the work submitted is the student's own:

*"I pledge my honor that I have abided by the Stevens Honor System."*