

Identifying Successful Capstone Projects

What is capstone?

Capstone projects are 1 or 2 semester long, student-ran projects overseen by ISU faculty. Teams interact with a company sponsor to determine project scope, identify/manage project deliverables, work through constraints, and get feedback on their work. Teams *typically* consist of 4 or 5 senior level students in their final semesters. Capstone project costs range from free, up to ~\$6,000, depending upon department.

What do deliverables look like?

Capstone project deliverables vary by department and project-to-project, but could include:

- CAD Design
- FEA Studies
- Lean Implementation
- Prototype Creation
- Software Development
- Cost Analysis
- Design Options
- Process Optimization
- Work Cell/Facility Layout

What ISU departments typically do capstones?

- Mechanical Engineering
- Industrial and Manufacturing Systems Engineering
- Agricultural and Biosystems Engineering
- Electrical and Computer Engineering
- Material Science and Engineering
- Computer Science

What makes a good capstone project?

Engaged sponsors, clear deliverables, proper scope, non-critical to clients' long-term success, and finding the correct department for the project all contribute to success. CIRAS does not have direct control during the project, but we can help by identifying what the project might look like, suggesting scope/deliverables, and finding engaged project sponsors. In short, a company would like to work on this but it simply keeps getting pushed out.

Common phrases that could indicate a need for a capstone project:

- "I wish I had the time to..."
- "It's on the back burner"
- "It's not that difficult, it's just not a priority."
- "That's on my engineer's 'to-do' list"

Capstone is not the right answer when:

If a project is "*mission critical*" and is key to a company's success it should not be left to students. Rushed projects are not possible; capstone project timelines are very fixed and coincide with University academic calendars.

Why is capstone important?

Capstone can be a hiring conduit for companies to identify potential students for future hiring. Iowa State capstone projects help create millions of dollars in economic impact and dozens of jobs per year.

For more information please contact:

Jake Behrens
jbehrens@iastate.edu
515-815-5003

Mayra Ramirez
ramirez@iastate.edu
515-520-3101