What does DESIGN mean?

- solving problems
- answering questions
- characterization
- modeling/calculation
- iteration
- analysis
- recommendations for optimization
- evaluation
- development
- synthesis
- process

What are the BENEFITS to our company?

- students provide **insight** into existing problems
- students and faculty mentor offer **specialized knowledge**
- students provide **man power and time** for projects that may otherwise be put on hold
- engage with students as **potential employees**
- have access to **equipment and expertise** not available at your own site
- **visibility** of your organization on campus
- provides a **gateway for a broader relationship** with MSE

What have other projects been?

- **characterization** of material properties and understanding of **direct laser sintering**
- investigating the **corrosion behavior in lead-free solders**
- determining **mechanical properties** of maraging steel produced by **selective laser melting**
- determining dependence of **physical properties of soluble glasses on synthesis route**
- **rapid prototyping** of polyactic acid crystal models

What should we do if we are interested?

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Fill out a ‘Project Information Sheet’ with contact information, project description, resources, outcomes, interest area, and financial commitment

Determine project objectives and criteria

Recent senior design business partners include:

*Allegheny Technologies | Emerson | Honeywell | 3M | Ervin Industries | John Deere | Link Mfg.|
*Cobham Mission Systems | Placon Corporation | Thombert, Inc. | SAFI-Tech

How does it work?

- This is a 2 semester course, offered in both fall and spring semester.
- It is an industry sponsored project.
- There are teams of 3-4 students and 1 faculty mentor.
- Students work 10-15 hours/week or 500-700 student hours in total.
- A $1000 financial commitment as a reimbursement for itemized costs is required and company approval is required before a group can go over that dollar amount.
- Companies must provide resources such as samples, supplies, or specialized equipment.
- An engineer within the company should be assigned as primary point of contact.
- Consider student travel to the company or a company visit to Iowa State University.
- Companies should provide outcomes and objectives such as reports/analyses, prototypes, models, data, etc.
- A non-disclosure agreement form is available in cases where confidential information is handled.
- There is also an agreement to assign any intellectual property to your company as desired.