Senior Projects: A Capstone Experience in the MATE Curriculum
The Materials Engineering Senior Project Design sequence takes place during the last, complete academic year for MATE students. Students may work in teams or individually, and are advised by a MATE faculty member. The projects can be student-generated, part of faculty research, or sponsored by industry or community partners.

Sponsored projects provide context that:
- Enables students to obtain a well-rounded experience focusing on real world engineering problems
- Gives your organization a new look at problems you need to solve (Both students and faculty will focus their experience and abilities on solving your problem.)
- Allows you to observe individual students who you may consider for future hiring
- Gives you the chance to directly contribute to the education of future engineers

Interested parties can contact the MATE Department (matedept@calpoly.edu) to discuss project sponsorship. Faculty typically define projects with collaborators and sponsors during the summer.

2014-15 MATE SENIOR PROJECTS:
- 17 Industry Sponsored Projects (provided project idea/mentorship, paid fee, and/or furnished supplies)
- 6 Student Generated Projects
- 3 Faculty Research Projects

Project examples that demonstrate a breadth of project topics to serve a diverse set of student goals and interests, from basic research to applied development include:

- An investigation on incipient melting during solution heat treatment of 7050 aluminum and its effect on corrosion properties
- Measuring and increasing the suspension time of lanthanide oxysulfide particles with modifiers via fluorescence for use in anti-counterfeiting applications
- The influences of the triple bottom line within the athletic footwear industry
- Molecular dynamic modeling of cellulose-arabinan interface
- Minimizing sheet resistance of organic photovoltaic cell top contact electrode layer: silver nanowire density vs. conductive polymer doping concentration
- Analysis of the variance of shear strength of PH 15-7 monel stainless steel blind rivet stems for aerospace applications