Do you have a need for a medical device or process to improve patient care?

Do you have a need for a biomedical or mechanical device or process in your clinical or research practice but no idea how to build it? Or need to modify an existing device or process to better suit your needs? Consider interacting with our College of Engineering’s Capstone Senior Design courses! The Clinical and Translational Science Center (CTSC) and the College of Engineering are soliciting project suggestions on translational research concepts appropriate for a team of undergraduate engineers to tackle in a 6-month time frame. Approximately 5-8 proposals will be selected by a committee comprised of College of Engineering course faculty, and School of Medicine and Veterinary Medicine faculty. Funding for the chosen projects will be provided by the CTSC Pilot Translational and Clinical Studies Program. For the past several years, engineering students have been collaborating with clinicians in the Schools of Medicine and Veterinary Medicine to complete projects for their senior design course. This is a 6-month course that runs from January to June. Teams of students work on specific projects to deliver a working prototype by the end of the course period.

Past projects with the School of Medicine faculty include:
- Motion translation unit for eyelid blink system in humans
- Surgical teaching tool for intussusception
- One-handed cricothyroidotomy device
  - ICU Patient walker
- iPhone peak flow meter and EKG
- Prostate biopsy tool

Past projects with the School of Veterinary Medicine faculty include:
- Endoscopic biopsy device for GI tumors
- All terrain portable anesthesia cart
- Mobility assist device for rehabilitation therapy
  - Lighted laryngoscope redesign

The projects may result in either a finished product or the detailed plans for a finished project (depending on scope and costs of constructing). Best projects are those that are within scope to be completed in a 6-month time period and allow for significant creative input from the students. Projects that simply seek to manufacture an already determined design are not suitable. Projects that are selected will be provided with approximately $500 for supplies for the students to construct a physical prototype and instrument, whenever possible.

If interested, please forward a brief paragraph to Dr. Nicholas Kenyon (nicholas.kenyon@ucdmc.ucdavis.edu) describing your needs. A course instructor will contact you for additional information. Proposals will be accepted until midnight Wednesday, November 13th, 2013. Thank you for supporting translational medicine and engineering education!

Please note: If you have a project idea but cannot meet the above deadline or do not need CTSC support for the project, please contact a course instructor regarding submission of a project.

Course instructors:
Professor Cristina Davis (cedavis@ucdavis.edu)
Department of Mechanical and Aerospace Engineering

Professor Anthony Passerini (agpasserini@ucdavis.edu)
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