Student Design Competition
Capstone Design
ME 4900, 4902.01, 4902.02

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S.D.C. Capstone Overview

• The College of Engineering hosts a wide range of student design projects:

  http://engineering.osu.edu/studentorgs

• Students involved in these activities can use the content as their capstone design project:
  • A student design team of 3-6 seniors is created
  • The project gets the approval of the course instructor
  • The student design team finds an appropriate technical advisor for the project (usually Dr. Midlam-Mohler)
Student Design Competitions

- Motorsports Projects:
  - Formula SAE
  - BAJA SAE
  - Buckeye Bullet
  - EcoCAR Mobility Challenge
  - Electric Motorcycle
  - Supermileage

- Other Design Competitions:
  - Buckeye Space Launch Initiative
  - Underwater Robotics
S.D.C. Capstone Overview

• The course sequence results in 7 + 7 + 14 weeks of working on your project with weekly meetings for updates/advice/deliverables

• Strong focus on System Engineering and Project Management

• It is possible to form interdisciplinary teams via other majors taking the ENG capstone sequence

• Funding for these projects comes out of already available team budgets (i.e. need faculty advisor approval) and external donations (typically $2500 is reimbursed to the teams)
Recent Projects

• **Buckeye Bullet:**
  - Battery Pack Design, 400 Mph Tire Tester, Vehicle Lift, Body Panel Attachment

• **EcoCAR:**

• **Formula SAE:**
  - Brake Tester, Aero Package, Active Aero Package, Engine Performance, Vehicle DAQ System, Tire Model Software

• **Current:**
  - CAN-Based DAQ, Motorcycle Service Lift, EV Frame Design, Cooling System Design, Traction Control System

• **Baja:**
  - Rugged DAQ and Instrument Package, Adjustable Sway Bar, Electronically Variable Transmission

• **Supermileage:**
  - Electronic Fuel/Spark Control for Improved Efficiency, Series Hybrid PT
How to Enroll

• This section is by permission of instructor only

• If you are on a design competition team already:
  • Send me a resume and a statement of what you do on the team currently
  • If you are not on a team but are interested in this capstone:
  • Send me a resume and a short statement of why you are interested in this experience

• The title of the email needs to have “ME4902” in the subject – I batch process students weekly and will send an email to you with permission to enroll

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