MEng Project offerings 2014-2015

This is a list of MEng Project offerings for 2014-2015, you may also contact individual faculty for additional opportunities. **This page will be updated as additional project descriptions become available**.

Project Teams
The department has a large number of project teams and many MEng students complete their MEng projects related to a team.

ASML
Piezo Athermalization
Small Bolt Pretensioner

CCMR JumpStart Projects

ener-g-rotors

Autonomous Systems Laboratory
ASL Projects Kress-Gazit
ASL Projects Campbell

Prof. Avedisian
A Chemical Reactor that Builds Itself
Can Water Remain a Liquid above 100C at Normal Atmospheric Presssure
Does Butanol = Gasoline

Prof. Bonassar
Assessing the Effects of Impact Injury on Cartilage Frictional Properties
Development of a Co-Culture Bioreactor for Anchoring Tissue Engineered Meniscus
Development of Injectable Biomaterials for the Repair of Dura
Mechanical Analysis of Cartilage from Human Tracheomalacia Patients
Surgical Device Design to Study Ankle Post
Post-Traumatic Osteoarthritis

Prof. Butcher
Design of a computational growth model for embryonic cardiovascular morphogenesis

Prof. Dawson
Grain de-huller for value-added processing on organic farms

Prof. Erickson
http://ericksonlab.org

Prof. Fisher
Sustainable Energy Cookstove Producing Biochar: Modeling, Testing, and Design

Prof. George
"Product Life-Cycle Management" and Systems Engineering of a Formula SAE Race Car
Composite Structural Design
Shock Absorber (Damper) Effects on Formula SAE Race Car Performance

Prof. Hernandez
Please contact Prof. Hernandez (cjh275@cornell.edu) for current list of available projects

Prof. Louge
Dune Field Research

Prof. Ruina
Biorobotics and Locomotion Lab
Biped Robot Design & Biomechanics Projects

Prof. Savransky
Simulation of Exoplanet Imaging Missions
Modeling Asteroid Impacts for In-Situ Resource Utilization

Prof. Selva
Projects in the Systems Engineering, Architecture, and Knowledge Lab

Prof. Silberstein
Characterization, processing, and design of self-reporting polymer composites

Prof. Singh
Singh Lab Projects

Prof. Williamson
The Aircraft Wake Phenomenon
The Vortex-Induced Vibration Problem

Prof. van der Meulen
Mechanical Testing
Characterization of lower limb geometry from CT scans for individuals with and without fracturesEquine Cone-Beam CT

Prof. Zhang

Optimizing thermal energy storage in building systems
Developing Tompkins County Energy Roadmap
Energy Management Strategies for Datacenters
Monitoring and Modeling of Energy Systems in Hospitals
Sustainable Roadway Designs to Mitigate Air and Noise Pollution
Solar-friendly Landscaping Designs
Design a Portable Exhaust Flow Meter

Prof. Zehnder
Fracture and acoustic properties of shale
Nonlinear Dynamics of Nanoscale Oscillator Arrays

MAE undergraduate research opportunities (many of these offerings are available to MEng students as well)

CHESS Projects
In-situ Microfluidic Separation and High Speed Mixing for Biological X-ray Small Angle Solution Scattering at a Synchrotron Beamline
Control engineering for the processing of advanced functional materials

Department of Biomedical Engineering MEng Projects
Many Biomedical Engineering design project teams find having students with mechanical engineering backgrounds to be an asset.
BME Faculty MEng Projects

Systems Engineering Projects
Create an Innovative Modular Robotics Platform
Cornell University Sustainable Design (CUSD)