

Lunar Regolith Excavator

MSU Lunar Regolith (moon dirt) excavator.

Interdisciplinary project with members from ME, MET, ECE, and CS:

The team will design and fabricate a device for the fourth annual

NASA competition, described at

<http://www.nasa.gov/offices/education/centers/kennedy/technology/lunabotics.html>

The system will be a remotely operated or autonomous digging machine. ME/MET students will be responsible for the structure, mechanism, and mechanical interfaces including drive mechanisms and digger. They must also define power requirements. ECE and CS students will work together on control systems, sensors, power management, and other appropriate details. All participants must meet regularly and utilize a systems approach to ensure components work together.

The resulting device will be entered in a student Lunar Regolith Excavator Challenge in Spring 2015, and members of the student team will attend this Florida Competition. Some fundraising will be required to ensure competition attendance.

History: The 2009/2010 MSU team won the National Competition, as described here:

<http://www.montana.edu/cpa/news/nwview.php?article=8551>

and has competed during each of the past several years.