Instructor: Prof. Jean Hertzberg MCEN (Mechanical Engineering)
ECME 220 492-5092
hertzberg@colorado.edu
http://stripe.colorado.edu/~hertzber/Home.html

TAs: Allen Molitoris: Allen.Molitoris@Colorado.edu
303-786-4409

Office Hours: TBD

Meeting Times: Lectures: 1:00 - 1:50 PM M
Laboratories: 1:00 - 2:50 PM W F
All classes meet in room ITLL 160,
accessible after hours by your Buff OneCard

ITLL hours will be Monday-Thursday, 8am-6:30pm the first week; stay open until 8pm
the second week, then finally expand to 11pm and add weekend
hours after that.

Course Website: http://www.colorado.edu/GEEN/GEEN1400-040

Course email list: geen-1400-040@lists.colorado.edu. To subscribe send email to
listproc@lists.colorado.edu
In the body of the message type
subscribe geen-1400-040 Firstname Lastname
with the appropriate substitution for your name.

Course Description:
The purpose of this course is to provide you an introduction to engineering through a
series of projects done in interdisciplinary teams. You will learn in a hands-on way a
series of valuable engineering skills including communication skills, how to function in
teams, and a variety of computer tools as appropriate to your projects, such as
spreadsheets, dynamic modeling software, or computer-aided design.

Grading:
The course grade will be based on a combination of group work and individual
accomplishment:

Group work:
  Design loop project
  Design project presentations, report, and judges’ evaluations

Individual accomplishments:
  Oral presentation participation
  Design journals
  Peer evaluations
Miscellaneous:

- The textbook for this course is optional: *“Introductory Engineering Design: A Projects-Based Approach,“* available for $20, payable by personal check or cashiers check made out to *The University of Colorado at Boulder.* To purchase the book, stop by the ITLL administrative office (ITLL 1B40); it is not available at the bookstores.
- Students are expected to purchase their own blank lab notebook to use as a journal to record their class and project activities.
- In addition, each student will be expected to pay up to a total of $50 towards supplies and expenses for the projects.

Course Elements:

The **Design Loop** is a guided introduction to the design process, which includes measurement, data analysis and presentation, and using engineering analysis to drive design decisions.

**Team Dynamics Exercises** are fun, moderately physical activities and problem-solving games in which we work together to solve a variety of interesting challenges.

The **Design Project** for this section involves designing and building a device to accomplish something fun. We’ll borrow some elements from the TV show “Junkyard Wars”: an emphasis on scavenged and recycled materials, and a ‘ringer’ on each team to help your design. Projects will be different for each team (no direct competition or stealing of parts/designs) and will be chosen by each team. Start thinking!

A **Design Expo** will be held on Saturday, December 8th. Your Design Project will be displayed to the public and judged by a team of outside engineering experts.

Several **workshops** throughout the semester will introduce you to some of the hands-on skills you will need to work on your projects, such as CAD, basic electrical circuits and safety and use of tools.