On March 12, 2015, Mr. Rocky Gomez of Xcel Energy led ENGR 465 students through a tour of a substation located in Grand Junction. The transmission line located in the picture carries power at 230,000 Volts. This voltage is stepped down to approximately 13,000 Volts for distribution to the nearby residential and commercial customers. The transformer located just behind Mr. Gomez (right side) is rated for 25,000,000 Volt Amperes. The tour continued into the building seen at far right where the students saw an array of controls, alarms, monitoring and safety equipment; in power company parlance this function is called SCADA (Supervisory Control And Data Acquisition.) The group left with an appreciation of the power company’s role in providing every home and business with ever present access to electricity…it’s always there!

The field trip was AWESOME! Thank you Mr. Gomez.

[ENGR 465 is Electric Power Engineering. Prerequisite ENGR 317 or MCEN 3017.]
Internships

The National Renewable Energy Laboratory (NREL) is a leader in the U.S. Department of Energy's effort to secure an energy future that is both environmentally and economically sustainable. With locations in Golden, Boulder and Washington D.C., NREL is the primary laboratory for research, development and deployment of renewable energy technologies in the United States. The NREL mission is to develop renewable energy and energy efficient technologies and practices, advance related science and engineering, and transfer knowledge and innovation to address the nation's energy and environmental goals.

The National Renewable Energy Laboratory's (NREL) National Center for Photovoltaics (NCPV) has an immediate opening for a part-time undergraduate student in Golden, Colorado to assist with laboratory work studying durability of photovoltaic packaging materials. This is an excellent opportunity for a student who desires to obtain relevant laboratory experience in preparation for graduate school or a career in industry.

* Assist in the synthesis and aging of encapsulation samples using polymeric materials such as silicone, PMMA, and EVA.
* Assist in the characterization and subsequent analysis of samples, studying the delamination (also including optical transmittance and chemical characteristics).
* Record, analyze, and summarize results using Excel spreadsheets or other software packages.
* Communicate effectively with mentor about the expected work, progress toward completing that work, and any issues in completing the work as planned.
* Be trained in laboratory safety procedures and follow these consistently

Must be enrolled as a full-time student in a degree granting program, or graduated in the past 12 months from an accredited institution. Internship period cannot exceed 12 months past graduation. Minimum of a 3.0 cumulative grade point average.

Please Note:
Be sure to attach your current transcript (unofficial transcripts are acceptable) on the "Submit Attachments" Page during the application process in order for your GPA and student status to be verified.

Ability to conduct laboratory experiments, sometimes with minimal supervision, with the utmost regard to safety is required. Knowledge or experience related to mechanics of materials, material science, and polymers is desirable but not required. Familiarity with relevant synthesis, spectroscopy (UV/Vis/IR spectroscopic measurement), and mechanical testing (loadframe) is desirable but not required.

* Laboratory work experience
* Aptitude for technical problem solving
* Computer skills for logging and organizing large data sets
* Teamwork and ability to communicate within the team

Online Application Address:  www.nrel.gov/careers

Ecology Technician: Western Colorado Conservation Corps

Description of Work: The participant will be working in areas within the Grand Junction Field Office, McInnis Canyons NCA and Dominguez Escalante NCA that have burned in the past. The participant will work closely with the ecologists, range specialists, weed specialists, and other BLM specialists, as well as independently. The participant will assist in ecological post-fire vegetation monitoring. Navigation with GPS and map, 4 wheel drive, and plant identification experience are required. Attention to detail, experience with data management, and experience with GIS are recommended. River trips and overnight camping may be required. The participant may assist in other BLM monitoring, GIS, data entry, and other office work.

Location: Bureau of Land Management, Grand Junction Field Office, 2815 H Road, Grand Junction, CO 81506
Pay and length of position: 12 weeks, $15/hr, May – August, 2015 (dates are somewhat flexible)

Physical Requirements: The applicant should be physically able and willing to complete full days of rigorous field work in hot, dry, and buggy conditions. The applicant must be able to complete long hikes (up to 10 miles) over rugged terrain carrying personal and field equipment. The applicant must have a valid driver's license and be able to maneuver on 4-wheel drive roads. The applicant will need a completed Government security background check. Overnight camping may be necessary.

Send Resume to: mnhoffman@gmail.com

BLM Contact Information:
Supervisor: Madeline (Nikki) Hoffman
Title: Ecologist/Science Coordinator CO NLCS
Office: Grand Junction Field Office
Phone: 970 244 3020
Email: mnhoffman@gmail.com
Former Corpsmembers should contact Gail Bower at gbower@mesapartners.org
The Waldo E. Rennie Trust has funds available for student loans! The Trust was established by Waldo E. Rennie to provide low interest loans to students with a demonstrated financial need who are pursuing a bachelor’s degree in Engineering, Geology, and/or Physics at a public school in Colorado. Mr. Rennie wanted to provide “… the same or similar opportunity for assistance to the average student who possesses no other qualifications than that [the student] has a desire to learn and is simply unable to pay for [the student’s] education, and it is to such persons I wish to limit the benefits of this trust …”

The current rate for the loans is 2.33% which starts accumulating the first month after graduation or the first month after ceasing to pursue one of the above listed majors. Students can borrow up to $8,000 per year.

Application deadlines for the 2015-2016 school year are as follows:

First Semester—June 1, 2015
Second Semester—November 1, 2015

Please contact Harriet Carpenter (hcarpenter@coloradomesa.edu), Administrative Assistant at AEC, to obtain an application.

PLEASE CHECK OUT THE BULLETIN BOARDS AT AEC FOR THE LATEST INFORMATION ON JOB OPPORTUNITIES, INTERNSHIPS, AND SCHOLARSHIPS
The Colorado Mesa University Engineering Club strives to further student interest and knowledge of engineering concepts, while encouraging teamwork. Hands-on experience and application are developed through collegiate competitions presented by ASME and SAE.

FSAE 2015 is almost here!!!!! Engineering Club is Michigan-bound in May!!!

Look for updated photos and news in next month’s newsletter ...

Contact Victoria Chavez (Victoria.Chavez@colorado.edu or 970.201.5660) to learn about SWE ...

... and how YOU can get involved!

ALL are welcome!

Finalizing 1st Year Projects
West Middle School students visited AEC on Friday, March 20, to learn about Engineering.

Thank you, students!!!!!
We deeply appreciate the time and effort our students spend assisting with community outreach events!

Fruita Middle School MESA Club Milk Jug Raft Competition Student Judges:

- Eric Black
- Austin Burns
- Victoria Chavez
- Corbin Cooper
- Terence Haley
- Alice Kerbein
- Oscar Madrid

Tour Guides and Demo Operators for West Middle School Field Trip to AEC

- Dylan Ashby
- Gavin Downey
- Cy Henry
- Alice Kerbein
- Tim Kettle
- Marcus Matthews
- Ty Sickels
- Aaron Troxel
Faculty Advisors
The purpose of a faculty advisor is to assist in the process of degree completion. Students are required to have a faculty advisor's signature on their Program Sheet and other graduation paperwork.

Find Your Advisor
Advisor assignments can be found in MAVzone under the Student Academics tab. Students can view their Academic Profile in the top-center column by selecting the current term in the drop-down box at the bottom of the profile and clicking Go. This will cause the current program of study and advisor(s) to appear. Your Primary Faculty Advisor will be the first name listed. (Note: Dr. Brower is the secondary advisor for all Engineering students. He is the primary advisor only for students in the CU-Boulder BSME degree program.) You can click on the envelope icon by the advisor's name to email your advisor.

Engineering Faculty Advisors
We strongly urge all students to take advantage of the opportunity to plan their course sequence, review potential elective choices, and discuss issues of concern with their Primary Faculty Advisor. Please make an appointment when you need to see your advisor.

Contact information for Engineering Faculty Advisors is shown below:

<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Office Phone</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Scott Bevill</td>
<td>AEC 212</td>
<td>970.248.1459</td>
<td><a href="mailto:sbevill@coloradomesa.edu">sbevill@coloradomesa.edu</a></td>
</tr>
<tr>
<td>Dr. Timothy Brower</td>
<td>AEC 213</td>
<td>970.248.1662</td>
<td><a href="mailto:tbrower@coloradomesa.edu">tbrower@coloradomesa.edu</a></td>
</tr>
<tr>
<td>Dr. Francisco Castro</td>
<td>AEC 215</td>
<td>970.248.1564</td>
<td><a href="mailto:frcastro@coloradomesa.edu">frcastro@coloradomesa.edu</a></td>
</tr>
<tr>
<td>Dr. Scott Kessler</td>
<td>AEC 216</td>
<td>970.248.1673</td>
<td><a href="mailto:skessler@coloradomesa.edu">skessler@coloradomesa.edu</a></td>
</tr>
<tr>
<td>Dr. Nathan McNeill</td>
<td>AEC 206</td>
<td>970.248.1623</td>
<td><a href="mailto:nmcnneill@coloradomesa.edu">nmcnneill@coloradomesa.edu</a></td>
</tr>
<tr>
<td>Dr. Farzad Taghaddosi</td>
<td>AEC 125</td>
<td>970.248.1678</td>
<td><a href="mailto:ftaghaddosi@coloradomesa.edu">ftaghaddosi@coloradomesa.edu</a></td>
</tr>
</tbody>
</table>

ENGR 261 (Statics & Structures) to be offered during Summer Session
There will be a section of ENGR 261 offered at CMU during Summer Session 2015. A hybrid delivery format is likely (combination of on-line and classroom instruction.)

For more information, please contact Dr. Brower (tbrower@coloradomesa.edu or 970.248.1662)

IMPORTANT UPCOMING DATES:
Friday, April 17: Orientation for incoming CU (Partnership) students
Friday, April 24: Sixth Annual CMU Student Showcase
Friday, May 1: Senior Project Presentations for Industry Advisory Council
Friday, May 8, 9:00 a.m.: CU-Boulder Engineering Recognition Ceremony (Coors Events Center, Boulder)
Saturday, May 9: CU-Boulder Commencement
May 11-14: FINALS Week
Saturday, May 16: CMU Commencement Ceremony (Stocker Stadium)