Hello Alumni and Friends!

We are pleased to send you this update of the happenings in the SDSM&T Department of Civil and Environmental Engineering. Spring has sprung and the grass is greening, but we all know there’s another blizzard coming before we really warm up for good. The students are all looking forward to graduation and/or summer; we’re looking forward to welcoming all of you back on campus for the All-School Five-Year Reunion, July 8-12, 2015 (learn more HERE). Finally, while we think you will enjoy receiving these updates, if you do not wish to receive them, just send an email to Ellen.Haffner@sdsmt.edu with “unsubscribe” in the subject line and we’ll take you off the list.

Sincerely yours,

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Student News:

ASCE Student Chapter Update:

The ASCE student chapter is in the beginning stages of a project with the city of Rapid City to design and building two large flower beds at the Education Center located at the Rapid City Landfill. These flower beds will provide educational opportunities for children and adults. Surveying has already taken place and students are currently in the process of designing flower beds that are accessible for people of all ages.

ASCE student chapter members are also very busy preparing for the concrete canoe and steel bridge competitions at the Rocky Mountain Regional Conference held at the University of New Mexico, April 9-April 11, 2015. Cody Schellinger will be presenting the technical paper about his concrete research while Brigit Kelly will be presenting the non-technical paper on engineering ethics. This year, instead of the usual construction event, students have to design and build a coin donation box for Habitat for Humanity. The pre-design team has to make a device to collect debris in a river or stream without decreasing flow.

The 2015 concrete canoe Unearthed was successfully poured and team members are completing the design paper as well as working hard to learn how to paddle efficiently. The steel bridge is in full fabrication mode. The steel bridge and the concrete canoe have correlating themes as is the tradition at SDSM&T; this year’s bridge theme is ‘Jurassic Arch.’
Students Bring Nature into North Middle School

Thanks to the American Society of Civil Engineers (ACSE) eighth graders at North Middle School were able to learn about water erosion firsthand. Four SD Mines students designed and built an 8-foot-by-4-foot stream table with two water sources and a circulating pump to give one science class a 3D representation of how an earth system works. Cody Schellinger, an ASCE officer, was happy to fuel an interest in science, technology, engineering and math. “We were excited about building this table at North Middle School. We offered our lab and tools and time to help them because I feel that getting them interested in science and engineering at an early age sparks creativity and interest,” Schellinger said.

Students Tour with Cloud Peak Energy Mine

CEE students took a trip to the Cloud Peak Energy open pit mine near Gillette, WY on January 20, 2015. Cloud Peak Energy generously supports the environmental program in the CEE department each year, so the ASCE student chapter set up a tour to visit their facility for the Environmental Engineering II class and ASCE members to get a first-hand look at the Cloud Peak Energy mining operation. Thank you, Cloud Peak, for your support!

Faculty News:

Congratulations to Dr. Gadhamshetty!
The National Science Foundation (NSF) has awarded South Dakota School of Mines & Technology Assistant Professor Venkataramana Gadhamshetty, Ph.D., P.E., with the prestigious CAREER award that carries a $500,000 research grant. The Faculty Early Career Development (CAREER) Program offers the NFS’s most prestigious awards to support junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research.

Dr. Gadhamshetty joined the CEE Department last fall. He has previously taught at Florida Gulf Coast University and Rensselaer Polytechnic Institute. The award will fund Dr. Gadhamshetty’s research over the next five years that could pave the way for the next generation of minimally invasive, corrosion-resistant coatings for infrastructure. The annual cost of microbial corrosion on infrastructure is estimated to reach nearly $1 billion in the United States alone.

Congratulations to Dr. Kenner!
Dr. Scott Kenner is working with the Mongolian government and other organizations to increase water supplies. He is helping to design dams for power, irrigation and drinking water. "Mongolia has started to develop since the 1990s and has expanded in mining industries, natural resources. And urbanized growth has increased. And that's put a lot of pressure on their infrastructure: water, sewer, power and drainage," Kenner said. His goal is to increase that infrastructure without disrupting the natural ecosystem. Dr. Kenner will provide a system with minimum flow during dryer times to support fisheries and natural biology, but also allow an increased flow during wet years. http://rapidcityjournal.com/news/local/school-of-mines-prof-helping-mongolia-increase-water-supply/article_6aab26c6-2442-51c8-b399-2856b2e0d0da.html
Department News:
51st Annual Concrete Conference

The 51st Annual Concrete Conference was held March 6 and included a wide array of speakers: Dr. Charles Nmai presented *Admixtures for High Performance Concrete* and *A New Admixture for Air Entrainment*, Gary Mass (BSCE 64) presented *Concrete for the Panama Canal Expansion*, Cody Schellinger (CEE senior) presented *Self-Healing Concrete*, Dr. Chris Shearer (SDSM&T Assistant Professor) presented *Material Properties of Concrete*, and Mike Schneider presented *High Performance Concrete in Action* and *News from ACI-International*. Dr. M.R. Hansen (Professor Emeritus) and Cody Schellinger also presented *Concrete in Mongolia*. The final session of the day was a question and answer and open discussion period. As usual, it was very well attended, with over 100 participants. We look forward to the 52nd conference next year!

Women in Science Conference

The Women in Science Conference was held on the SDSM&T campus on March 10th. Over 550 girls from middle schools in the area attended the one-day event. Sponsored by Youth in Science Rapid City, the free conference is designed to provide young women in grades six through 12 with engaging opportunities to learn about careers in science, technology, engineering and mathematics (STEM).

Dr. Molly Gribb, Dr. Jennifer Benning, and CEE student Jaylyn Woods provided exhibits for students during the day-long event. Girls had the opportunity to build paper triangle structures and observe contaminants move in a groundwater model to better understand how water flows through aquifers in the subsurface.

CEE Students Compete in Research Symposium Paper and Poster Competition

The annual SDSM&T Undergraduate and Graduate Student Research Symposium was held March 31, 2015. This year 96 students participated, almost double compared to last year’s event. Students showcased their research through oral presentations and poster projects with awards for both graduates and undergraduates in each category. Graduate Poster 2nd place was awarded to CEE MS student Erik Vik. Erik’s advisor is Dr. Jim Stone. Graduate Oral Presentation 2nd place was awarded to CEE MS student Tyler Adams. Tyler’s advisor is Dr. Marc Robinson. Undergraduate Oral Presentation 3rd place was awarded to CEE senior Kristen O’Connor. Kristen’s advisor is Dr. Jennifer Benning.

Mr. Hank Kohlbrand was the keynote speaker at the award reception. An internationally recognized expert in reactive chemicals engineering, Mr. Kohlbrand was the global research and development director for Process & Manufacturing Technology R&D at the Dow Chemical Company prior to starting his consulting company. He also served as Dow’s global director of external technology and intellectual asset management, and was responsible for external research and development and for Dow’s Offices of Science & Technology in Europe and the Pacific.
Thank you:

Many Thanks to Our Donors

We are so grateful for the many generous donors who support the CEE department in many ways. While we can’t list them all, here are just a few examples of the gifts that have really made a difference for our students:

- Banner Associates has pledged $50,000 over five years for renovation of our undergraduate teaching laboratories. Our freshman lab space is nearly finished and we're looking forward to a ribbon-cutting ceremony April 21.
- Kiewit Energy Group donated $10,000 this January to upgrade the geotechnical engineering laboratory, and we’re planning to acquire a new direct shear device to be used in the introductory soil mechanics laboratory sections that serve all CEE, Mining and Geological Engineering majors on campus.
- The ASCE student chapter, steel bridge and concrete canoe teams all receive very generous support that makes it possible for them to travel to regional competitions and do all of the great outreach and service they do.
- We receive many scholarship donations that sustain our students and keep our enrollment growing. Our freshman class size is directly related to our ability to provide scholarships of $1,000 or more.

If you would like to donate online to the CEE department, please visit foundation@sdsmt.edu. Be sure to designate “other” and list “CEE Department” to direct your gift. Thank you!