Hello Students!

In the wake of the career fair, we’d like to take a moment to remind you that career planning starts with making sure you’re on track to complete your degree. Here are some curricular updates, reminders, and advice that will help you plan for future semesters!

**Minimum Grade Requirements: These apply to everyone!**
- Students must earn a “C” or better in the following courses to advance in the program: MATH 123, EM 214, EM 321, EM 331, CEE 326, CEE 336/336L, CEE 346/346L, CEE 353.
- Prerequisites for senior design are: CEE 326, CEE 336/336L, and CEE 346/346L, all with a “C” or better.
- Students must take at least 6 credits of 400- or above CEE classes as department approved electives

**New for Next Fall (Pending Approval):**
- Senior design repackage as a one-semester, 3-credit class, CEE 489, taken in the student’s last semester (offered fall/spring).
  - Prerequisites (C or better) apply
  - Note that CEE 489 won’t be added to WebAdvisor or the catalog until this summer
- GEO 201 or GEOE 221/L and Math 381 will be required courses; one 3-credit science elective will remain.
  - Why? Geology is important to CEE. Probability and statistics are now required for ABET accreditation of our BSCE program.
- 9 of 12 credits of department approved electives must be CEE classes at the 400- level or above:
  - CEE 357: Theory and Design of Metal Structures will be replaced by CEE 456: Concrete Theory and Design
  - CEE 453/453: Design of Steel Structures will be a senior-level steel class that will replace CEE 357. It is currently listed as CEE 492: Design of Metal Structures in WebAdvisor for Fall Semester 2014

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**Be the Master of Your Own Destiny**

**BSCE Students: Take Control of Your Course Scheduling and Planning**
- See your advisor every semester. All CEE professors are required to have 4 posted/scheduled office hours a week.
- Register for fall before you leave for summer.
- Check your degree progress yourself and ask questions if you need help; your advisor. If they aren’t able to answer your questions, see Professor Arneson-Meyer.
- Read the catalog statement for the degree. You may graduate under any catalog in place the year you enter the program, or any later catalog. Consider doing a minor. The catalog can be accessed at: [http://catalog.sdsmt.edu/](http://catalog.sdsmt.edu/)
- Consider participating in undergraduate research (Keep reading for opportunities!)
- Apply for scholarships (many listed in this newsletter) for which you are eligible. Why not?

You can request a change of advisor online – see the Registrar’s web page at: [http://www.sdsmt.edu/Academics/Registrar/RAS/RAS-Forms/](http://www.sdsmt.edu/Academics/Registrar/RAS/RAS-Forms/)
More Department News:

**Summer Term Sections of Statics and Mechanics of Materials on WebAdvisor**
The CEE department will be offering EM 214 and EM 321 this summer *if there are 10 students who enroll in each*. Last year we were able to offer EM 214. If you’d like to stay on track or get ahead, please consider enrolling for these critical prerequisites on WebAdvisor as soon as possible.

**Students to Participate in Department-Wide Strategic Planning Effort**
“Mines 2020” is a vision for the future of SDSM&T, articulated by five strategic priorities for the university. As students of our department and the university at large, you are an important part of that vision. Now, the CEE department has embarked on a renewed planning effort to align those strategic priorities are with our own departmental goals, and we will be asking for your involvement and input. Keep your eyes peeled for more planning updates and a chance to participate.

**FE Examination: SDSM&T Testing Center Available Soon**
Previously administered twice a year as a paper-and-pencil exam, the FE Exam is now administered as a six hour computer-based test with several test dates each in the months of April, May, July, August, October, and November. *SDSM&T will not be present as an authorized test center until certification is complete.*

**Preparing for the Exam:** Review sessions and exam prep planning are parts of the CEE 463 class in fall semester. Best advice: prepare for the exam! Get the general FE review book ($45), study the relevant sections, and do a practice exam.

**About the FE Exam:** Seniors who are within two semesters of graduating may apply for the FE exam. The FE exam is the first step in the process leading to professional licensure.

**Don’t Miss the 50th Annual Concrete Conference: March 7**
The 2014 Concrete Conference offers a roster of professional and academic experts in different areas of concrete practice, construction, and research. Come learn about some of the advancements made during the last 50 years and current and future technologies influencing many aspects of concrete structures, network with local, regional, and national professionals, and promote the conference’s mission: to advance the performance of concrete.

- To learn more and get registered, visit:
  [http://www.sdsmt.edu/Campus-Services/Conference-Services/Concrete-Conference/](http://www.sdsmt.edu/Campus-Services/Conference-Services/Concrete-Conference/)

**Student Research Symposium Submission Deadline: March 3**
The 5th annual Student Research Symposium, sponsored by the Office of Research Affairs, will be held on Tuesday, April 8, 2014. *The Research Symposium is open to all graduates and undergraduates and cash prizes will be awarded.* Possible topics include, but are not limited to, reports on ongoing or completed research or design projects, or reviews of recent advances in some branch of engineering, science and mathematics, or humanities and social sciences. Students may apply to give either an oral presentation using PowerPoint slides or a poster presentation. In order to participate, students must submit an abstract online by March 3, 2014:

- [http://interact.sdsmt.edu/research/presentation-proposal.htm](http://interact.sdsmt.edu/research/presentation-proposal.htm)

For more information and details, visit:

- [http://www.sdsmt.edu/Research/Student-Research-Symposium/](http://www.sdsmt.edu/Research/Student-Research-Symposium/)
Certification:

Opportunity to Get Certified by ACI: Respond by 3/5
Civil Engineering Students! If you are interested in becoming ACI Concrete Field Testing Technician - Grade I certified, please complete the attached form and reply to anthony.kulesa@mines.sdsmt.edu as soon as possible. These skills may help gain internship positions with testing firms and will teach you the fundamentals of testing civil engineering materials. Please note that all forms must be returned by **Wednesday, March 5** to order the exams.

**More About the American Concrete Institute:** The American Concrete Institute (ACI) is a leading authority and resource worldwide for the development and distribution of consensus-based standards, technical resources, educational programs, and proven expertise for individuals and organizations involved in concrete design, construction, and materials, who share a commitment to pursuing the best use of concrete.

**More about ACI Certification:** A Concrete Field Testing Technician—Grade I is an individual who has demonstrated the knowledge and ability to properly perform and record the results of seven basic field tests on freshly mixed concrete. A summary of the program leading to certification can be found here: [http://www.concrete.org/Certification/CertificationPrograms.aspx](http://www.concrete.org/Certification/CertificationPrograms.aspx)

Spring 2014 Seminars and Thesis Presentations

**Held 2nd and 4th Wednesday of Every Month, 4:00 – 4:50 PM in CB204W**

For more information, contact Dr. Sangchul Bang (Sangchul.Bang@sdsmt.edu) or visit the CEE webpage


**March 5, 2014:** Mongolia: Culture, People and Research
Dr. Scott Kenner, PE, CEE Professor, SDSM&T (CE ’77 and MSCE ’79)
This talk will highlight activities Dr. Scott Kenner experienced on his Fulbright Scholarship to Mongolia.

**March 26, 2014:** Achieving Your Engineering Aspirations
Connie Determan, Vice President of Environmental, Kiewit (CE ’84 and MSCE ’85)
A 25-year veteran of the industry, Connie Determan, Vice President of Environmental at Kiewit Corporation, will be visiting on March 26, 2014 to offer advice and share lessons learned to help you not only reach, but exceed your engineering aspirations.

**April 9, 2014:** 2014 Western South Dakota Hydrology Conference
In lieu of the CEE graduate student seminar this week, students are encouraged to go to the 2014 Western South Dakota Hydrology Conference at the Rushmore Plaza Civic Center in Rapid City, which will include technical sessions, a keynote speaker, and a combined poster session and evening social.

**April 16, 2014:** Thesis Presentation: The Effects of Chemical Additives on Stabilization of Coarse and Fine-Grained Soils
Karen Schaefer, MSCE 2014
Fiber, a byproduct from milling processes, can be used as a stabilizing mechanism due to its absorptive characteristics. As an agricultural byproduct, integration of this substance into soils could potentially eliminate waste and provide an unlimited supply of material for exploratory research. The primary goal of this study is to identify the stabilizing effects of the agricultural byproduct, pea bran, on coarse and local fine-grained soils with liquid stabilizers.
Undergraduate Research Opportunities:

RESPEC Undergraduate Research Grant: DUE 3/14/14

One full-time, degree-seeking undergraduate student who will graduate in 2015 will be selected for a $10,000 award plus a summer internship with RESPEC, a company that had its beginnings in Rapid City. Proposals are to be submitted electronically to Mrs. Jeanette Nilson, Research Affairs at Jeanette.Nilson@sdsmt.edu no later than 4:30 pm on March 14, 2014. Interviews will commence mid-April and the winner will be announced by April 25, 2014. The selected research project will begin in September and must be completed by August 15, 2015. For more information and application materials, please visit:

- News Item: RESPEC Commits $250,000 to School of Mines Research Effort

Undergraduate Research in the CEE Department:

Did you know that students may earn elective credit and/or about $1,000 per semester as undergraduate researchers? Did you know that the external funding to date for our department amounts to about $8000? Did you know that we’ve had 18 students involved in research this year?? Undergraduate research experience complements coursework and internships, enhances writing and critical thinking skills, and gives participants an idea of what graduate work might be like. To find out more, ask your professors about their current projects and let them know you’re interested in opportunities to be a part of research in our department!

Examples of Recent CEE Undergraduate Research Projects:

- Bacterial Source Tracking in Stormwater
- Enzymatic Soil Stabilization
- Historical Mining Impacts
- Native American Sustainable Housing Initiative
- Shear Response in Concrete-Filled Composite Tubes

National Science Foundation Research Experience for Undergraduates

Each year, the National Science Foundation funds undergraduate research experiences all over the country. These programs are an excellent way to try your hand at research and apply your coursework to real-life research problems in labs, research stations, and universities all over the country. To search for exciting NSF-funded summer undergraduate research programs, visit:

- http://www/nsf.gov/crssprgm/reu/reu_search.jsp

Featured NSF REU: Cal Poly Global Waste Research Institute

The REU program at Cal Poly engages undergraduates on research supported by the Global Waste Research Institute (gwri.calpoly.edu). Students interested in applying to the program should indicate their interest by e-mail as soon as possible to Dr. Gregg Fiegel (griegel@calpoly.edu), Professor of Civil and Environmental Engineering at Cal Poly. The review of applications will begin on March 1, 2014 and will continue until all available research positions are filled.
Internship Opportunities:

Internships on GoldMine

Check out GoldMine for a list of internships available to Mines student! Hint: Click jobs search, select “advanced search” then specify your major to get a list of relevant opportunities. The following internships posted on GoldMine are set to expire in the next two weeks:

**Blattner Energy Inc. – Field Construction Coordinator Intern - Job ID #5188 – Expires 3/4**

Administer daily operations of project site under supervision of Project Construction Coordinator, Project Manager and Site Manager while ensuring and maintaining cost, safety, schedule, and quality of project.

**Compensation:** Not Specified

**Location:** Nationwide

**KLJ – Various Positions - Job IDs #5151- #5155 – Expires 3/5**

**Surveying:** Assist to provide surveying services for KLJ projects in a timely, accurate, and cost effective manner. These positions are field-based and will provide practical experience working on surveying projects.

**Environmental Planning:** Assist with environmental services for KLJ projects in a timely, accurate, and cost effective manner. Internships may be office- or field-based and provides practical experience working on environmental projects. Responsibilities may include assisting with field work, environmental planning and documentation and the NEPA process.

**Engineer Technician:** Assist in providing technical and field support services for KLJ projects in a timely, accurate, and cost effective manner. The Engineer Technician I internship may be office or field based and provides practical experience working on engineering projects. Responsibilities may include assisting with drafting, surveying, measurement, construction inspection, and documentation.

**Compensation:** DOE

**Location:** Interns are needed in a number of office locations; please provide your top three locations in your cover letter. Office locations throughout ND, SD, MT, MN, and WY: [http://kljeng.com/about/locations](http://kljeng.com/about/locations)

**City of Belle Fourche – Engineer Summer Technician - Job ID #5231 – Expires 3/14**

Assist Engineering department and Building Inspector/Code Enforcement personnel in many areas: updating maps of city-owned utilities and infrastructure, updating water system models; updating sewer system models; assist in topographic surveying, construction staking, construction observation; update record drawings; assessing and inventorying City-owned infrastructure needs; assist in designing project for infrastructure; preparing and presenting engineering reports and data to committees and the Common Council. Basic knowledge of drafting and surveying expected. Must enjoy daily challenges and working with various people throughout the community. Good communication skills for working with other City employees, contractors, City Council/public officials and the general public. For more information contact Ryan Kavan at 605-892-3006.

**Compensation:** $9.00/hr - $13.00/hr, DOE

**Location:** Belle Fourche, SD

But wait! There’s more!

More internship opportunities are listed on GoldMine, including positions with POET, LLC, Dakota Gasification Company, Inberg-Miller Engineers, and William H. Smith & Associates.
Job Opportunities:

**Ecosystems Group of the Arapaho-Roosevelt National Forests – Technician Positions**
The Ecosystems Group of the Arapaho-Roosevelt National Forests seeks to fill seasonal tech positions (biological science technician or hydrologic technician). The positions will comprise an interdisciplinary fisheries-watershed field crew. Work will focus on riparian condition surveys, resource inventories for future land management projects related to insect and disease outbreaks in the forest, fish monitoring surveys, and field investigations for watershed restoration projects. The crew will perform activities related to upland watershed health conditions, identify riparian protection areas, characterize aquatic habitats, wetland delineation, and estimate size and health of local fish populations. Candidates with experience performing fish surveys, habitat assessments, riparian plant identification, stream or watershed surveys, GPS, and data entry are preferred, but on-the-job training is possible. Positions require strenuous field work during all types of weather conditions. Some assignments will require camping in remote locations, such as any work occurring in Wilderness Areas. Successful candidates also will have opportunities for training and gain substantial on-the-job experience. Interested parties should contact Chris Carroll by email at ChristopherCarroll@fs.fed.us or 970-295-6637 by Mar. 14, 2014 for further information.

**Compensation:** $14.39/hr – $16.10/hr, depending on education and experience related to GS level
**Location:** Fort Collins, CO
**Position Duration:** Early May – September 30, 2014 (or longer)
**Application Deadline:** March 17, 2014; Contact by March 14, 2014

**Test Lab, Inc. - Construction Materials Engineer/Field Engineer**
A position is available immediately at Test Lab, Inc. Duties include preparation of construction materials testing proposals, oversight of technicians and field engineers for testing of construction materials, client maintenance and business development. Construction experience/background will be a consideration. Must have a 4-year degree in engineering, be able to work in and around construction sites, and have an insurable driving record. Contact us in Tampa, FL, regarding our current employment opportunities, or call 813-872-7821. Please address inquiries to Jeanne A. Berg, P.E., Vice President and Director of Engineering. You may also download this application, fill it out and fax it to at 813-872-1876 or email to HR@testlabinc.net.

**Compensation:** $55k/year, annual bonus
**Location:** Tampa, FL

**Medicine Bow-Routt National Forests - Hydro Crewmembers for Forest Service**
The Medicine Bow-Routt National Forests and Thunder Basin National Grassland (www.fs.usda.gov/mbr) are looking for summer employees interested in watershed management. Job duties include a diverse range of surveys, inventory, monitoring, and restoration work, and include both field and office work. Work requires the ability to hike, wade, lift, carry and use equipment in rugged terrain and in mountain weather while collecting physical and biological data. The ability to work safely and work well in a team environment is necessary. Prior watershed management experience is beneficial, but not required. A valid driver’s license is required, and overnight travel to different locations on the Forest may also be required. Crews may periodically camp out overnight during the week, depending on work location. To apply, visit: www.usajobs.gov between January and March 2014 (be sure to upload your transcript!) or contact Dave Gloss, hydrologist at dgloss@fs.fed.us with questions or for additional information.

**Compensation:** $11.75/hr – $16.28/hr, depending on GS level
**Location:** Steamboat Springs, CO; Saratoga, WY
**Position Duration:** Early May – Late September, 2014
Job Opportunities, Cont.:

Black Hills National Forest – Various Summer/Seasonal Positions
The Black Hills National Forest may be advertising and filling several temporary positions. To find out more, visit:
http://www.fs.usda.gov/detail/blackhills/home/?cid=stelprdb5441559. Available positions include hydrologic technician, biological science technician, engineering aid, and more. Positions will also be posted and searchable on the USA Jobs website, www.usajobs.gov, when they open.

Compensation: Varies, depending on education and experience related to GS level
Location: Bearlodge Ranger District – Sundance, WY; Northern Hills Ranger District – Spearfish, SD; Mystic Ranger District – Rapid City, SD and Hill City, SD; Hell Canyon Ranger District – Custer, SD and Newcastle, WY; Supervisor’s Office – Custer, SD
Position Duration: Early May – Late September, 2014

Using GoldMine in Your Job Search
GoldMine is a great resource. To use it effectively, try selecting “advanced search” to enter your major and degree-level and other specifications, then use the “Sort By” dropdown menu to get a personalized list of opportunities.

On Goldmine as of 2/25/2014:

- Dakota Gasification Co. – Environmental Engineer – Job ID #5701 – Expire 2/28
- Dakota Gasification Co. – Civil Engineer – Job ID #4857 – Expire 2/28
- KSFY – Master Control Operator – Job ID #5150 – Expire 2/28
- FMG, Inc. – Entry-Level Civil Engineer – Job ID #5211 – Expire 2/28
- Montana-Dakota Utilities Co. – Electric Transmission Engineer – Job ID #5130
- Montana-Dakota Utilities Co. – Gas Engineer – Job ID #5160
- Montana-Dakota Utilities Co. – Gas Supply – Job ID #5209
- Blattner Energy Co. – Field Construction Coordinator – Job ID #5187
- KLJ – Engineer I - Structural – Job ID #5184
- CETEC Engineering Services, Inc. – Project Engineer EIT/Civil Engineering Technician – Job ID #5031
- Clark Engineering Corp. – Structural Engineer – Job ID #5191
- Menards – Truss Designer – Job ID #4994
- Valero Renewables – Associate Plant Engineer – Job ID #5141
- Parker Hannifin – Operations Management Associate – Job ID #4855
- Parker Hannifin – EHS Specialist - Operations Management Associate – Job ID #5143
- Inberg-Miller Engineers – Entry Level Civil Engineer – Job ID #5165
- Inberg-Miller Engineers – Entry Level Geotechnical Engineer – Job ID #5167
- EMIT Technologies – Emissions Test Engineer I – Job ID #5225
- Toman Engineering Company – Graduate Engineer – Job ID #5212
- Charter Steel – Materials Engineering Program – Job ID #4893
- BNSF Railway – Engineering Management Trainee – Job ID #4689
- Gerdau – Environmental Engineering Management Associate – Job ID #4582
Scholarships:

**NEW: Association of State Dam Safety Officials Undergraduate Scholarship:** Due 3/31/14

Scholarships of up to $10,000 will be awarded for the 2014/2015 school year. Successful recipients must be U.S. citizens and enrolled full-time at the senior level (during the 2014/2015 school year) in an accredited civil engineering program, or in a related field as determined by ASDSO, and must demonstrate an interest in pursuing a career in hydraulics, hydrology or geotechnical disciplines, or in another discipline related to the design, construction and operation of dams. Undergraduate students planning to graduate in May/December 2015 will be eligible for the 2014 scholarship.

Applicants must have a cumulative grade point average of 2.5 for the first three years of college and be recommended by their academic advisor. The basis for selection will generally follow these guidelines: academic scholarship, financial need, work experience/activities, and the essay component.

Announcement of successful candidates will be made in July 2014. To download an application, visit:


**American Council of Engineering Companies (ACEC) Scholarship Program:** Due 3/14/14

_General Scholarships:_ Students must be entering their junior, senior, fifth, or master’s degree year in the fall of 2014 to qualify for the general scholarships. In addition, a student must be a U.S. citizen pursuing a bachelor’s or master’s degree in engineering or in an accredited land-surveying program to qualify. Five general scholarships will be awarded.

_Specialty Scholarships:_ One specialty scholarship will be awarded to a student pursuing a master’s degree in structural engineering who is enrolled for fall 2014. Students who qualify for the specialty scholarship will also be eligible for all general scholarships.

Students’ interest and commitment to the business and management of the profession are important. Students are encouraged to reflect their interest and commitment throughout their applications.

Awards vary from $3000 to $10,000. All applications will be submitted through ACEC of South Dakota. For further information and application materials, visit [http://www.acec.org/getinvolved/scholarships.cfm](http://www.acec.org/getinvolved/scholarships.cfm)

**NAE “Engineering for You” Video Contest:** Due 3/31/2014

In celebration of its upcoming 50th anniversary, the National Academy of Engineering is launching Engineering for You (E4U), a video contest to show the impact that engineering has or will have on society. NAE is offering a $25,000 prize to the most inspiring 1-2 minute video focused anywhere between 1964 and 2064. The contest will run until March 31, 2014. For more information, visit [www.e4uvideocontest.org](http://www.e4uvideocontest.org) or email E4Uvideocontest@nae.edu.
Student Organization Updates:

Update from ASCE:
Hey everyone! Spring break is just around the corner, and that midterm exams are on their way. Need a good reason to kickback before cram time? Here’s one: come watch a movie and discuss ASCE goings-on this Friday, February 28th. Popcorn is on the house!

**February 28: Popcorn & Movie Meeting**
We’ll be getting into the spirit with Pirates of the Carribean (non-pirated, of course).

**April 3-5: Regional Competition in Fort Collins, CO**
Step 1: Put it on your calendar if you’re signed up. Step 2: Get pumped up!

**April 26: Mines 10 Year Steel Bridge Reunion**
Stay tuned for details, as this event is sure to be a good time.

**March 31: ASCE Bridge Photo Competition Deadline**
The Bridge Photo Competition opened on February 1st!

As with everything ASCE, make sure to keep checking your email, MinesLink, and Facebook for details as they come. If you’re not on the email list, email [ASCE@mines.sdsmt.edu](mailto:ASCE@mines.sdsmt.edu) to get in the loop or visit us in the Bill Coyle Lounge.

Note from Concrete Canoe Captains Kyle & Logon:
Big announcement: concrete has been poured. With hard work, good luck and nice weather for rowing practice, we will be regionals-ready in no time! If you aren’t attending the conference, you can still help us prepare (especially if you’re good with a paint brush). Contact Kyle or Logon for more information.
- Want to get involved? Contact [Kyle.Carey@mines.sdsmt.edu](mailto:Kyle.Carey@mines.sdsmt.edu) or [Logon.Vogt@mines.sdsmt.edu](mailto:Logon.Vogt@mines.sdsmt.edu) to find out more!

PS: Pirates know it when they see it... the Black Hills Pearl.

Note from Steel Bridge Captains Kirk & Nick:
This year’s bridge reunion will be on April 26, so the team is busy preparing for that in addition to the usual regionals preparation. Whether you’re on the team or not, it should be a great event and an opportunity to connect with alumni of our department. As far as this year’s bridge goes, we’re in a good position so far, and we’ve had great fun in the shop with our high-strength Swedish steel. Feel free to stop by and check out our progress—you can find us in the old surveying lab area or ask around in the Bill Coyle lounge. And of course, contact us with questions if you have them!
- Want to get involved? Contact [Nicholas.Claggett@mines.sdsmt.edu](mailto:Nicholas.Claggett@mines.sdsmt.edu) or [Kirk.Ehike@mines.sdsmt.edu](mailto:Kirk.Ehike@mines.sdsmt.edu) to find out more!