

GLE Society joins Association of Engineering Geologists

It has been a truly exciting year for the GLE Society. Last spring the Geological Engineering Society was honored to have Rex Upp, then-President of the Association of Engineering Geologists (AEG), speak at a GLE Society meeting. Thanks to Rex's encouragement and the initiative taken by last year's officers, the Geological Engineering Society is now an AEG student chapter.

It was serendipitous that this year's Annual AEG conference was held in St. Louis, only six hours from Madison. We took advantage of the opportunity. In October, six members of UW AEG traveled to the conference. We met other geological engineering students from the University of Mississippi, the University of Missouri-Rolla and the Colorado School of Mines. We also talked with professional geophysicists, hydro-geologists and engineering geologists. These connections are paving the way for internships and careers from the Appalachians to the Rockies.

We also traveled to Chicago for AEG North Central section meetings in November and December. Thanks to these AEG events, professional geologists and engineers have offered to visit UW and speak with us. Industry guests are important to this small degree program; they reassure young students that geological engineering is a valuable degree.

This semester we look forward to hosting Kim Gerred from URS, Will Green from GreenSmith, Inc., Bill Simpkins from Iowa State and Bob Glass from Sandia National Laboratories.

The GLEs would like to extend a sincere thank you to Polygon for these rewarding, educational experiences. Without Polygon's funding, we would not have been able to develop so many new personal and professional relationships with fellow engineering geologists. And of course, thank you to the alumni and faculty who brought about our AEG affiliation.



Students in GLE 476, Geological Engineering Field Methods, examine rock core samples.

MESSAGE FROM THE CHAIR



David Mickelson, Chair

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This is the first, and certainly not the last, GLE newsletter. It is being sent to graduates of the former Mining Engineering Program, many civil engineers from the geotech area and also as part of the geology and geophysics newsletter. The GLE Program at UW-Madison is 14 years old. We are now 14 faculty strong. Our newest faculty member, David Alumbaugh, is profiled in this issue.

We are tenured in a variety of departments (geology and geophysics, civil and environmental engineering, engineering physics, soils), but work together to teach, advise and administer this interdisciplinary program.

We cover many areas of GLE, as you can see in the diagram below.

This is my third year as chair, and it has been a busy time. Last year our undergraduate program underwent its ABET accreditation review (this happens every six years). We were successful. This year we went through a review of the graduate program, also passing with a recommendation that the program continue, so it looks like we are here to stay. Last year our Board of Visitors met for the first time (*see adjacent story*), and they met again in February 2002. We are pleased to have such a fine group of alumni helping with the program.

There are about 30 undergraduate majors and 18 grad students at the MS and PhD level.

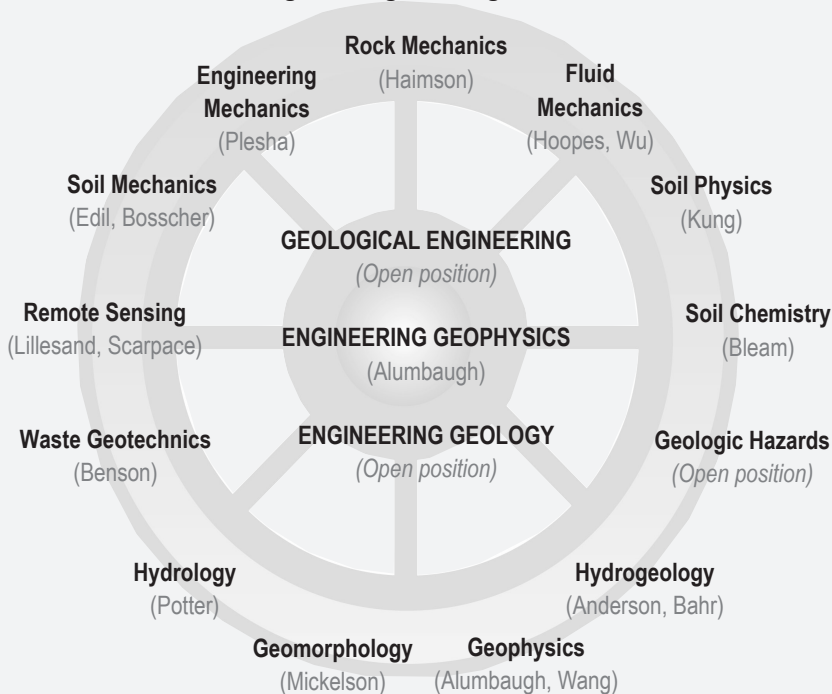
We are proud of our students; they take a heavy course load and finish with a degree in engineering and another in geology. The students who took the Fundamentals of Engineering Exam in Wisconsin had a very high pass rate (about 97 percent). Perhaps some of you have been fortunate enough to employ our graduates. If not, give us a call and we'll put you in contact with them. Likewise, if you know of internship possibilities either for summer or during the school year, we'd like to hear about them.

Although we are a relatively new program, we have gained national stature, and are excited about the future. If you come to campus, please visit us. We would be happy to talk with you. We are in need of your financial support. Please make your check payable to the **GLE Program** and mail it to **UW Foundation, 1848 University Ave., P.O. Box 8860, Madison, WI 53708-8860**. We currently have no endowments and little money to offer our top students for scholarships. Any help you could provide would be very much appreciated.

Thank you, and I look forward to meeting many of you in the years ahead.

Dave Mickelson

GLE Curriculum Faculty and organization of the Geological Engineering curriculum



Board of Visitors



The Board of Visitors was formed in 2000 to advise the GLE program on curriculum, strategic hires and potential funding for program expansions. The first meeting was held in February 2001, and the second meeting was held this year on Feb. 21–22. The 2001 meeting focused on faculty positions and curriculum for the program. The Board reviewed and analyzed the new GLE curriculum, which helped assure compliance with ABET requirements.

The 2002 Board of Visitors focuses on strategic hiring of new faculty and on identifying funding sources. The GLE Program is young and until this year has had few donations. The program hopes to acquire funding from corporations and others who benefited from the GLE program or its predecessor, the Mining Engineering Program, or geotechnical engineering, and applied geology and geophysics. The new funding will support student research, scholarships and guest lecture programs as well as enhance the GLE program's national recognition.

Ideas and comments regarding potential funding or other aspects of alumni participation should be sent to the GLE program chair so they can be forwarded to the Board of Visitors. We would also like to enlarge the board. Let's have an active alumni organization and help this growing program.



David Alumbaugh joined the UW-Madison Geological Engineering faculty in 1999. He completed his PhD in applied geophysical engineering at the University of California-Berkeley in 1993. Upon completing his graduate degree, Alumbaugh spent six years at Sandia National Labs in New Mexico, where he developed algorithms for modeling geophysics. But in 1999 he was offered a tenure-track position here at UW-Madison. As he had "always wanted a university position," Alumbaugh accepted and moved to the sub-arctic Madison isthmus.

He says that one of the attractions UW-Madison held was a mentoring committee for young faculty—an unusual asset. The committee, consisting of three tenured professors, meets annually to guide young faculty into tenure—another of Madison's perks. Unlike many universities, UW has a reputation for "hiring people intending to tenure them."

Alumbaugh started teaching Geology 594 with Cliff Thurber (Geophysics) in fall 2000. Geology 594 replaced Applied Geophysics I and II, and covers seismic methods, resistivity, gravimetrics, and magnetism in one semester. During spring 2002 he will be teaching Borehole Geophysics, a new course to the GLE and the geology and geophysics programs. He hopes to develop the geophysics program into a nationally recognized curriculum.

Alumbaugh applies electromagnetic methods to image subsurface structures. He seeks a better understanding of contaminant/fluid flow processes. He is also interested in 2-D and 3-D electromagnetic imaging of energy reserves; He points out that the oil industry funds 90 percent of geophysics research. Alumbaugh predicts a growing demand for geophysicists in the oil industry as onshore and offshore oil wells grow deeper and baby boomers retire.

He was recently involved with the stray voltage project, sponsored by the Rural Energy Management Council. Midwestern dairy farmers have been reporting production and cow health problems that some attribute to "leaking" electricity. Alumbaugh and Research Scientist Louise Pellerin gathered data during the summer of 2001. Their study aims to determine the source of the stray voltage. Final results will be out by June.

Alumbaugh and his wife, Jennifer Mayfield, and son, Zane, enjoy living in Madison. He especially appreciates the democratic nature of UW-Madison and the active student union.



GLE Program welcomes David Alumbaugh

Board of Visitors Members

Robert Sterrett, Chair—Sterrett was an MS student in hydrogeology at UW-Madison and received a PhD in geology and a minor in CEE in 1980. He has taught at Colorado School of Mines and worked for several consulting firms. He founded Hydrologic Consultants, Inc. in 1989 and recently left that company to do independent consulting.

Douglas Connell—Connell earned his MS degrees in geology and water resources management from UW-Madison in 1984. He had joint advisors in geology and CEE. He is now president of Barr Engineering in Minneapolis.

Tom Doe—Doe earned his MS in structural geology and a PhD in rock mechanics in 1980. He was a scientist at Lawrence Berkeley for about 10 years before moving to Battelle and finally Golder Associates. He is principal and manager of Golder's specialty group for fluid flow studies in fractured rock.

Karyn Edwalds—Edwalds received her BS degree in geological engineering at UW-Madison in 1992. She also has an MS degree in landscape architecture from the University of Minnesota. She is currently working for a natural resources-based firm called Kestrel Design Group.