

# Student Learning Outcomes Assessment Summary

## *MS (Geological Engineering)*

*College of Engineering and Mines*

2009-2010, 2010-2011, 2011-2012

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### **1. Assessment information collected**

GRE and/or TOEFL scores, Student Background, Comprehensive Exam, Instructor Opinions, Student Annual Progress Reports, Graduate Research Committee Evaluations, Project/Thesis Reports and Presentations, Publications, Placement.

### **2. Conclusions drawn from the information summarized above**

- Student learning outcomes continue to be met.
- MSGE Comprehensive Exam pass rate: All except one student who took and completed the exam.
- Grad Committee Evaluation: MSGE student outcomes were evaluated by their graduate research committee members. The uneven quality and readiness of those admitted grad students were noted due in part to their diverse academic background (e.g., BS degrees in geological engineering, geology, civil engineering, and so on). Requirement of GRE for the graduate students is not consistent.

### **3. Curricular changes resulting from conclusions drawn above**

- The admission requirements for the MSGE program has been modified so that those admitted in the future without a BSGE degree will have to go through a set of courses to overcome their deficiency.
- Submission of GRE scores has been made mandatory although no minimal requirement for admission into the MSGE program has been set, so far. Impact of GRE scores on student performance is being assessed currently by the program faculty.
- Continuous improvement of the MS curriculum is being made with a set of GE courses provided to the MSGE students to ensure that all graduate students will have the breadth of understanding of all major geological engineering focus areas. Among those core courses, students are required to complete four courses from the suggested list.

**4. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting**

All members of the geological engineering faculty:

Prof. Scott L. Huang

Prof. Paul A. Metz

Prof. Margaret M. Darrow

Prof. Debasmita Misra

**5. Student Assessment Data**

Several students have graduated and been placed successfully in industry over the period of this assessment.

These graduates are: Elliot Thorum, Charles Bohart, Kyle A. Obermiller, Peter A. Calvin and Collin Macheel.

All of them met the student learning outcomes effectively and have found employment applying their geological engineering training. Some of them have peer-reviewed publications and/or technical reports to their credit. A few of them are in the process of submitting their manuscripts for peer-reviewed publications.