

Meeting of the Graduate Faculty

Monday October 27, 2008

A special meeting of the graduate faculty was called at 3:00 pm on October 27, 2008 in the Missouri Ozark Room (Havener Center) to consider a request by the Geological Engineering Department to modify the program residency requirements for distance students in order to allow them to pursue a PhD in GE (Geological Engineering). The text of the proposal by Geological Engineering was circulated to the graduate faculty in advance of the meeting and is included here as an appendix to the minutes.

Professor Neil Anderson moved to approve the proposal and the motion was seconded by Prof. David Rogers.

After considerable discussion the motion was called to a vote. There were 12 votes in favor of the motion, eleven votes against, and two abstentions. Therefore the attached proposal has been approved by majority vote of the graduate faculty present at the meeting in accordance with the rules of the graduate faculty.

The meeting was adjourned at approximately 4:00 pm.

Respectfully Submitted,

Richard E. DuBroff
Chairman of the Graduate Faculty.

Appendix
**Request by Geological Engineering for Authorization to Adopt Modified
Ph.D. Program Residency Requirements for Distance Students**

1) Request to Graduate Faculty:

In an effort to meet a well-defined need (primarily within the American Military), Geological Engineering (GE) requests approval from the Graduate Faculty to offer modified Residency Requirements to qualified distance Ph.D. Degree candidates. This modified Ph.D. program will be available only to exceptional applicants who hold a Master of Science in Geological Engineering (or comparable degree) degree from Missouri S&T or another institution.

Current Missouri S&T Ph.D. Degree program residency requirements as cited in the Graduate Catalog are listed below (subheading **A**). Also listed are: **B**) the proposed residency requirements for distance GE Ph.D. Degree program candidates; and **C**) the previously approved residency requirements for the Systems Engineering Ph.D. Degree program. Note that the proposed GE Ph.D. residency requirements are almost identical to those approved for Systems Engineering by the Missouri S&T Graduate Faculty.

A) Current Missouri S&T Ph.D. Residency Requirements as Cited in the Graduate Catalog:

Italicized text was extracted directly from Missouri S&T catalog “For those holding a master’s degree from Missouri S&T or another institution, this three-year residency requirement can be met by completing the equivalent of two years (four semesters) of full-time academic work beyond the master’s degree, including at least two consecutive semesters in residence at Missouri S&T while enrolled in at least nine graduate credit hours per semester.”

B) Proposed GE Residency Requirements for Distance Ph.D. candidates who hold a Master of Science Degree in Geological Engineering (or comparable degree):

*The Geological Engineering Ph.D. program will follow the residency requirements listed in the Missouri S&T Graduate Catalog under the section entitled **Doctor of Philosophy Degrees**. Distance students who hold a Master of Science in Geological Engineering (or comparable degree) degree from Missouri S&T or another institution can satisfy the current two-semester residence at Missouri S&T requirement by meeting the following guidelines.*

- *The qualifying exam must be taken on-campus during the first year of enrollment. The exam can be taken up to two times. A second failure will generally result in the student not being accepted into the PhD program or being allowed to take the test for a third time. Nonetheless, under special circumstances, the student can petition the program head and be*

allowed to take the test more than two times if approved by the program head and department chair. The core faculty will be instrumental in preparing the exam, although other engineering faculty may be asked to participate in the preparation and administering of the exam.

- The student is required to have at least two conference call meetings per month with their advisor that they sign up with for the GE 490 research course.
- The student's PhD committee must include one member from the student's professional work location. While it is technically possible for the professional member to be at another location, it is desirable that this individual be in the same location to facilitate research mentoring and interaction. This individual must have a PhD degree and be familiar with the chosen research area of the student and be an unbiased co-worker (i.e., preferably not a direct or indirect reporting supervisor or manager).
- The student will be required to meet with his PhD committee on a regular basis as established by the committee through campus visits or telephone conferencing with a minimum of two meetings each semester.
- During any one year period, the student is required to be on campus for a minimum of 16 days spread over at least four visits while taking courses toward the PhD.
- The student is required to participate in all graduate courses synchronously with the class sessions based on the communication technology available in the classroom. Full participation in class activities is expected within the limitations of the communication technology. Asynchronous participation may be allowed as needed on a case by case basis.
- The PhD comprehensive exam must be taken on campus. The comprehensive exam will be given by the students' graduate PhD committee, along with others as chosen by the committee.
- Defense of the dissertation must take place on campus.
- Except as noted above all of the requirements for the on campus PhD program in Geological Engineering will also apply to distance students enrolled in this proposed program.

C) Systems Engineering Ph.D. Program Residency Requirements for Distance Students:

Residency requirements for the Ph.D. Degree in Systems Engineering at Missouri S&T differ from those cited in the Missouri S&T Graduate Catalog. The Systems Engineering residency requirements are listed below (*italicized*). This text was extracted from the proposal that was submitted to and approved by the Missouri S&T Graduate Faculty.

*The program will follow the residency requirements listed in the UMR Graduate Catalog under the section entitled **Doctor of Philosophy Degrees**. Distance students can satisfy the current two-semester residence at UMR requirement by meeting the following guidelines.*

- *The qualifying exam must be taken on-campus during the first year of enrollment. The exam can be taken up to two times. A second failure will generally result in the student not being accepted into the PhD program or being allowed to take the test for a third time. Nonetheless, under special circumstances, the student can petition the program director and*

be allowed to take the test more than two times if approved by the program director and department chair. The core faculty will be instrumental in preparing the exam, although other systems engineering faculty may participate in the preparation and administering of the exam.

- The student is expected to have at least two Internet video conference meetings per month with their advisor or committee member that they sign up with for the SysEng 490 research course.*
- The student's PhD committee must include one member from the student's professional work location. While it is technically possible for the professional member to be at another location, it is desirable that this individual be in the same location to facilitate research mentoring and interaction. This individual must have a PhD degree and be familiar with the chosen research area of the student, but be an unbiased co-worker (i.e., preferably not a direct or indirect reporting supervisor or manager).*
- The student will be expected to meet with his PhD committee on a regular basis as established by the committee through campus visits or internet video conferencing with a minimum of two meetings each semester.*
- During any one year period, the student is expected to be on campus for a minimum of 16 days spread over at least four visits while taking courses toward the PhD.*
- The student is expected to participate in all graduate courses synchronously with the class sessions based on the communication technology available in the classroom. Full participation in class activities is expected within the limitations of the communication technology. Asynchronous participation may be allowed only on an exceptional basis for individual class sessions.*
- The PhD comprehensive exam must be taken on campus. Students, whether on-campus or off-campus, will take the comprehensive exam on the same date and at the same time. The comprehensive exam will be given by the students' graduate PhD committee, along with others as chosen by the committee.*
- The student has the option of selecting a dissertation topic in an area directly related to and beneficial to his/her professional work, and can carry out the associated research at the student's worksite. It is essential that the student's employer fully support the doctoral program.*
- Defense of the dissertation must take place on campus.*

2) Existing Geological Engineering On-Line and Extension MS Degree Programs:

For the past ten years, Active Duty Officers enrolled in the Engineering Captains Career Course (ECCC) at Fort Leonard Wood (FLW) have been able to obtain a Master of Science Degree in Geological Engineering through the auspices of the USAES-MST Cooperative Academic Program (http://emse.mst.edu/academic_programs/eccc.html). In the past five years alone, one hundred and five (105) officers have graduated from the GE FLW MS Degree program (or its immediate predecessor); twenty-four officers are currently enrolled in the program. Comparable FLW MS Degree Programs are currently offered by two other Missouri S&T Departments: Engineering Management and Civil Engineering.

This past summer (2008) Geological Engineering initiated an on-line Master of Science Degree program designed for and restricted to Reserve Component Officers (<http://flwgee.mst.edu>). This MS Degree program was developed in response to a recognized need as presented to Missouri S&T by senior leadership within the Army Reserve. A total of twelve (12) officers are currently enrolled in the new GE on-line MS Degree program.

Geological Engineering is also home to the on-line Master of Engineering in Geotechnics Degree program (<http://gtech.mst.edu/>). Twenty-five (25) on-line graduate level courses are currently offered through the auspices of this ME Degree program; about thirty (30) students are currently enrolled.

3) Identified Need for a Geological Engineering Ph.D. Degree Program with Modified Residency Requirements:

Past graduates of the GE FLW MS Degree Program and many current registrants (as well as other Active Duty and Reserve Officers) have expressed interest in pursuing the Ph.D. Degree in Geological Engineering. Their reasons are varied: some would like to advance to senior leadership positions within the military; some intend to lead civilian-staffed research units within the military; some will seek faculty positions within the military or as civilians; some are thinking of post-military career options. Irrespective of their reasons for seeking the Ph.D., all of the officers have indicated that it could be difficult for them to meet current Missouri S&T Ph.D. program residency requirements. However, many of them have indicated that if they were admitted to a Ph.D. program, they could seek military postings that would enable them to further their research.