GLO Non-Thesis MS Assessment Plan

Geological Engineering is a multi-disciplinary field that requires understanding of core geological and engineering concepts. It is the goal of the Geological Engineering program at MST to provide non-thesis MS students with a range of skills that provide both breadth and depth in geological engineering applications and that will help them to develop professionally throughout their careers. Accordingly, these students will be required to follow the attached coursework plan, where all students take certain core courses in Geological Engineering, and then will select electives from the listed emphasis areas.

Assessment of non-thesis MS students will be performed using components of the required core courses, where these courses cover subsurface exploration, engineering geology/geotechnics, and geohydrology. Assessment will be performed as follows:

**Knowledge**: Each of the core courses includes regular exams that test the students’ ability to apply knowledge of the course content. A student will be considered to have demonstrated adequate mastery of the subject matter in each course if that student’s average exam scores are greater than 75% of the best possible score.

**Communication**: All core courses require students to prepare written and oral reports over projects performed in those courses. Each student’s ability to communicate effectively will be considered adequate if they receive a score greater than 75% on these reports.

**Critical Thinking**: All core courses require students to solve open-ended problems using a variety of concepts and skills. Students develop their critical thinking skills and scientific creativity as they work with data sets that require an understanding of heterogeneity and uncertainty and as they design solutions to problems based on these data sets. Each student’s ability to think critically will be considered adequate if they achieve a score of greater than 75% on homework problems and projects that exercise these abilities.

**Professional Development**: Each of the core courses stresses professional development, and the skills and concepts taught in these courses correlate directly to those needed in the workforce. These courses also stress the importance of professional registration and the need for continuous learning throughout one’s career. Each student’s professional development will be assessed by their response to questions on exams related to topics such as profession registration, ethics, and continuing education. A score of 75% of greater on these questions will be considered as adequate mastery of this area.