

Checklist for _____ by _____ Date: _____

MASTER OF SCIENCE IN GEOLOGY AND GEOLOGICAL ENGINEERING

GEOLOGICAL ENGINEERING SPECIALIZATION

General Requirements:

The student must complete the following minimum course credits:

	<u>Thesis Degree</u>	<u>Non-Thesis Option</u>
___ Coursework (500 or above)**	24 credits	32 credits
___ GEOL/GEOE 798 MS Thesis (minimum)	6 credits	0 credits
	30 credits	32 credits

** With thesis committee approval, up to 6 credits may be 300- or 400-level courses.

M.S. Course Work Requirements for Geological Engineering Specialization

The candidate's committee is responsible for assisting the student in developing a program of study that prepares the student for his/her intended field.

Course Requirements:

___ GEOL 700 Research Methods (to be taken first fall semester of enrollment)

___ GEOL/GEOE course emphasizing field methods fulfilled by _____

___ GEOL/GEOE course emphasizing analytical methods fulfilled by _____

___ GEOL/GEOE course emphasizing computational methods fulfilled by _____

Three focus areas are offered to M.S. candidates in the Geological Engineering Specialization. The recommended courses for each area are listed below.

Ground Water and Environmental Focus:

Recommended:

- ___ GEOE 641 Geochemistry
- ___ GEOE 663 Ground Water Geochemistry
- ___ GEOE 664 Advanced Ground Water
- ___ GEOE 682 Fluvial Processes
- ___ GEOE 766 Digital Modeling of Ground Water
- ___ GEOL 517 Geospatial Databases
- ___ GEOL 519 Advanced Geospatial Analysis
- ___ GEOL 633 Sedimentation
- ___ CEE 519 Environmental Eng Process Design
- ___ CEE 521 Environmental Systems Analysis
- ___ CEE 634 Surface Water Hydrology
- ___ CEE 730 Statistical Methods Water Resources
- ___ CEE 731 Topics in Water Quality Assessment

Geomechanics Focus:

Recommended:

- ___ GEOE 566 Engineering and Env Geology
- ___ GEOE 664 Advanced Ground Water
- ___ GEOE 768 Eng Geology of Surficial Deposits
- ___ GEOL 633 Sedimentation

- ___ CEE 643 Advanced Soil Mechanics I
- ___ CEE 645 Advanced Foundations
- ___ CEE 646 Stability of Soil and Rock Slopes
- ___ CEE 647 Earth Retaining Structures
- ___ MEM 525 Advanced Rock Mechanics
- ___ MEM 533 Comp. Apps Geoscience Modeling
- ___ MEM 550 Rock Slope Engineering

Energy and Mineral Resources Focus:

Recommended:

- ___ GEOE 641 Geochemistry
- ___ GEOE 663 Groundwater Geochemistry
- ___ GEOL 576 Petroleum Geology
- ___ GEOL 652 Problems in Ore Deposits
- ___ GEOL 633 Sedimentation
- ___ GEOL 650 Seminar in Ore Deposits
- ___ CEE 627 Treatment, Disposal, and Management of Hazardous Waste
- ___ CEE 784 Modeling and Comp. in Civil Engineering
- ___ MEM 533 Comp Apps Geoscience Modeling