PHD IN GEOLOGY AND GEOLOGICAL ENGINEERING

GEOLOGICAL ENGINEERING SPECIALIZATION

Curriculum
____ A minimum of 72 credit hours is required beyond the B.S. degree.
____ At least 36 of these credits must be for course work. Up to twenty-four (24) course credits and six (6) research credits from the M.S. degree can be applied toward the total required credits if the student’s committee agrees.
____ It is recommended that six (6) to twelve (12) hours of course work be taken outside the department.

The student’s committee is responsible for assisting the student in developing a program of study that prepares the student for advanced work in his/her chosen specialty field.

Required of all GEOE students:
____ GEOL 700 Research Methods (to be taken first fall semester of enrollment)
____ GEOL 808 Fundamental Problems in GEOL/GEOE
____ GEOL/GEOE course emphasizing field methods fulfilled by __________
____ GEOL/GEOE course emphasizing analytical methods fulfilled by __________
____ GEOL/GEOE course emphasizing computational methods fulfilled by __________

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
____ GEOE 517 Geospatial Databases
____ GEOE 519 Advanced Geospatial Analysis
____ GEOE 633 Sedimentation
____ CEE 519 Environmental Engineering
____ CEE 521 Environmental Systems Analysis
____ CEE 634 Surface Water Hydrology
____ CEE 730 Statistical methods in Water Resources
____ CEE 731 Topics in Water Quality Assessment

Geomechanics Focus:
Recommended:
____ GEOE 566 Engineering and Environmental Geology
____ GEOE 664 Advanced Ground Water

____ GEOE 678 Engineering 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 Computer Applications in Geoscience Modeling
____ MEM 550 Rock Slope Engineering

Energy and Mineral Resources Focus:
Recommended:
____ GEOE 641 Geochemistry
____ GEOE 663 Groundwater Geochemistry
____ GEOE 576 Petroleum Geology
____ GEOE 652 Problems in Ore Deposits
____ GEOE 633 Sedimentation
____ GEOE 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 Applications in Geoscience Modeling