Master of Science

Degree Requirements

- Completed Plan of Study
- Credit Hours: All students are required to complete a minimum of 32 graduate credit hours at the 400, 500 or 600 level. Students who elect to complete a thesis will typically earn additional credit hours.
- Grade Point Average: Students must earn a minimum overall GPA of 3.0 and a minimum GPA of 3.0 in coursework applied to their graduate program.
- Degree Requirements:
  - Complete a plan of study
- Completion Requirements: students must select a completion track for a total of 8 credits. Available tracks are the
  - Research track: students must complete a Master's thesis including:
    - Thesis Proposal Defense
    - Thesis Defense
  - Professional studies track: students have the option of completing an internship, completing a project with a faculty member, taking the ASBOG Fundamental exam (first step in professional licensure), additional coursework, or a combination of these options.

Curriculum Requirements

Core Requirements

- Any GEOL courses at the 400, 500 or 600 level*

Electives

- Select three courses from the list below:
  - Any additional GEOG or GEOL courses at the 400, 500 or 600 level**
  - AEM 401 Environmental Microbiology
  - AGRN 417 Soil Genesis and Classification
  - AGRN 455 Reclamation of Disturbed Soils
  - AGRN 552 Pedology
  - ENVP 460 Environmental Impact Assessment
  - ENVP 515 Hazardous Waste Training
  - ENVP 555 Environmental Sampling and Analysis
  - FNRS 444 Watershed Management
  - FNRS 655 Watershed Hydrology
  - PNGE 632 Reservoir Simulation and Modeling
  - PNGE 735 Advanced Formation Evaluation
  - RESM 444 Advanced GIS for Natural Resource Management
  - RESM 480 Environmental Regulation
  - RESM 540 Geospatial Modeling
  - RESM 545 Spatial Hydrology and Watershed Analysis
  - STAT 511 Statistical Methods 1
  - STAT 512 Statistical Methods 2
  - WMAN 446 Freshwater Ecology
  - WMAN 547 Applied Wetlands Ecology and Management

GRADUATION TRACK

- Select one track:
  - Research Track:
    - GEOL 697 Research (students must complete 6 credit hours)
    - GEOL 696 Graduate Seminar (students must complete 2 credit hours)
  - Professional Studies Track: ***

Core Courses:

- GEOL 682 Masters: Professional Studies Track Cohort Seminar (taken first semester in program)
GEOL 696  Graduate Seminar

Select one option or a combination of the options below:

Project:
GEOL 680  Masters Project Research

Internship:
GEOL 681  Grad Internship in Geology

Professional Licensure:
Any GEOL course(s) at the 400, 500 or 600 level

GEOL 696  Graduate Seminar

Total Hours  32

*  No more than 40% of courses may be at the 400 level (WVU requirement) and excludes GEOL 790.

**  Except GEOL 680, 681, 697, 790.

***  The professional studies track is completed in part by 1 hour of GEOL 682 and 1 hour of GEOL 696. The remaining 6 credits may be satisfied one or a combination of the following options: additional GEOL 696 credits, Internship, Research Project, Licensure, or additional GEOL coursework at the 500 or 600 level.

** Major Learning Outcomes **

** GEOLOGY **

Students obtaining a masters in Geology with a Research Track will be able to:

- Communicate geologic concepts orally and in writing
- Apply research skills to analyze geologic questions
- Propose, produce and defend original research in their field of study
- Explain geologic principles as they relate to their area of research

Students obtaining a masters in Geology with a Professional Studies Track will be able to:

- Communicate geologic concepts orally and in writing
- Demonstrate knowledge in either energy geology or environmental geology
- Apply geological knowledge and methods to (1) find, develop and produce energy resources particularly natural gas, natural gas liquids and oil; OR, (2) to assess environmental issues