

PHYSICS AND APPLIED SCIENCES, M.S.

The Master of Science in Physics and Applied Sciences, offered in cooperation with the Departments of Chemistry, Geology, Computer and Information Technology, and Mathematics, is intended to provide the opportunity for students with diverse qualifications to improve the depth and breadth of their knowledge in the Physical Sciences. The degree offered is a M.S. in Physics and Applied Sciences, with an Area of Emphasis in one of the following: Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics and Physical Science.

The area of emphasis in Geobiophysical Modeling is interdisciplinary, with core courses in Remote Sensing and GIS Modeling. Thereafter, students may choose from areas of concentration in Aquatic, Terrestrial or Biophysical Systems and Models.

Admission Requirements

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at www.marshall.edu/graduate/admissions/how-to-apply-for-admission (<http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission/>).

In addition:

- The applicant must have an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale in their major;
- Applicants external to the Marshall University geology department must arrange for **three** recommendation letters mailed (or e-mailed) to the department chair.
- Applicants with a GPA between 2.5 and 3.0 in their major may be provisionally admitted to the Geology emphasis program with the unanimous approval of the Geology faculty;
- Applicants who do not meet Marshall's requirements for a B.S. in Geology may be required to take additional courses (as determined by the Geology faculty), in addition to graduate coursework, to provide an adequate foundation in the area of emphasis. The foundation courses may be undergraduate courses.

Program Requirements

A Plan of Study approved by the student's advisor must be submitted for approval to the Graduate College Dean before the student registers for his or her 12th semester hour. The Plan of Study is a student's "blueprint" for completing graduation requirements.

Programs will be designed to meet individual needs. Students must consult with their advisors for specific requirements. The writing of a thesis is optional in all areas of emphasis.

If the thesis option is chosen, a minimum of 32 hours is required, including not more than 6 hours for the thesis. Without the thesis, 36 hours are required.

Note: These are general guidelines. Individual departments may have their own requirements.

Code	Title	Credit Hours
Minimum Requirements		32-36
Area of Emphasis (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics)		12-18
Minor area (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics)		6
Electives		12-18

Requirements for Geology Area of Emphasis

1. Students must pass a qualifying examination during the first eight weeks of their first semester of graduate work. The exam will be administered orally by the Geology faculty and will be coordinated by the student's thesis advisor. Students will be allowed two attempts to pass the qualifying exam. If a student fails to pass the qualifying exam on the first or second attempt, the student must withdraw from the program at the end of their first semester and may not reapply the program until the following academic year.
2. Following successful completion of the qualifying exam, and prior to the end of the first semester of graduate work, students must submit to the Graduate College a Plan of Study approved by the Geology faculty. The plan must include a total of at least 32 hours, at least 16 of which must be earned in classes numbered 600 or above. In addition, the curriculum must include at least 12 hours of 500-600 level geology courses. A maximum of six hours may be taken as thesis credit.
3. Following approval of the Plan of Study, the student forms a thesis committee with the mutual consent of his/ her advisor and nominated faculty. The committee will consist of at least three faculty members with graduate status, at least two of whom are faculty members from the Geology Department.
4. Following successful passing of the qualifying exam, the student must submit a thesis proposal to his/her committee. The proposal must be approved by the committee no later than the end of the student's second semester of enrollment in the plan. Guidelines for writing the research proposal can be found on the departmental website.
5. Students will be evaluated by a letter grade in all graduate coursework with the exception of the 6 hours of thesis work, which will be evaluated by a *CR/NC* grade. No candidate will earn his/her degree unless he/she obtains a "*CR*" grade for the thesis.
6. Students should submit an application for graduation to the Graduate College at the beginning of the semester in which they plan to graduate.
7. Upon completion of his/her thesis work, the student will submit a draft of his/her thesis approved by his/her advisor to the thesis committee. Guidelines for scientific writing can be found on the departmental website.
8. The candidate must orally present and successfully defend his/ her thesis before his/her thesis committee. The oral presentation will be open to the public. The subsequent question-and-answer session by the committee will focus solely on the student's research, and will be closed to the public. Upon completion of the Q & A session, the student will be asked to leave the room, while the committee members deliberate. The candidate's thesis advisor will communicate the results of deliberation to the student. Should the candidate not pass his/ her thesis defense, he/she will

be allowed two more attempts at defending the thesis. Conference or meeting presentations will not substitute for the oral defense.

9. The student must submit a final copy of his/her thesis with all revisions requested by the committee members to the committee for final approval. Once the committee approves the student's thesis, the student will be given permission to upload a PDF version of the thesis on the Graduate College ETD Administrator website. The candidate's advisor is responsible for proofreading this version to ensure that it is identical to the version approved by his/her thesis committee.
10. Normal time for completion of the M.S. degree is 2.5 years. A student must complete all requirements for graduation within five calendar years from the date of successful completion of his/her qualifying exam. Otherwise, his/her thesis hours will no longer count toward graduation.
11. A student who fails to satisfy criterion 10 above may petition his/her thesis committee explaining the circumstances behind this delay.