Request for Graduate Non-Curricular Changes

PLEASE USE THIS FORM FOR ALL NON-CURRICULAR CHANGE REQUESTS (changes in admission requirements or requirements for graduation, changes in existing or new policies/procedures, changes in program descriptions in catalog, general language changes in catalog).

SIGNATURES may not be required, depending on the nature of the request and from where it originates. Consult Graduate Council Chair.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: College of Science Dept/Division: Department of Physics/Division of Physica

Contact Person: Huong Nguyen Phone: x6-2756

Rationale for Request:

We request a change in the graduate catalogue for two reasons: first, to clarify ambiguities that might arise between the name of the program and the major offered; and second, to add admission requirements for the Physics Major. This change is requested simultaneously with the request on changing the name of the degree program from Master of Science in Physical and Applied Science to Master of Science in Physics and Applied Sciences. We want to make sure that the students understand that there are two separate majors within one degree program. The two majors have different requirements and admission rules.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.
NOTE: all requests may not require all signatures.

Department/Division Chair Ralph E. Oberly Date Mar 27, 2019

Registrar Date 3/28/19

College Curriculum Committee Chair Date 4/1/19
(or Dean if no college curriculum committee)

Graduate Council Chair Date

NOTE: please complete information required on the following pages before obtaining signatures above.

Request for Graduate Non-Curricular Changes – Page 2

1. **Current Catalog Description (if applicable)**: Please insert the catalog description from the current catalog for entries you would like to change.

Please see attached document.

2. **Edits to current description**: Attach or insert a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

Please see attached document.

3. **New Catalog Description**: Provide a "clean" copy of your proposed description without strikethroughs or highlighting. This should be what you are proposing for the new description.

Please see attached document.

Request for Graduate Non-Curricular Changes – Page 5

Please insert below your proposed change information for the Graduate Council agenda.

Type of change request: Changes in the graduate catalogue

Department: Department of Physics

Degree program: Master of Science in Physics and Applied Sciences

Effective date (fall/spring/summer, year): Fall 2019

ATTACHMENT 1:
Old Catalogue Description for the M.S. in Physical and Applied Science

PHYSICAL AND APPLIED SCIENCE, M.S.

Areas of Emphasis

Chemistry
Geobiophysical Modeling
Geology
Mathematics
Physics and Physical Science

Minor in Geobiophysical Science

The Master of Science in Physical and Applied Science, 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 Physical and Applied Science, 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.*

In addition:

a. The applicant must have an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale in their major;
b. Applicants external to the Marshall University geology department must arrange for THREE recommendation letters mailed (or e-mailed) to the department chair.
c. 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;
d. 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.

Degree 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.

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 long 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.

Minor in Geobiophysical Science

The Department of Physics and Physical Science also offers a minor field in Geobiophysical Science. Please contact the department chair for information about this minor.

ATTACHMENT 2:
Change Catalog Description

~~**PHYSICAL AND APPLIED SCIENCE, M.S.**~~

~~**Areas of Emphasis**~~

~~**Chemistry**~~

~~**Geobiophysical Modeling Geology**~~

~~**Mathematics**~~

~~**Physics and Physical Science**~~

~~**Major in Physics**~~

~~**Minor in Geobiophysical Science**~~

~~The Master of Science in Physical and Applied Science, 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 Physical and Applied Science, 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*.~~

~~In addition:~~

~~a. The applicant must have an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale in their major;~~

~~b. Applicants external to the Marshall University geology department must arrange for THREE recommendation letters mailed (or e-mailed) to the department chair.~~

~~c. 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;~~

~~d. 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.~~

~~**Degree Requirements**~~

PHYSICS AND APPLIED SCIENCES, M.S.

MAJORS: Physics

Physical and Applied Science

Areas of Emphasis

Chemistry
Geobiophysical Modeling
Geology
Mathematics
Physics

Minor: Geobiophysical Sciences

The Master of Science in Physics and Applied Sciences degree offers the following majors: Master of Science in Physics and Master of Science in Physical and Applied Sciences, as well as Minor in Geobiophysical Science.

The Major in Physics is offered by the Department of Physics. Students with an undergraduate degree in physics or related fields are encouraged to apply to this major to advance in their knowledge of physics and to pursue their career goals in industry, government, or teaching. This major has been designed to meet the needs of students who are either interested in obtaining an M.S. in Physics as their terminal degree, or who want to pursue further graduate studies in physics, astronomy, or related fields, serving thus as a bridge to a Ph.D. program.

Graduates with an M.S. in Physics are usually hired into positions which require a high level of problem-solving or technical skills, either in the government or private sector.

The Major in Physical and Applied Science is offered in cooperation with the Departments of Chemistry, Geology, Physics, Mathematics, and Computer & Information Technology, and it provides an opportunity for students with diverse qualifications to improve the depth and breadth of their knowledge in the physical sciences. The M.S. in Applied Sciences has areas of emphasis in Chemistry, Geobiophysical Modeling, Geology, Mathematics, and Physics. 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.

1. PHYSICS

Admission Requirements

Applicants should follow the admissions process described in the current catalogue or at the Graduate Admissions website at *www.marshall.edu/graduate/admissions/how-to-apply-for-admission*

Applicants external to the Marshall University Physics department must arrange for THREE recommendation letters sent to the department chair by mail or email.

In addition, the Physics Department has the following requirements for admission:

1. A B.S. with at least 21 credit hours in physics.
2. A G.P.A of 2.5 for all college work
3. A minimum average of 3.0 in physics courses

Provisional Admission

Students may be admitted with "Provisional" status if two out of three criteria above are met. (Students who do not meet either criterion or meet only one criterion are not eligible for provisional admission.) Provisionally admitted students will be fully admitted to the program when they have completed 9 hours of classes from the core courses with no grade being below a "B." A Physics faculty advisor will review the transcripts of each student in "Provisional Status" to decide which courses are needed to take to fulfill those 9 hours requirement.

Major Requirements

1. Required Courses (20 credit hours)

PHY 600 Electricity and Magnetism (4)

PHY 608 Statistical Mechanics (4)

PHY 630 Classical Mechanics (4)

PHY 642 Advanced Quantum Mechanics (4)

PHY 645 Methods of Mathematical Physics (4)

2. Elective Courses (6 credit hours), among which one Advanced Lab is required
3. Thesis (6 CH) or Elective Courses (10 CH)

Students can choose between the thesis option and non-thesis option to complete the requirements for the M.S. program.

Thesis Option: Research opportunities in the Physics Department are broad. Faculty members in the Physics Department are doing their research in theoretical and experimental condensed matter physics, nanoscience, solar cells, laser physics, optics, gravitational physics and astrophysics. Students can choose to work with one of the faculty members on a research direction the faculty and the students choose. A thesis must be submitted to a committee of 3 faculty members and presented after that in an oral exam.

Non-thesis Option: Students who already complete all required courses and labs and do not want to do a thesis can fulfill the requirement by taking elective courses from the graduate level courses offered by the Physics Department.

General Requirement: Students need to complete a minimum of 32 credits with thesis (36 without thesis) with a GPA of 3.0 or better.

2. PHYSICAL AND APPLIED SCIENCE

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.*

In addition,

e. the applicant must have an undergraduate Grade Point Average (GPA) in their major of 3.0 or higher on a 4.0 scale;
f. applicants from outside the Marshall University geology department must arrange for THREE recommendation letters to be sent to the department chair by mail or e-mail;
g. 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;
h. 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.

Major 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.

Hours

Minimum requirements 32-36

Area of Emphasis (Chemistry, Geobiophysical Modeling, Geology, Mathematics, or Physics)..... 12-18

Minor area (Chemistry, Geobiophysical Modeling, Geology, Mathematics, or 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 long 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.

~~Major in Physics~~

~~The Department of Physics at Marshall offers a Master of Science with major in physics, within the Physical and Applied Science master's degree program. Students with an undergraduate degree in physics or related fields are encouraged to apply to this major to advance in their knowledge of physics, and to pursue their career goals in industry, government or teaching. The Marshall physics master's major has been designed to meet the needs of students who are either interested in obtaining an M.S. in Physics as their terminal degree, or want to have further graduate study in physics, astronomy or other fields. A master's serves as a bridge to a Ph.D. program. Moreover, graduates with an M.S. in Physics usually are hired into positions which require a high level of problem-solving or technical skills, in the federal or private sector.~~

~~Degree Requirements~~

~~1. Required Courses (20 credit hours)~~

~~PHY 600 Electricity and Magnetism (4)~~

~~PHY 608 Statistical Mechanics (4)~~

~~PHY 630 Classical Mechanics (4)~~

~~PHY 642 Advanced Quantum Mechanics (4)~~

~~PHY 645 Methods of Mathematical Physics (4)~~

~~4. Elective Courses (6 credit hours), among which one Advanced Lab is required~~
~~5. Thesis (6 CH) or Elective Courses (10 CH)~~

~~Students can choose between the thesis option and non-thesis option to complete the requirements for the M.S. program.~~

~~*Thesis Option:* Research opportunities in the Physics Department are broad. Faculty members in the Physics Department are doing their research in theoretical and experimental condensed matter physics, nanoscience, solar cells, laser physics, optics, gravitational physics and astrophysics. Students can choose to work with one of the faculty members on a research direction the faculty and the students choose. A thesis must be submitted to a committee of 3 faculty members and presented after that in an oral exam.~~

~~*Non-thesis Option:* Students who already complete all required courses and labs and do not want to do a thesis can fulfill the requirement by taking elective courses from the graduate level courses offered by the Physics Department.~~
~~General Requirement: Students need to complete a minimum of 32 credits with thesis (36 without thesis) with a GPA of 3.0 or better.~~

Minor in Geobiophysical Science

The Department of Physics also offers a minor field in Geobiophysical Science. Please contact the department chair for information about this minor.

ATTACHMENT 3:
New Catalog Description

PHYSICS AND APPLIED SCIENCES, M.S.

MAJORS: Physics

Physical and Applied Science

Areas of Emphasis

Chemistry
Geobiophysical Modeling
Geology
Mathematics
Physics

Minor: Geobiophysical Sciences

The Master of Science in Physics and Applied Sciences degree offers the following majors: Master of Science in Physics and Master of Science in Physical and Applied Sciences, as well as Minor in Geobiophysical Science.

The Major in Physics is offered by the Department of Physics. Students with an undergraduate degree in physics or related fields are encouraged to apply to this major to advance in their knowledge of physics and to pursue their career goals in industry, government, or teaching. This major has been designed to meet the needs of students who are either interested in obtaining an M.S. in Physics as their terminal degree, or who want to pursue further graduate studies in physics, astronomy, or related fields, serving thus as a bridge to a Ph.D. program.

Graduates with an M.S. in Physics are usually hired into positions which require a high level of problem-solving or technical skills, either in the government or private sector.

The Major in Physical and Applied Sciences is offered in cooperation with the Departments of Chemistry, Geology, Physics, Mathematics, and Computer & Information Technology, and it provides an opportunity for students with diverse qualifications to improve the depth and breadth of their knowledge in the physical sciences. The M.S. in Applied Sciences has areas of emphasis in Chemistry, Geobiophysical Modeling, Geology, Mathematics, and Physics. 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.

1. PHYSICS

Admission Requirements

Applicants should follow the admissions process described in the current catalogue or at the Graduate Admissions website at *www.marshall.edu/graduate/admissions/how-to-apply-for-admission*

Applicants external to the Marshall University Physics department must arrange for THREE recommendation letters sent to the department chair by mail or email.

In addition, the Physics Department has the following requirements for admission:

1. A B.S. with at least 21 credit hours in physics.
2. A G.P.A of 2.5 for all college work
3. A minimum average of 3.0 in physics courses

Provisional Admission

Students may be admitted with "Provisional" status if two out of three criteria above are met. (Students who do not meet either criterion or meet only one criterion are not eligible for provisional admission.) Provisionally admitted students will be fully admitted to the program when they have completed 9 hours of classes from the core courses with no grade being below a "B." A Physics faculty advisor will review the transcripts of each student in "Provisional Status" to decide which courses are needed to take to fulfill those 9 hours requirement.

Major Requirements

1. Required Courses (20 credit hours)

   PHY 600 Electricity and Magnetism (4)

   PHY 608 Statistical Mechanics (4)

   PHY 630 Classical Mechanics (4)

   PHY 642 Advanced Quantum Mechanics (4)

   PHY 645 Methods of Mathematical Physics (4)

2. Elective Courses (6 credit hours), among which one Advanced Lab is required
3. Thesis (6 CH) or Elective Courses (10 CH)

Students can choose between the thesis option and non-thesis option to complete the requirements for the M.S. program.

Thesis Option: Research opportunities in the Physics Department are broad. Faculty members in the Physics Department are doing their research in theoretical and experimental condensed matter physics, nanoscience, solar cells, laser physics, optics, gravitational physics and astrophysics. Students can choose to work with one of the faculty members on a research direction the faculty and the students choose. A thesis must be submitted to a committee of 3 faculty members and presented after that in an oral exam.

Non-thesis Option: Students who already complete all required courses and labs and do not want to do a thesis can fulfill the requirement by taking elective courses from the graduate level courses offered by the Physics Department.

General Requirement: Students need to complete a minimum of 32 credits with thesis (36 without thesis) with a GPA of 3.0 or better.

2. PHYSICAL AND APPLIED SCIENCES

Admission Requirements

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a. the applicant must have an undergraduate Grade Point Average (GPA) in their major of 3.0 or higher on a 4.0 scale;
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c. 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;
d. 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.

Major Requirements

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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.

Hours

Minimum requirements 32-36

Area of Emphasis (Chemistry, Geobiophysical Modeling, Geology, Mathematics, or Physics)..... 12-18

Minor area (Chemistry, Geobiophysical Modeling, Geology, Mathematics, or 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.
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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.
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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 long 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.

Minor in Geobiophysical Science

The Department of Physics also offers a minor field in Geobiophysical Science. Please contact the department chair for information about this minor.