

Date Submitted: 09/27/19 10:53 am

## Viewing: **GEOSPH : Geosciences, Doctor of Philosophy**

Last approved: 04/02/18 8:36 am

Last edit: 09/27/19 10:53 am

Changes proposed by: jatullis

Catalog Pages Using  
this Program  
[Geosciences \(GEOS\)](#)

Submitter: User ID: calison Phone:  
479-575-6731

Program Status Active

Academic Level Graduate

Type of proposal Major/Field of Study

Select a reason for this modification

Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding/changing Focused Study or Track)

Are you adding a concentration?

No

Are you adding or modifying a track?

No

Are you adding or modifying a focused study?

No

Effective Catalog Year Fall 2020

College/School Code

Fulbright College of Arts and Sciences (ARSC)

### In Workflow

1. ARSC Dean Initial
2. GRAD Dean Initial
3. Director of Program Assessment and Review
4. Registrar Initial
5. Institutional Research
6. GEOS Chair
7. ARSC Curriculum Committee
8. ARSC Dean
9. Global Campus
10. Provost Review
11. University Course and Program Committee
12. Graduate Committee
13. Faculty Senate
14. Provost Final
15. Provost's Office-- Notification of Approval
16. Registrar Final
17. Catalog Editor Final

### Approval Path

1. 09/18/19 4:23 pm  
Jeannie Hulen (jhulen): Approved for ARSC Dean Initial
2. 09/18/19 4:25 pm  
Pat Koski (pkoski):

## Department Code

Department of Geosciences (GEOS)

## Program Code

GEOSPH

## Degree

Doctor of Philosophy

## CIP Code

Approved for GRAD

Dean Initial

3. 09/19/19 2:31 pm

Alice Griffin

(agriffin): Rollback

to Initiator

4. 09/29/19 9:58 am

Jeannie Hulen

(jhulen): Approved

for ARSC Dean

Initial

5. 09/29/19 3:25 pm

Pat Koski (pkoski):

Approved for GRAD

Dean Initial

6. 09/30/19 1:44 pm

Alice Griffin

(agriffin): Approved

for Director of

Program

Assessment and

Review

7. 10/01/19 3:05 pm

Lisa Kulczak

(lkulcza): Approved

for Registrar Initial

8. 10/02/19 8:56 am

Gary Gunderman

(ggunderm):

Approved for

Institutional

Research

9. 10/02/19 9:07 am

Christopher Liner

(liner): Approved for

GEOS Chair

10. 11/06/19 11:48 am

Ryan Cochran

(rcc003): Approved

- for ARSC Curriculum Committee
11. 11/06/19 3:13 pm  
Jeannie Hulen (jhulen): Approved for ARSC Dean
  12. 11/06/19 4:12 pm  
Suzanne Kenner (skenner): Approved for Global Campus
  13. 11/08/19 7:35 am  
Terry Martin (tmartin): Approved for Provost Review

### History

1. Mar 3, 2015 by Charlie Alison (calison)
2. Feb 8, 2017 by Charlie Alison (calison)
3. Apr 2, 2018 by Gina Daugherty (gdaugher)

40.0601 - Geology/Earth Science, General.

#### Program Title

Geosciences, Doctor of Philosophy

#### Program Delivery

##### Method

On Campus

Is this program interdisciplinary?

No

Does this proposal impact any courses from another College/School?

No

What are the total hours needed to 72 ~~na~~

complete the  
program?

## Program Requirements and Description

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### Requirements

Geosciences-specific requirements are intended to be in harmony with those of the Graduate Catalog [admissions](#) and requirements for [PhD degrees](#) as well as all other university-level requirements. Supplemental information can be found in Department of Geosciences Graduate Handbook. In case of conflict, university-level requirements prevail, followed by Geosciences program requirements found below. Exceptions to program requirements, in consultation with the adviser, must be approved by the Geosciences PhD coordinator and the department chair.

#### Admission Requirements:

Undergraduate and graduate GPA as well as GRE (Verbal, Quantitative, and Writing) will be reviewed on a competitive basis by the Geosciences PhD admissions committee

~~Requirements for Admission to the Doctor of Philosophy Degree in Geosciences: Minimum Undergraduate GPA: 2.85 on a 4.0 system Minimum Graduate GPA: 3.20 on a 4.0 system Minimum GRE Verbal: 153 Minimum GRE Quantitative: 144 Minimum GRE combined Verbal and Quantitative: 297 Minimum GRE writing: 4 International students only: a minimum score of 6.5 on the International English Language Testing System (IELTS), 79 on the Internet-based Test of English as a Foreign Language (TOEFL), or a 58 on the Pearson Test of English—Academic (PTE-A), taken within the preceding two years M.S./M.A. requirements: 24 units graduate courses, 6 hours thesis Recommendations: Three (3) letters of recommendation from individuals qualified to assess the applicant's academic potential~~

~~Ph.D. course requirements: 24 units graduate courses; 18 hours dissertation; completed original dissertation research. No course with a grade of less than a C (graduate or undergraduate) will be accepted as fulfilling prerequisites. Acceptance by an adviser~~

#### Current curriculum vitae

~~Current Curriculum Vita; Other:~~ Statement of academic and research interests

~~Submit application by Jan.~~ **Submit application by January 15th deadline** for **Fall** fall-semester to assure consideration

#### Degree Requirements: **Course Requirements for the Doctor of Philosophy Degree:**

~~24 course hours beyond the U of A M.S./M.A. degree or equivalent. GEOS 5023 Technical and Proposal Writing for the Geosciences It is strongly recommended that two courses be taken outside of the department that are supplementary to the student's interests and dissertation topic. These may be 3000-level undergraduate courses, if approved by the Advisory Committee and the Graduate School. No more than 3 hours of Special Problems or Independent Research Dissertation—18 hours to be taken after admission to candidacy. Candidacy Exams: The comprehensive examinations consist of two rigorous examinations: A written comprehensive examination and An oral defense of the dissertation proposal. Students will take a comprehensive examination after they have completed the Graduate School residency requirement and have completed the required departmental core~~

~~courses. The exam will be taken during the fall or spring semester when classes are in session, but not during final exams. 24 At the time of the exam, the student must have a grade point average of 3.25 on 12 or more hours of course hours work taken~~ beyond the **MS Geography, MS Geology, or an equivalent master's degree (or for those starting the program without a master's, 48 course hours beyond a related bachelor's degree) degree.** **GEOS 5612 Research Methods in Geosciences**

### **GEOS 5011 Colloquium**

~~Two It is strongly recommended that two~~ **courses outside of the department that are supplementary to the student's interests and dissertation topic; these may be 3000-level undergraduate courses, if approved by the advisory committee and the Graduate School and International Education. taken outside of the department that are supplementary to the student's interests and dissertation topic.**

**No more than 3 course hours of special problems Special Problems or independent study Independent Research**

~~This exam must be taken at least one year prior to completing all requirements for the degree. The second written work to be assessed by the Comprehensive Examination Committee will be a research proposal composed by the student in the format typical of a National Science Foundation grant proposal. It is expected that the document will conform to all proposal formatting described in the Department of Geosciences Graduate Student Handbook requirements. Oral Dissertation Proposal: Upon admission to candidacy (passing the written comprehensive exam), the student will present to his/her Dissertation Committee a written and oral proposal of the dissertation topic for comment, suggestions, and approval. The dissertation adviser will chair the committee, unless prohibited by Graduate School conflict of interest rules. Successful completion of the proposal defense requires the positive vote of the committee. Normally this proposal will be completed by the third or fourth semester after matriculation and can only be delayed with the approval of the dissertation committee and the appropriate departmental Graduate Adviser. Any waivers to these requirements must be appealed to the Advisory or Dissertation committee and the departmental Graduate Adviser. Students should also be aware of Graduate School requirements with regard to doctoral degrees. The student must maintain a 3.0 GPA in course work taken for the Ph.D. degree. The Doctor of Philosophy degree is primarily a research degree, but communication of that research is critical for professional development and required for most professional pursuits. The PhD degree To promote development of the communication skills, each student is primarily a research degree, but communication of that research is critical for extension and application of research results as well as professional development; in order required to advance communication skills, each student is required to teach labs and/or a a course for for at least one semester and/or to and to present scientific results results at one or more national or international professional professional meetings. In addition, each student will present a departmental colloquium on the dissertation topic.~~

**Examination for Candidacy: Two candidacy exams should be taken within the first two years of graduate study and after completion of 12 hours of graduate study, including Research Methods in Geosciences and Colloquium (see above). The candidacy exams are administered dissertation adviser will chair the committee, unless prohibited by the advisory committee (consisting Graduate School conflict of the adviser plus 3-5 additional faculty members) during full-semester classes. interest rules. The first exam is Upon admission to candidacy (passing the written comprehensive exam), the student will present to his/her Dissertation Committee a review paper written using the format written and length oral proposal of a specified refereed**

**journal. the dissertation topic for comment, suggestions, and approval.** The committee Normally this proposal will assign be completed by the paper topic third or fourth semester after matriculation and journal style, can only be delayed with the approval of the dissertation committee and the paper will be due 30 days later. **appropriate departmental Graduate Adviser.** The advisory committee will determine whether the quality of the review paper demonstrates sufficient preparation for independent dissertation research. The second candidacy exam is an **An** oral defense of a written **the** dissertation proposal. The format of **second written work to be assessed by the** written dissertation proposal **Comprehensive Examination Committee** will be specified by a research proposal composed by the advisory committee. **student in the format typical of a National Science Foundation grant proposal.** The defense Any waivers to these requirements must demonstrate to be appealed to the advisory **Advisory or Dissertation** committee that and the student is prepared to move to the independent dissertation-research stage. **departmental Graduate Adviser.** Upon successful admission to candidacy, the advisory committee is dissolved, and a dissertation committee (adviser plus 2-4 additional faculty members) may then be formed.

Are Similar Programs available in the area?

No

Estimated Student NA

Demand for Program

Scheduled Program 2020-2021 NA

Review Date

Program Goals and

Objectives

**Program Goals and Objectives**

The goal of the PhD Geosciences is to prepare students for research-based employment in geography, geology, and other geoscience disciplines. The program will help students develop expertise in select areas of the geosciences. These include but are not limited to the physical, chemical, and biological processes that act upon Earth and other planets, human activity as it affects and is affected by these processes, and advances in the geographic information sciences. NA

Learning Outcomes

**Learning Outcomes**

PhD Geosciences graduates will learn strong scholarly written, verbal, and visual communication skills and will develop a suite of analytical techniques that may be based in field work, laboratory work, remote sensing, geographic information systems, geovisualization, quantitative or qualitative techniques, etc. to address problems across the geosciences. Students will complete a doctoral dissertation that advances understanding on a research frontier. NA

Description and justification of the request

Description of specific change	Justification for this change
<p>1) Score minimums from admissions requirements are removed; 2) instead of GEOS 5023 Technical and Proposal Writing for the Geosciences, the GEOSPH will now require GEOS 5612 Research Methods in Geosciences and GEOS 5011 Colloquium; thus the number of required hours has not changed; 3) two courses outside the department are now required instead of strongly recommended; 4) instead of having to teach lab/course AND present at convention, students can do one or the other but they must also present at colloquium; 5) description of examination for candidacy has been simplified and clarified to be in harmony with GSIE guidelines and to allow students to focus more on their review paper and the oral defense of the dissertation proposal.</p>	<p>The original GEOSPH description was difficult for students and faculty to understand due to some unnecessary overlap with GSIE/university requirements (e.g., minimum required GPA in program) as well as conflicting information about what exactly makes up the examination for candidacy. This update and clarification has been approved by the department.</p>

Upload attachments

Reviewer Comments

**Alice Griffin (agriffin) (09/19/19 11:12 am):** Inserted scheduled program review date.

**Alice Griffin (agriffin) (09/19/19 11:18 am):** Hyper-linked courses in program requirements.

**Alice Griffin (agriffin) (09/19/19 2:31 pm):** Rollback: Please insert program goals and student learning outcomes.

Key: 315