

From: noreply@wsu.edu
To: [curriculum.submit](#)
Subject: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan
Date: Friday, April 2, 2021 9:15:31 AM
Attachments: [2021.04.02.09.12.32.37.FormData.html](#)
[2021.04.02.09.12.31.30.currentCatalogFile_SOE_PhD_Geology_Program_Description_FINAL_for.docx](#)

Lisa Shipley has submitted a request for a major curricular change. His/her email address is: shipley@wsu.edu.

Requested change: Revise or Drop Graduate Plan

Degree: Ph.D. Geology

Title: NA

Requested Effective Date: Fall 2022

Revise plan requirement: Yes

Dean: Swindell, Samantha - Assoc Dean - CAS, Zack, Rich - Assoc Dean - CAHNRS

Chair: Keller, Kent – Director – Environment ,

Catalog Subcommittee
Approval Date

AAC, PHSC, or GSC
Approval Date

Faculty Senate
Approval Date

From: [Keller, Kent](#)
To: [Swindell, Samantha](#); [curriculum.submit](#)
Subject: Re: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan
Date: Monday, April 12, 2021 1:24:45 PM

I approve. -Kent.

From: "Swindell, Samantha" <sswindell@wsu.edu>
Date: Monday, April 12, 2021 at 11:09 AM
To: "curriculum.submit" <curriculum.submit@wsu.edu>, Kent Keller <ckkeller@wsu.edu>
Subject: RE: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan

1. I approve this proposal in its current form.

From: curriculum.submit@wsu.edu <curriculum.submit@wsu.edu>
Sent: Friday, April 2, 2021 9:13 AM
To: Keller, Kent <ckkeller@wsu.edu>
Cc: Swindell, Samantha <sswindell@wsu.edu>
Subject: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan

Keller, Kent – Director – Environment ,

Swindell, Samantha - Assoc Dean - CAS,

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Both Chair and Dean approval is required to complete the submission process. Please indicate that you have reviewed the proposal by highlighting one of the statements below and **reply all** to this email. (curriculum.submit@wsu.edu.) [Details of major change requested can be found in the attached supplemental documentation]

1. I approve this proposal in its current form.

From: [Swindell, Samantha](#)
To: [curriculum.submit](#); [Keller, Kent](#)
Subject: RE: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan
Date: Monday, April 12, 2021 11:09:01 AM

1. I approve this proposal in its current form.

From: curriculum.submit@wsu.edu <curriculum.submit@wsu.edu>
Sent: Friday, April 2, 2021 9:13 AM
To: Keller, Kent <ckkeller@wsu.edu>
Cc: Swindell, Samantha <sswindell@wsu.edu>
Subject: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan

Keller, Kent – Director – Environment ,

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1. I approve this proposal in its current form.
2. I approve this proposal with revisions. Revisions are attached.
3. I do not approve this proposal. Please return to submitter.

If you do not respond within one week, you will be sent a reminder email. If no response is received within three weeks of the submission date, the proposal will be returned to the submitter.

From: [Zack, Richard Stanly, Jr](#)
To: [curriculum.submit](#)
Subject: Re: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan
Date: Friday, April 2, 2021 11:17:09 AM

Approved

Rich Zack

From: "curriculum.submit@wsu.edu" <curriculum.submit@wsu.edu>
Date: Friday, April 2, 2021 at 12:15 PM
To: "Zack, Richard Stanly, Jr" <zack@wsu.edu>
Cc: "curriculum.submit" <curriculum.submit@wsu.edu>
Subject: 643144 Environment Requirements Revise - Revise or Drop Graduate Plan

,

Zack, Rich - Assoc Dean - CAHNRS,

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3. I do not approve this proposal. Please return to submitter.

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Thank you for your assistance as we embark on this new process. If you have any

Ph.D. in Geology

- **Revise plan**

Rationale:

The School of the Environment (SoE) was created in 2013 as a merger of the School of Earth and Environmental Sciences and the Department of Natural Resources. Over the past 8 years the faculty and staff in SoE have worked to combine and leverage their wide-ranging disciplinary expertise toward building a single School, with a shared vision, mission, and goals. An early step in this process was to combine all of the pre-existing B.S. degrees into a single, interdisciplinary degree (B.S. Earth and Environmental Sciences), with multiple majors that reflect the disciplinary strengths within the School. We have submitted our proposal to revise our M.S. degrees within SoE to reflect these strengths, and now we are proposing to revise our Ph.D. programs.

In 2018, the Ph.D. programs reverted to graduate school minimums, but the editing within the program requirements below show changes from the last approved Ph.D. in Geology. The main change is a reduction in the required number of graded graduate courses from 27 to 24, and the addition of SOE 501 (Graduate skills seminar) for students without an M.S. in a related subject.

School of the Environment Ph.D. Geology Program and Degree Description

Program Description

The Ph.D. in Geology is focused on fundamental questions in the Geosciences ranging from how Earth formed, how it has evolved, and how it operates and is changing today. The expectation is that Ph.D. Geology students conduct dissertation research that makes a significant contribution to the geological sciences, worthy of publication in refereed international journals.

Student Outcomes

Students who successfully complete the Ph.D. in Geology will be able to:

- Recognize, think critically about, and develop creative solutions to scientific problems.
- Master the field, laboratory, data analysis and theoretical skills necessary to perform the research.
- Write successful research grant proposals or otherwise obtain research funding.
- Effectively communicate the results of their research.
- Become effective teachers in field, laboratory and lecture-room settings.
- Prepare future students to successfully compete for jobs in industry, academia, and government.

- Contribute scientific leadership and expertise at the local, state and national levels.
- Become visible members of the scientific community by taking organizational and service roles.

Degree Program Requirements

Major Advisor and Supervisory Committee

Students are required to find a Major Advisor from the SOE graduate faculty who is willing to supervise the student's dissertation research before being admitted to the program. The Major Advisor and student will together identify potential members of a Dissertation Supervisory Committee, and the Major Advisor will serve as Chair. The committee will consist of at least three members, including the Chair, who each must be SOE Graduate Faculty. The committee also has the responsibility for assessing the student's dissertation proposal, the Ph.D. preliminary examination, and the qualifying final examination for the Doctor of Philosophy degree.

Curriculum

The coursework required for the Ph.D. in Geology supports the academic development and training of each student toward the completion of a dissertation. Students may choose courses offered across any of the WSU colleges, in consultation with their Major Advisor, in consideration of their prior academic and/or professional experiences and proposed dissertation research area.

Ph.D. in Geology Degree requirements

- At least 72 hours minimum total credits, consisting of:
 - At least ~~27~~ 24 hours graded course work at the 500-level, including:
 - At least ~~27-24~~ 24 hours minimum graded course work at the 500-level (with the exception that Ph.D. students who already have an M.S. degree in Geology or a related discipline can have up to 15 hours of 500-level coursework transferred towards their Ph.D. program of study, and therefore only need to take 9 or more hours of 500-level coursework).
 - Up to 9 hours of non-graduate (300-400 level) graded course work is allowed
 - If a student does not have an M.S. degree, SOE 501 (Graduate Skills Seminar; 1 hour) must be taken during the first year of the student's program (not graded)
 - At least 2 hours (semesters) SOE 598 (Seminar, not graded)
 - 20 hours minimum of SOE 800 (Ph.D. research, thesis or examination), 2 hours of which must be taken during the semester of the final exam (not graded).
 - Courses taken for audit may not be used on the program of study
 - Preliminary Exam
 - Final oral exam - Dissertation defense

Program of Study

The Program of Study is a degree plan submitted to the WSU Graduate School listing the student's completed, current, and proposed coursework to meet the degree requirements, and must be signed by each member of the student's Supervisory Committee. Specific courses to be included in the Program of Study are determined as a joint effort between the student, his/her major Major Advisor, and the other members of the committee to meet the particular needs of the student, as well as to meet the curricular requirements of SOE and the Graduate School. The Program of Study must be

submitted to and approved by the WSU Graduate School by the end of the student's 2nd year in the program, unless otherwise arranged according to SOE and Graduate School policy.

Dissertation Proposal

Each Ph.D. Geology student must submit a Dissertation Proposal to their Supervisory Committee, prior to scheduling the required preliminary examination. The proposal should clearly outline the research question or issues relevant for their dissertation study, define how those questions shall be addressed, and place their research within the appropriate context for the investigation.

Preliminary Examination

Each student is required to pass a preliminary examination in order to become a candidate for the Ph.D. degree. It is expected that students will take the preliminary exam by the end of the 3rd year of their program, or at an alternate time determined in consultation with and approved by their Major Advisor and Supervisory Committee. If the student fails to pass the examination after two attempts, SOE will recommend to the Graduate School that the student be disenrolled from the program. The exam will consist of a written and oral component as described below.

Written Examination

The content, format and schedule for the written examination will be determined by the student's doctoral committee. The committee may be guided by an examination format normally utilized in the committee chair's department, introducing alterations in that format as appropriate for the individual student. After the written examination is reviewed, doctoral committee members will provide the committee chair with feedback related to any gaps or weaknesses in the student's answers. The committee chair will provide the student with written feedback at least one week prior to the oral portion of the examination.

Oral Examination

The oral examination must be conducted by the entire doctoral committee. During the oral examination, the student will make a formal presentation of their research proposal. In defense of that research proposal, the student may be asked to address specific methods or assumptions of the proposed research, any questions remaining after committee members have read the written examination, and any relevant questions related to the student's area of research. At the close of the oral examination, the doctoral committee members will ballot on whether the student has passed or failed the preliminary examination.

The student and each member of the Supervisory Committee has a role in determining and communicating the structure and content of the preliminary exam.

Responsibility of the Doctoral Committee

It is the responsibility of the doctoral committee to talk with the student and determine the actual format of the examinations, subject to Graduate School regulations. The committee members may choose to write individual questions based upon their specific expertise. The committee may then meet (without the student) to compose and select questions for the examination, ensuring that all of the areas for which the student is responsible are covered. All of the committee members should evaluate the written examination and communicate with the committee chair the results of their evaluation. Every member of the doctoral committee is required to be present at the oral examination.

Responsibility of the Chair

The chair will call any necessary meetings of the committee. It is the responsibility of the committee chair to provide written feedback to the student regarding the committee's evaluation of the written examination no later than one week prior to the oral portion of the examination.

Responsibility of the Student

The student must register for a minimum of two credits of SOE 800 at the beginning of the semester in which they intend to take their preliminary examination. The student also must schedule the preliminary examination with the Graduate School. The student must obtain a scheduling form from the Graduate School to schedule the oral and written examinations. Signatures are required from each member of the committee, and dates of both the written and oral portions of the examination are to be included. The form must be submitted to the Graduate School no less than ten working days before the first examination. No more than thirty days should elapse between the written and the oral examinations, according to Graduate School policy.

Advancing to Ph.D. Candidacy

Upon successful completion of the preliminary exam, and the approval of the dissertation proposal by the Supervisory Committee, a student may advance into the candidacy stage of the Ph.D. Geology program, during which the student will complete their dissertation research.

Dissertation and Final Examination

The final examination will be mainly a defense of the dissertation. All students are required to present a seminar to the faculty and the public on their dissertation research, followed by a closed defense of their dissertation to the Supervisory Committee. As required by the WSU Graduate School, students may not schedule the dissertation defense to occur less than 3 months after passing the preliminary exam, nor schedule the defense to occur more than 3 years after the date of satisfactory completion of the preliminary examination. Exceptions to extend the time to degree completion beyond the 3-year limit may be requested, according to WSU Graduate School Policies and Procedures described on their website.

Within five business days of passing the defense, each student must submit their dissertation to the Graduate School, in any of the formats the School dictates as described on their website.

*** Because a student only has five working days after defending their thesis to turn in the final version to the Graduate School, all substantial changes recommended or required by each committee member should be addressed *prior* to defending the dissertation in the final exam. Consequently, **committee members need to have read the dissertation prior to scheduling a defense date**. This means committee members must receive copies of the final draft dissertation at least 14 days before scheduling the final exam.

Response to questions from the catalog sub-committee

1. The reasoning behind the request to drop 3 credit hours from 27 to 24 of graded 500 level coursework for students without a MS.

The SOE faculty arrived at a minimum course requirements for Ph.D. students without an M.S. by considering 1) that students with an M.S. are required to take 15 credits (Graduate School minimum), thus students without should be expected to take more credits, and 2) the Graduate School minimum for Ph.D. students without an MS is 17 credits. As a group, we decided that a minimum of 24 graded credits was a reasonable compromise that allowed Ph.D. students without an MS to acquire additional coursework while still emphasizing the scholarly/scientific aspects of their Ph.D. program acquired through research credits.

2. How does the credits change affect the overall credit/degree requirements?

The reduction in minimum course credits for Ph.D. students without an M.S. does not affect the overall degree requirements of 72 credits (Graduate School minimum). However, these students can fill their remaining credits with either 3 more research credits or additional coursework based on their Graduate Committee recommendations.

3. Why SOE 501 skills seminar is not graded?

This course was designed to introduce new graduate students to the SOE graduate program rather than emphasize any particular scholarly or scientific content. This 1-credit course focuses on cohort-building, professional skills, and discussion, therefore the SOE faculty concluded that past fail made the most sense for this course. Although students that already possess an M.S. are welcome to take the class if they choose, it is required for anyone new to graduate school, thus Ph.D. students without a prior M.S.