HSE Checklist / Milestones for Graduation for M.S. Degree in Hydrology (Thesis)

Step 1: Develop a preliminary course plan with your advisor either before starting your first semester or during that term. Your plan should also be approved by your newly formed Committee at the first meeting. You and your advisor should retain a copy of the approved course plan.

Step 2: Determine a thesis research topic and formalize your advisor, who must be an HSE faculty member. This should be completed by the end of the first semester.

Step 3: Select a committee and fill out the Graduate School Committee Form: https://www.mines.edu/graduate-studies/forms/advisorthesis-committee/. Your thesis committee should be developed as soon as practical and must have at least three Mines faculty members, at least two of which must be HSE faculty. If you have a co-advisor, then you must have four people on your committee. You should provide each member with a summary of your thesis topic and ask him/her to serve on your committee before bringing him or her the committee form to sign.

Step 4: Prepare a draft research proposal in concert with your advisor and obtain advisor approval to circulate to your committee. Distribute the approved research proposal to your committee and schedule a committee meeting to discuss the proposal and research plan. The thesis proposal is typically completed in the second semester of your graduate program. The specific format is determined by the committee and is tailored to the specific needs of the research project and student. It may be a short (5-10 page) white paper or proposal, or a distributed PowerPoint presentation (or some combination). Make an oral presentation of your research proposal to committee and gain committee approval to proceed.

Step 5: Two months prior to the start of your final semester, review Graduation Deadlines and download the appropriate checklist for forms and applicable dates: http://gradschool.mines.edu/Graduation-Checklist

Step 6: Prepare a draft of your thesis and obtain advisor approval before submitting this to your committee. The thesis should be free of grammar and spelling errors before your advisor sees it for the first time. If the thesis is in very good shape when you give the first draft to your advisor, then you can plan to give it to your advisor about 2-3 weeks prior to the day you plan to give it to your committee. However, multiple drafts and advisor review are often required before the thesis is provided to the committee. Distribute the approved document to your committee two weeks prior to the defense date.
Step 7: Complete paperwork to schedule your thesis defense, called the Graduate School Thesis Defense Request Form: This should be done at least a month or more in advance as scheduling defense rooms can be challenging. Submit your form to Tim VanHaverbeke via email as to the time, date, location, title and abstract of your presentation.

Step 8: Make an oral thesis defense presentation to committee members and gain committee approval to graduate. The MS defense generally requires 30-45 minutes to present. After the general public asks questions, they are dismissed and the student and committee engage in a closed-door session. You should allow 3 hours for the defense and subsequent questions. Bring copies of the Completion/Check out form to your defense. This will also need to be signed by the HSE director.

Step 9: Make final corrections to your thesis. Obtain all committee signatures on the forms. Bring thesis cover sheets to the Director for signature.

This document is for guidance purposes only and may or may not be in agreement with current Mines Graduate Office (OGS) deadlines and procedures or the Graduate Catalog. While the HSE Program will make every attempt to update please also refer to the OGS website and current Graduate Catalog as these are the ultimate governing sources for Mines degree requirements, processes and deadlines.

All Graduate School forms and deadlines can be found at: http://gradschool.mines.edu/GS-Forms
HSE Checklist / Milestones for Graduation for M.S. Degree in Hydrology (Non-Thesis)

Step 1: Develop a preliminary course plan with your advisor. It is best if your course plan is completed before the start of your first semester and must be completed during your first term.

Step 2: Please see - https://www.mines.edu/graduate-studies/graduation-deadlines/ AND https://www.mines.edu/graduate-studies/wp-content/uploads/sites/60/2018/02/MS-non-thesis-Graduation-Deadlines-Chart.pdf for details on forms and graduation deadlines. Dates will be slightly different each year so please refer to this site for the most current information. Additionally, the Graduate Office will send out email reminders, please pay attention to these notices!

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HSE Checklist / Milestones for Graduation for Ph.D. Degree in Hydrology

Step 1: Either prior to or during your first semester develop a preliminary course plan with your advisor. Your entire committee must eventually approve this plan and it is a good idea to discuss the plan in your first committee meeting. Please be aware of the guidelines for reduced registration: https://www.mines.edu/graduate-studies/registration-requirements-reduced-registration-qualify/ and strategize with your advisor how best to meet these requirements as this will result in a savings to your project funding.

Step 2: In your first semester, determine a dissertation research topic and formalize your official advisor, who must be an HSE faculty member. Due to interdisciplinary nature of our research, co-advisors are not uncommon.

Step 3: A Ph.D. committee should be developed during your first year. Select a committee and fill out the Graduate School Committee Form https://www.mines.edu/graduate-studies/forms/advisorthesis-committee/. The committee must consist of at least three members in addition to the advisor (and possible co-advisor). At least two of these three additional members must be part of the HSE faculty. At least one committee member must be from outside the HSE Program. For details on PhD committee requirements please see https://catalog.mines.edu/graduate/programs/. You should provide each prospective member with a summary of your thesis topic and ask him/her to serve on your committee before bringing them a form to sign.

Step 4: Complete a short summary of your research plans and timeline for completion in concert with your advisor that will be presented to your committee in a meeting that takes place at least one month before you plan to take your qualifying examinations. The qualifying exam is generally taken in the third semester of the doctoral program. If the student has already completed an M.S. degree, then the exam would ideally be completed late in the second semester.

Step 5: Schedule a pre-qualifying exam meeting at least one month prior to the date you plan to start the exam. The purposes of this meeting are to

1) ensure the committee is familiar with you and your proposed research;
2) evaluate whether you are ready to proceed to qualifying examinations;
3) schedule the exams.

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Step 6: Take your written and oral qualifying examinations. The exact format of the examination is developed by the advisor and committee. The purpose of this exam is for the committee to evaluate your critical thinking, data analysis, writing, and presentation skills to assess whether you are a viable candidate for the Ph.D. program. Thus, while the focus is on “the basics”, any topic is “fair game.” The exact format of the examination is developed by your advisor and committee. All committee members are expected to participate in both the written and oral portions of the qualifying examination. The student passes the exam if all but two committee members vote to pass. In the event that the student fails the examination, another examination may be given if requested by the student and approved by the committee. This exam should be taken no later than the end of the semester following the original exam. Generally, the written exam will last for 5 days. The oral exam should be completed within two weeks of completing the written examinations. The length of oral exams varies, but generally requires 3 hours.

An email memo of successful competition of the exam should be sent to the HSE director and graduate coordinator.

Step 7: Complete your Admission to Candidacy form (see https://www.mines.edu/graduate-studies/forms/admission-to-candidacy/) and obtain committee signatures. Candidacy signifies you are now formally qualified to pursue the Ph.D. degree. You may be admitted to candidacy once you have passed your written and oral qualifying examinations, and completed your Admission to Candidacy form. At this point you may qualify for reduced registration; please see https://www.mines.edu/graduate-studies/registration-requirements-reduced-registration-qualify/ for details.

Step 8: Prepare and defend a doctoral dissertation proposal. This must be completed at least one year before defending your dissertation. Discuss the format and expectations for the proposal defense with your advisor and committee.

The specific format of the proposal is determined by the committee and is tailored to the specific the research project and student

Distribute the advisor-approved research proposal to your committee two weeks prior to the oral proposal defense. The oral defense will generally take place within two weeks of providing the committee with your written proposal.

Step 9: Make an oral presentation of your research proposal to committee and gain committee approval to proceed. The student passes the exam if all but two committee members vote to pass. In the event that the student fails the
proposal defense, another defense may be allowed if requested by the student and approved by the committee. This exam should be taken no later than the end of the semester following the original exam. Your Advisor will send an email of a successful defense to the HSE director and graduate coordinator.

Step 10: At the beginning of the semester before your intend to defense and graduate please refer to the Graduate Office Graduation Deadlines: https://www.mines.edu/graduate-studies/graduation-deadlines/, which outline dates and forms required. Missing a deadline or not submitting forms on time may delay your graduation.

Step 11: Prepare a draft of your dissertation and obtain advisor approval before submitting this to your committee. The thesis should be free of grammar and spelling errors before your advisor sees it for the first time.

The dissertation often consists of at least three separate papers integrated into a single document, or be of the more traditional style—talk with your advisor about expectations. For the separate-papers style, you should have a separate chapter at the beginning that describes how each paper ties together into a single theme, and a conclusions chapter that summarizes the important findings of each paper.

If the first-draft of the thesis is in very good shape, then 2-3 weeks for advisor review may be sufficient. However, often multiple drafts may be required before the dissertation is provided to the committee. Distribute the approved document to your committee at least two weeks prior to the defense date. This dissertation version should be in FINAL form (i.e., look like it will when bound and submitted to the library) before submitting it to the committee.

Step 12. Complete paperwork to schedule your thesis defense, called the Graduate School Thesis Defense Request Form. This should be done at least a month in advance (it is not easy to find a room, and the graduate school requires it). Notify Tim VanHaeverbeke via email with the time, date, location and title and provide an abstract of your presentation.

As you will likely need 1-2 weeks after your defense to make the committee-requested changes, so plan accordingly.

Step 13: Make an oral presentation to defend your dissertation to the committee and gain committee approval to graduate (Dissertation Defense). The PhD defense generally requires 40-45 minutes to present. The general public will be invited to the presentation. After the general public asks questions, they are dismissed and the student and committee engage in a closed-door
session. You should allow 3 hours for the defense and subsequent questions.

Step 14: Complete the Check Out Form (which will be emailed to you once you complete the online Graduation Application; see https://www.mines.edu/graduate-studies/graduation-deadlines/) and obtain needed signatures.

Step 15: Make final corrections to dissertation, obtain all committee signatures on the thesis cover pages, and bring cover pages to the HSE Director for signature. Please note that your home department head does not sign the transmittal page.

Step 16: The graduate school requires a format check of the thesis, which cannot be completed until your thesis cover pages are signed.

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