
— Signature Page —

Earning a Ph.D. in Physics at GW

This document is addressed to Graduate Students in the Ph.D. Program in Physics in the Columbian College of Arts and Sciences (CCAS) at GW. Its purpose is to clarify the *formal* steps required to successfully propose and defend a Ph.D. in Physics. It is assumed that students have passed all other formal requirements (coursework etc., as specified in the CCAS Graduate Student Handbook and Physics documents) prior to entering their Ph.D. research project. (If you are uncertain what these are, ask the Physics Graduate Advisor. As a general rule, if in doubt always ask.)

In this document, the abbreviation DGS refers to the Director of Graduate Studies or the DGS' designated representative.

Attached to this document are several forms that will need to be filled in at various stages as you progress through the project. All forms need to be signed and certified by the DGS. Also, various steps may require giving advance notices before going on to the next step. The time periods associated with these advance notices are *firm requirements*, not suggestions.

Approved by Physics Graduate Committee: 23 March 2017

Amendments Approved by Physics Graduate Committee Sep 2017

By signing here, I hereby acknowledge having received, read, and understood the instructions laid out here.

Name

GWid

Signature

Date

Please return this page to DGS with your signature.

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Please sign the attached signature page to acknowledge that you have received, read, and understood the instructions laid out here.

Step 0 — *Finding a project*

Find a Physics faculty member and agree with him/her on a Ph.D. project; this faculty member is going to be your Ph.D. Advisor (also referred to as Dissertation Director, Supervisor, etc.). If your primary Advisor is not a Physics faculty member at GW, you will need a GW Physics faculty member as Co-Advisor. The expectation is that you present your Dissertation Proposal *no later than the 3rd year of your studies*. Delay beyond that may indicate lack of academic progress and may lead to dismissal.

Start researching your project under your Ph.D. Advisor's guidance and prepare a Proposal. You do not need to include *already performed* original work in the Proposal; outline the project, its original content and scientific significance, resources needed, how you expect to achieve your goals, and specify a tentative and feasible timeline. *The narrative of the proposal should not exceed 15 pages*, not counting references. If you have material for more than 15 pages, condense it into 15 pages. For a mandatory Proposal document template contact the Physics Graduate Advisor.

Step 1 — *Presenting your proposal*

When your Advisor agrees that your Proposal is ready to be presented to the public, your Advisor and you need to decide on your *Dissertation Research Committee*, composed of your Advisor (and your co-Advisor if

Research Committee:

- Advisor
- Co-Advisor (if necessary)
- Two Readers

Committee stays in place for the duration of your project

necessary) and two Readers. The choice of Readers needs to be endorsed by the DGS. **The Research Committee stays in place for the duration of your dissertation project.** Readers are Physics faculty members who have an active interest in your project and have the necessary expertise to provide additional help and guidance for your project. (If at any time during the course of your Ph.D. research a Reader should no longer be available to serve on the committee, the Reader must be replaced immediately while your project is still on-going. This replacement requires the approval of the DGS. Such approval is also required if a Reader is to be replaced for any other reason.)

The formal *Thesis Proposal Defense* may be scheduled, after the DGS receives written consent from all members of the Research Committee that your proposal is ready for presentation. *Announcements must be sent out to the entire Physics Department at least two weeks in advance.*¹ Please note: Unless the DGS agrees that there are valid mitigating circumstances, presentations should not be scheduled outside of regular lecturing or exam periods. (Inconvenience, scheduling problems, or being too busy otherwise, are not mitigating circumstances. Plan ahead.)

The Thesis Proposal Defense is conducted publicly in front of the entire Research Committee. The proceedings are chaired by the DGS. The Ph.D. Candidate gives a 20-minute presentation followed by a public Q&A session between Readers and Candidate. After that, the Chair may invite the public to pose questions. Following these, there is a discussion with the Readers in a closed session. The Advisor should not engage in presenting the project, but may provide brief clarifications if necessary. The Chair does not participate in the discussion. The whole process lasts typically 90 minutes.

At the conclusion of the Proposal Defense, the attached form **Step 1a** “Dissertation Topic Approval” needs to be filled in, signed by the members of the Research Committee, and certified by the Chair. In addition, form **Step 1b** “Advancement to Candidacy” must be filled in and signed by the DGS, certifying that you have satisfied all prerequisites for starting your PhD project and recording the members of your Research Committee. The DGS sends this document to CCAS as the official record of the start of your candidacy.

M. Phil. Degree: Students who have advanced to Candidacy and have completed at least 48 course credits are eligible for the M. Phil. degree. Upon request, the DGS files the necessary form **Step M. Phil.** “Graduation Clearance Form (Masters)” with CCAS; the student applies to the Registrar and pays a modest fee.

Intermediate steps — *Submitting annual progress reports*

Once a year, usually at the end of Spring semester, until the Ph.D. project is concluded, you and your advisor are required to submit a progress report to the DGS (with details as specified by the Physics Graduate Committee); the DGS gives copies of these reports to the Readers ~~for comments~~. You then meet with the Readers to discuss the work and any issues related to your academic progress.

The Readers provide advice and guidance and evaluate your progress between Proposal and Defense. You are encouraged to take advantage of their expertise. You and your Academic Advisor must inform the DGS and the Readers immediately of major changes in the project’s scope or direction.

¹Announcement templates are available from the Physics Department Office.

Step 2 — *Getting approval of the Research Committee and forming an Examination Committee*

When you finish research work on your project, write up your findings in a thesis document that must follow established guidelines; for a document template and further instructions contact the Physics Graduate Advisor. You must then seek formal approval of your completed dissertation from the Research Committee. The state of the thesis at this stage should be a finished product in form, appearance, and scientific scope and content. It is bad practice to deliver an unfinished product and rely on post-examination revisions to correct deficiencies, and Readers should not sign off on such unfinished drafts.

Satisfactory state of your thesis is certified by the members of the Research Committee in the attached form [Step 2] “Dissertation Research Committee Approval”. All members of the Research Committee must *unanimously* agree that the Ph.D. dissertation draft presented to them is acceptable in its current form and suitable for distribution to the Examiners (see following paragraph) in preparation for the *Dissertation Defense*. If only one member of the Research Committee disagrees, the Defense cannot go forward at this point in time and you need to continue working on improvements until all members are in agreement.

The attached form also specifies departmental and outside *Examiners for the Dissertation Defense*. The Physics Department limits the number of examiners to two: one from within the department (preferably from a different area of expertise) and one from outside the department. **None of the examiners can**

Defense Examination Committee:

- | |
|---|
| <ul style="list-style-type: none">• DGS (Chair)• Members of Research Committee• Two Examiners |
|---|

have had a direct role in the dissertation research process. (They may be affiliated with the same research group as the candidate, as long as they were not involved in any of the project’s work and have no vested interest in its outcome.) The two examiners plus the members of the Research Committee form your *Defense Examination Committee*. The DGS chairs the committee.

You send the completed form to the DGS, whose signature certifies approval of the Research Committee and proper appointment of the Examination Committee. *The Ph.D. Defense must not be scheduled without this certification.*

Step 3 — *Defending your Ph.D. Thesis*

The attached CCAS document [Step 3a] “Procedures for Ph.D. Examinations” lays out requirements and best practices for Ph.D. examinations in the Columbian College.

The *Defense Examination Committee* consists of the Research Committee formed at the time of the Proposal Defense augmented by two examiners — one from within the Physics Department and one from the outside, as specified in Step 2 — and by the DGS who chairs the actual defense proceedings.

*The version of the dissertation that is to be defended must be circulated to all examination committee members at least one month prior to the examination. Announcements of the examination must be sent out to the entire Physics Department at least two weeks in advance.*² Please note: Unless the DGS agrees that there are valid mitigating circumstances, examinations should not be scheduled outside of regular lecturing and exam periods. (Inconvenience, scheduling problems, or being too busy otherwise, are not mitigating circumstances. Plan ahead.)

²Announcement templates are available from the Physics Office.

The Dissertation Defense is conducted publicly in front of the entire Examination Committee. The DGS chairs the proceedings, but does not participate in the discussion. As part of the public part of the examination, you present your Ph.D. project and its scientific outcome in a 25-min lecture, followed by a Q&A session between Examiners and Readers and you. The Advisor should not engage in presenting the project, but may provide brief clarifications if necessary. The Chair may invite the public to pose questions as well. At the discretion of the Chair, part of the examination may take place in a closed session. **Further details of how to conduct the examination are specified in the attached CCAS document.**

The decision to pass the dissertation and defense is reached in closed session by majority vote of the two Examiners and the two Readers; Director(s) and Chair do not vote. A split 2-2 vote counts as ‘pass’. Possible outcomes are (a) dissertation accepted as presented; (b) dissertation accepted subject to successful completion of mandatory revisions within specified timeframe; or (c) dissertation is unacceptable. The outcome of the Defense is certified by the signatures of all members of the Examination Committee in the attached document Step 3b “Final Examination Committee Sign-off”. (The actual vote tally is *not* recorded.)

If revisions of the dissertation should be necessary, the form needs to clearly specify their scope, extent, and the expected timeline for submission of the revised, final version, and the committee members (Readers or Examiners, *not* a thesis Advisor) who will sign off. (Ideally, at this stage none of the revision requests should come from the Research Committee since they already had ample opportunity to request corrections prior to signing off on the thesis under Step 2 above.)

Step 4 — *Getting final approval*

If the dissertation was accepted as presented, skip this step.

If revisions are necessary, the correspondingly revised thesis is examined by the committee members designated in the previous step. If revisions take significantly longer than the previously agreed upon expected timeframe, the DGS must be notified, who will then decide whether the delay warrants reconvening the examination committee for an executive session to assess the situation.

If the revised dissertation is found acceptable, the committee members charged with the sign-off forward the attached form Step 4 “Final Dissertation Approval” to the DGS who signs and certifies it.

Step 5 — *Graduating...*

Upon successful completion of all steps, the attached form Step 5 “Graduation Clearance Form (Ph.D.)” is signed by the DGS certifying that all requirements have been successfully completed and you may be awarded a Ph.D. Degree. The DSG submits this form and the “Application for Graduation” (see CCAS website) to CCAS. You upload the final version of the thesis to the ProQuest dissertation library (for further information, see GW Gelman Library website).

The day you successfully upload the thesis to ProQuest is the day your thesis is finally approved. This day also determines the semester in which your degree is awarded. If a “graduation date” has been set for you (e.g., by granting an extension request), you need to have uploaded your thesis successfully to ProQuest by that date. Graduations are counted as “Fall term” when the upload is finished by early January of the following term. Ph.D. degrees are conferred only during May graduation. For exact dates and other terms, see the Academic Calendar.

Ph.D. Step Sequence Summary

- Find advisor and agree on Ph.D. project
- Write proposal for Ph.D. project
- Choose two Readers for Research Committee (requires DGS endorsement)
- Have completed proposal approved by Research Committee (unanimity required)
- Announce date of Proposal Defense at least **two weeks** in advance
- Public presentation of Proposal
- DGS submits “*Advancement to Candidacy*” form to CCAS
- Start Ph.D. project research
- Submit *annual* Progress Reports to Graduate Committee
- Upon completion of project, write dissertation
- Research Committee unanimously approves completed dissertation — notifies DGS
- Choose two Examiners for Dissertation Defense Examination (requires DGS endorsement)
- Circulate thesis to Examination Committee at least **one month** before examination date
- Publicly announce date of Dissertation Defense Examination at least **two weeks** in advance
- Public defense of Dissertation
- If necessary, revise dissertation within specified timeframe
- If necessary, obtain approval of revised dissertation
- DGS completes *Graduation Clearance* and submits to CCAS
- Upload final version of dissertation to ProQuest dissertation library

At any stage, the student may address any complaints, in writing, to the DGS. If the answer is not to the student’s satisfaction, the student may appeal at any stage to the Chair of the Physics Department.

Penalties, Academic Dishonesty. Not following these rules and timelines can have consequences, including but not limited to: delay of approvals or signatures necessary; delay, cancellation or failure of the examination; termination of GTA or GRA stipends; and in severe cases, termination from the program due to lack of academic progress. The GW Code of Academic Integrity applies in its entirety. Excerpt: “Academic dishonesty is defined as cheating of any kind, including misrepresenting one’s own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” If you have any questions about what constitutes academic dishonesty, ask the Physics Graduate Advisor.

