

McKelvey School of Engineering

Doctoral Dissertation Guide

Overview

- 1. Present a proposal or prospectus of your dissertation to your faculty advisor and at least two other faculty members,
- 2. Review the <u>McKelvey Dissertation and Thesis Template</u>; you should consult the template for answers to all your formatting questions
- 3. Consult with your faculty and your department, and schedule your defense
- 4. Complete your defense, then submit your dissertation to the McKelvey School of Engineering electronically through ProQuest
- 5. After your electronic dissertation has been accepted
 - o you may order copies from Thesis on Demand
 - we encourage you to submit your thesis to the Washington University Digital Research Materials Repository (DRMR). For more information, or to submit your datasets, visit http://libguides.wustl.edu/drmr

Minimal Requirements for Dissertations

A dissertation is the product of extensive research and presents an original contribution to knowledge in a given field. It documents the candidate's ability 1) to make substantive contributions to answering a major intellectual question and 2) to communicate research results with professional competence.

In all cases, the dissertation must constitute an integrated, coherent work, whose parts are logically connected. It must have a written introductory chapter that sets forth the general theme and core questions of the dissertation research and that explains the relationship among the constituent chapters or parts. The introduction will typically include, as is appropriate to the discipline, a review of the literature relevant to the dissertation, an explanation of theories, methods, and/or procedures utilized by the author, and a summary discussion of the contribution of the dissertation project to knowledge in the field. In its final deposited form, the dissertation must constitute an achievable product, which meets the standards prescribed by the university.

The dissertation may consist (in whole or part) of co-authored chapters and articles, but the candidate must be a major contributor to the research and writing of any such papers and must describe her/his ideas, individual efforts, and contributions to the larger work. To comply with the university's policy on plagiarism and academic integrity, a dissertation that incorporates co-authored work must also include

in its introduction an explanation of the role of the candidate in the research and the writing of the coauthored work.

If a dissertation includes previously published materials (authored or co-authored), the candidate must provide a full referencing of when and where individual papers have been published. Because prior publication and multiple authorship have implications concerning copyright, PhD candidates should discuss copyright with advisers and obtain copyright clearance from any coauthors well in advance of defending the dissertation. Written permission must be obtained to include articles copyrighted by others within the dissertation.

It is the responsibility of the student and the student's dissertation committee to ensure that the dissertation meets all requirements regarding authorship, academic integrity, and copyright, as here outlined.

¹ Plagiarism is the willful or unintentional act of using, without proper acknowledgment, another person's or persons' words, ideas, results, methods, opinions, or concepts. . . . The act of claiming as one's own work any intellectual material created by another or others is wrong and will be treated by Washington University as a serious violation of academic integrity.

Preliminary Paperwork

- Title, Scope, and Procedure
- Intent to Graduate
- Open Researcher and Contributor ID (ORCiD)

Title, Scope, and Procedure

PhD Proposal/Title Scope & Procedure Form

You may file your PhD Proposal/Title, Scope, & Procedure Form as soon as your Research Advisory Committee has been approved (refer to PhD Research Advisory Committee Approval form).

You must file your PhD Proposal/Title, Scope & Procedure Form before starting your fifth year of graduate study.

Your project's "scope" defines its limits—what you intend to cover and what you intend not to cover. Your "procedure" describes the manner in which you intend to conduct your research. By defining the scope and procedure of your dissertation, you provide an initial outline or model for yourself as you research your topic.

The form also serves as a contract between you and your Research Advisory Committee.

Research Advisory Committees normally consist of three tenured or tenure-track Washington University faculty members from within your degree program.

Your dissertation's title, scope, and procedure may change in the course of your research. You are not required to file an amended form with McKelvey School of Engineering, although getting your committee's written approval of the changes may be advisable.

Intent to Graduate

You must file an Intent to Graduate form for the semester in which you intend to graduate. Deadlines for filing the Intent to Graduate form for each semester are listed on the McKelvey School of Engineering's online calendar.

Complete this form by logging onto WebSTAC and clicking on "Intent to Graduate" from the menu. Take note of the diploma pick-up and mailing dates that are included in the form because your diploma will be mailed to the address entered. If your graduation semester changes, you must file a new form.

Open Researcher and Contributor ID (ORCiD)

We strongly encourage you to establish an Open Researcher and Contributor ID and begin to populate your profile. ORCiD is a free, persistent personal digital identifier which several funders, publishers, scholarly associations, databases, and universities are beginning to adopt or require. Many scholars will want to establish their ORCiD profile and maintain it throughout their careers. You are also encouraged to include your ORCiD in your dissertation submission in ProQuest.

For more information, visit http://libguides.wustl.edu/orcid

Create an ORCID Profile

Dissertation Defense

PhD Dissertation Defense Committee Approval Form

How to Arrange a Dissertation Defense

Consult your committee chair about the membership of your dissertation defense committee, which should conform to the following University policy. Address questions regarding dissertation defense committee membership to Associate Dean Cathy Freesmeier, currently the McKelvey School of Engineering designee for approving such committees.

- 1. "The committee before which the student is examined consists of at least five members, who normally meet two independent criteria:
 - o Four of the five must be tenured or tenure-track Washington University faculty; one of these four may be a member of the Emeritus faculty. The fifth member must have a doctoral degree and an active research program, whether at Washington University, at another university, in government, or in industry.

- Three of the five must come from the student's degree program; at least one of the five must not. All committees must be approved by the Dean of the McKelvey School of Engineering or by their designee, regardless of whether they meet the normal criteria." *
- 2. Fill out (your department may do this for you) the Dissertation Defense Committee Form.
 - This form must be signed by your department's Director of Graduate Studies and sent to Associate Dean Cathy Freesmeier. Your DGS or a department staff member should submit it (not you). Dean Freesmeier will email the approval to the DGS. Only after this step has been completed should the defense be scheduled.
 - After the committee has been approved and at least 15 days before the defense, your department (not you) should send an email to the McKelvey Registrar stating the time, date, and place of the defense. The email should have a copy of your CV attached. Do not put your Social Security Number, birth date, or birthplace on your CV.
- 3. You are responsible for giving copies of the dissertation to your committee. Committee members may request rescheduling of the defense if the dissertation is not made available at least 1 week in advance. However, most departments require dissertations to be available to committee members 2-4 weeks before the defense.
- 4. "Attendance by a minimum of four members of the dissertation defense committee, including the committee chair and an outside member, is required for the defense to take place. This provision is designed to permit your defense to proceed in case of a situation that unexpectedly prevents one of the five members from attending. Do not plan in advance to have only four members in attendance; if one of those four cannot attend, your defense must be rescheduled. Note that the absence of all outside members or of the committee chair would necessitate rescheduling the defense." **
- 5. Members of the dissertation defense committee normally attend in person. However, students, with support of their Dissertation Defense Committee Chair, may opt to hold their dissertation defense in-person or by utilizing a virtual or hybrid format.***

Forms and Permissions Needed Prior to Electronic Submission

Deadlines

Your dissertation must be submitted and also accepted by the deadlines indicated in the academic calendar. You are encouraged to submit your dissertation before the McKelvey Thesis/Dissertation deadline, in case you need to make changes. Also, you should submit your PhD Dissertation Defense Approval Form and Survey of Earned Doctorates before the deadline.

Academic Calendar

Copyright Permissions

Before you submit your dissertation electronically, you must have obtained permissions for any copyrighted work included in it for which you do not hold the sole copyright. This may include your own previously published work, whether or not you are its sole author.

You may wish to consult your subject librarian or email Olin Library

Copyright and Your Dissertation or Thesis: Ownership, Fair Use, and Your Rights and Responsibilities (pdf)

PhD Dissertation Defense Approval Form

The form is signed by members of the dissertation defense committee at your defense and by the chair/director of your department or program afterward. A department member (not you) will send this form to the McKelvey Registrar.

PhD Dissertation Defense Approval Form

Survey of Earned Doctorates (SED)

You are encouraged to complete your Survey of Earned Doctorates prior to the dissertation deadline. Do this as soon as possible so that our office has a record of its arrival in time for graduation requirements to be met. The McKelvey Registrar will be notified once you complete the survey.

Your electronic submission of your dissertation will not be processed or approved until this email arrives.

Complete the SED

Navigating the ProQuest Electronic Submission Process

After you have successfully defended your dissertation and made any committee-requested changes, McKelvey School of Engineering requires that you create an online account at ProQuest (https://www.etdadmin.com/wumse) to submit your final text. ProQuest is this country's most widely used commercial archiving service for dissertations and theses. This guide is to inform and advise you in making selections through the submission process in ProQuest. The tabs below including "Publishing Options," "PDF," and "Register U.S. Copyright" require special attention and will be addressed in detail.

Creating your account and getting started

Before you create your account, make sure that you have the following items at hand:

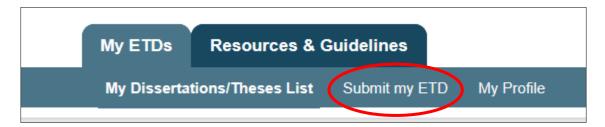
- The full text of your dissertation, formatted as a PDF, with embedded fonts
- Supplementary files and/or supporting documents (optional)
- The body of your abstract, without the heading; note that there is no word limit on your abstract
- A full list of your committee members
- Any copyright permissions obtained; these will need to be submitted as a part of this process.

Detailed Instructions

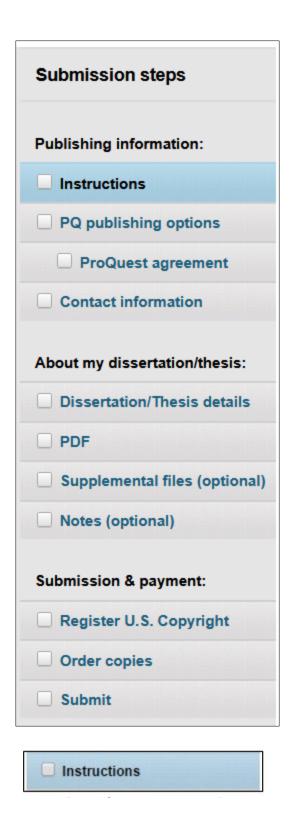
Log in to ETD Administrator. If you have not yet created an account, you must do so now. Make sure to register with an email address that is checked regularly, even after your graduation.



After you have created your account and logged in, select "Submit ETD" from the "My ETDs" tab.



On the left side of the webpage, you will see a menu of checkboxes that look like the following image. This portion of the guide will take you through each checkbox, step by step.



The instructions page includes similar information to what we have up above; please review and then click continue, which will bring you to the second checkbox, "PQ Publishing Options."

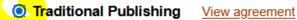


The first half of this page requires you to indicate a selection for either "traditional" publishing or "open access" publishing.

Washington University is committed to providing open access for scholarly work authored by WUSTL students and faculty. Therefore, the WU Library has launched a platform called **Open**Scholarship: http://openscholarship.wustl.edu. When a student submits a dissertation to ProQuest, the Library automatically receives an electronic copy and makes it available on Open Scholarship. However, the Library respects all limitations, such as embargoes, that authors set on their submissions in ProQuest.

As you can see in the image below, Open Access Publishing PLUS requires a \$95 registration fee, whereas Traditional Publishing is free for Washington University students; the Library pays the fee to ProQuest for this option. Because the Open Scholarship platform will give your dissertation as much open access, at no charge, as ProQuest will charge \$95 to give it, we recommend that students choose Traditional Publishing.

Select Type of Publishing *



- I want to make my work widely available to the international community of subscribers to ProQuest Dissertations & Theses and I want to be eligible to receive royalties on the sale of my work.
- I understand that I must maintain a current mailing address with ProQuest in order to be eligible to receive royalties.
- I understand that ProQuest does not charge a fee for Traditional Publishing.
- I understand that my work will be available through <u>ProQuest Dissertations & Theses</u> database, <u>Turnitin</u> and other like services, and <u>Dissertation Express</u>, and that a citation/abstract may appear in Google Scholar and some <u>indexes</u> (e.g. MLA, MathSciNet, PsycINFO, etc.).

Open Access Service View agreement

- I want the broadest possible dissemination of my work, and I want to provide a wide audience with free global access to the electronic copy of my work via the internet.
- I understand that I will not be eligible to receive royalties.
- I understand that the ProQuest fee for the Open Access Service is \$95.00 USD for an author. If your school
 is interested in purchasing this on your behalf, they should contact <u>disspub@proquest.com</u> for institutional
 pricing.
- I understand that I will pay the fee, unless notified by my graduate institution that the school will pay.
- I understand that my work will be available through <u>ProQuest Dissertations & Theses</u> database, <u>Turnitin</u> and other like services, and <u>Dissertation Express</u>, and that a citation/abstract may appear in Google Scholar and some <u>indexes</u> (e.g. MLA, MathSciNet, PsycINFO, etc.).
- I understand that the full-text of my work will also be made freely available in its entirety through open web entry to the ProQuest Platform.
- I understand that this is an optional service and is not a required purchase.

The second half of the PQ Publishing Options page asks you to select your publishing and access options.

Access options (e.g., delaying the release of your work)
If you choose to delay the release of your work, access to the full text of your work will be delayed for the period of time that you specify. The citation and abstract of your work will be available through ProQuest and may be available through your institutional repository.
Note: Most institutions have delayed release (or embargo) policies. Please consult with your Graduate School for more information.
Delaying release in ProQuest
I want my work to be available in ProQuest as soon as it is published. * O Yes
O No - I have patents pending, or another reason why I need to delay access to the full text of my work.

The table below, from ProQuest, is an excellent summary of the advice our office would give you about whether or not you should embargo your dissertation.

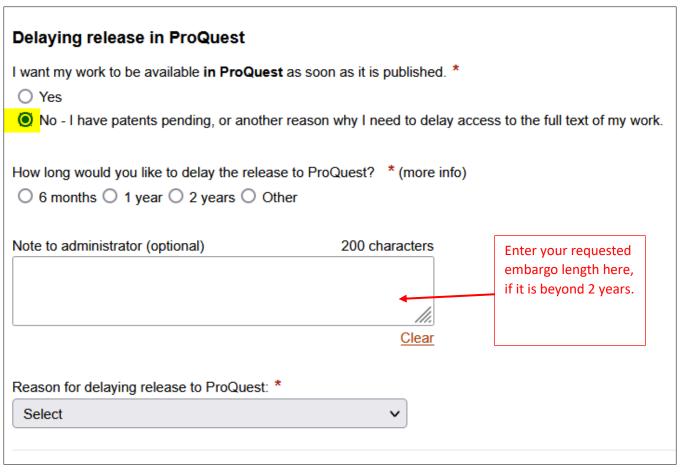
Show More

Consideration	Recommended Action		
	Choose Traditional Publishing	Place an embargo on your dissertation	Restrict from Google/search engines
Likely submission to a peer-reviewed journal	✓	✓	
Interested/potential interest by an academic or commercial press	✓	√	
Ethical need to prevent disclosure	~	✓	~

Your work on ProQuest will be discoverable and accessible through Google Scholar!

Search Engine Discovery

If you choose to embargo your work, select "No - I have patents pending, or another reason why I need to delay access to the full text of my work" and select how long an embargo you would like. If you need to embargo your work for more than two years, request as long an embargo as you wish by using the "Note to administrator" text box.



You can lift an embargo on your work at any time – or impose or extend an embargo – by contacting both ProQuest (at DISSPUB@PROQUEST.COM or 1.877.408.5027) and the Washington University Libraries (at digital@wulib.wustl.edu) directly.



On the contact information page, please use an email address that is checked regularly, because that is how McKelvey School of Engineering will get in touch with you regarding your submission. Please note that you must include an abstract on the Dissertation/Thesis details page, even if your dissertation does not include one. There is no word limit on your abstract.

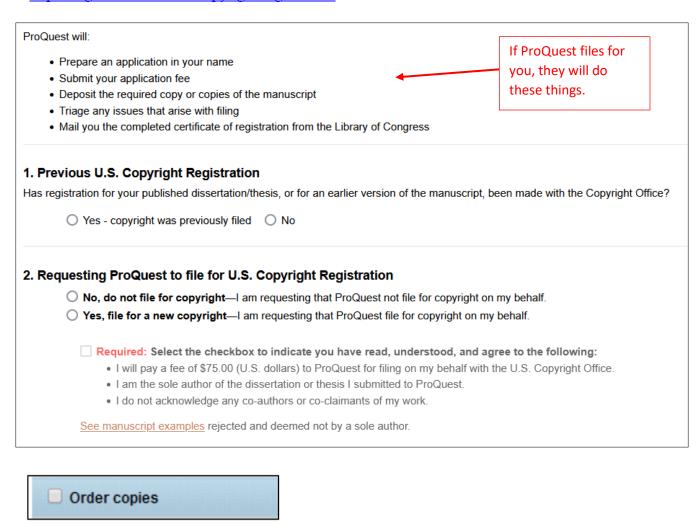


You are required to submit your dissertation as a PDF.

Register U.S. Copyright

You do not need to register your claim to copyright in order to include a copyright page in your manuscript. If your dissertation is not itself of monetary value and does not contain information of monetary value, then registering your claim to copyright is not necessary. In order to sue others for monetary damages caused by their infringing your copyright, you must have registered your claim to copyright.

If you wish to register your claim to copyright, you may choose to have ProQuest act as your agent to register your copyright for a fee, or you may decline that service and register your work yourself. More information about copyright registration can be found at http://libguides.wustl.edu/copyright/registration.



There is an alternate way to order copies of your dissertation. See the section called "How to submit copies for printing and binding."

Review and Approval Process

The McKelvey Registrar is notified when you submit your dissertation to ProQuest. When we review your submission, we make sure that your PhD Dissertation Defense Approval Form and Survey of Earned Doctorates have been completed, and we check the submitted PDF to ensure that all formatting requirements have been followed. The amount of time we will need to review your manuscript, and the number and nature of any changes you may be required to make, are generally determined by how carefully you have prepared your work. Do not wait until the deadline day to submit your dissertation! Your work must be formatted correctly and approved by the McKelvey Registrar in order for you to graduate.

Once our review is complete, we will send you an email through ProQuest saying one of the following:

- 1. Your submission has no revisions and is being accepted.
- 2. Your submission has no revisions, but we are missing the required paperwork.
- 3. Your submission has a few revisions that must be made before we can accept it.

If you have revisions you must make, log back into ProQuest, and you will see this screen.

Welcome back to the ETD Administrator @ Washington University – McKelvey School of Engineering

Revising your dissertation/thesis

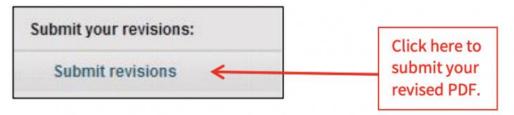
You can revise your submission:

· First, make your changes

- · On the left sidebar you'll see a list of Revision Options.
- · Select the item you wish to change.
- · A new page will display where you can make and save your changes.
- · Repeat for any additional changes you need to make.

· Submit your changes

- · After your changes are complete, click Submit Revisions from the left sidebar.
- . Follow the instructions on the 'Submit Revisions' page to finish.



Please verify submission first After you submit, you cannot revise your submission without permission from yo **Submission Summary:** If changes are needed, you can make them using the links provided. Dissertation/Thesis Details: Degree: Title: Abstract: Subject Categories: Keywords: PDF: **Publishing Options:** McKelvey Registrar will not be notified of your modifications unless you click here. Submit revisions

How to Acquire Bound Copies

As of February 1, 2016 Washington University will no longer accept any paper copies for binding. Once your revisions are submitted in ProQuest, and the McKelvey Registrar has reviewed them, you will receive an email saying your dissertation is approved. Then, and only then, you can order copies of your dissertation to be printed and bound from Thesis on Demand. Any copies must all be identical to your approved ProQuest submission. Therefore, when you upload a PDF of your dissertation for printing and binding, use the same one that was just approved in ProQuest.

- Ask your department's administrator if your program is one that will pay for a certain number of
 copies to be bound by Thesis on Demand. In some departments, those will be ordered directly by
 departmental staff; in other departments, you will order those and request reimbursement for
 them. Clarify your department's procedures before starting to order printed and bound copies of
 your work.
- 2. Go to Thesis on Demand to order copies. Begin by uploading your PDF; when prompted, fill out the rest of the page. If you want copies sent to different shipping addresses, you will need to go through this process separately for each address; all copies ordered together will be shipped together to a single destination. Note that this service will not ship to international addresses.
- 3. As soon as you reach the second page of the order form, "Document Information as Uploaded" will appear on the right-hand side of the page; check to be sure that the total number of pages, the number in color versus black and white, and the information about images is all accurate. Your PDF for ProQuest will already have embedded fonts.
- 4. If your dissertation does not have color pages, choose the "Print Document in Black and White Only" option; if your dissertation does have color pages, choose the "Print Document in Color" option.
- 5. If you have any difficulty, begin by consulting the FAQ section of the bindery's website: https://www.thesisondemand.com/faq/. You will need to enter the university's zip code, 63130, in order to access these questions and answers.

Visit Thesis on Demand

Questions to Ask Before Submission

It's a great relief to pass your defense and have very little work left to do before you can put PhD on your CV. It's a great frustration to convert your dissertation into a PDF and submit it electronically, only to be asked to do it again after making changes to the text.

Here are some things to make sure you have completed before you submit to ProQuest.

- Have you filed your Intent to Graduate for the semester in which you plan to complete your degree?
- Does your title page indicate the correct administrative unit?
- Is your committee alphabetized by last name, after your chair/co-chairs?
- Is Your Title in Upper and Lower Case, as in This Question?
- Does your title page indicate the month and year in which your degree is being conferred?

- If you are including an abstract page, does it use the required heading found in the McKelvey Dissertation & Thesis Template?
- Is your front matter numbered correctly, starting with ii?
- Does the page numbering on your Table of Contents correspond to the correct page location?
- Does your Table of Contents include your bibliography/references/works cited?
- Have you completed the Survey of Earned Doctorates?
- Have you completed the Post-Graduation Job Survey?
- Has the McKelvey Registrar received your PhD Dissertation Defense Approval Form?
- Do you have any requisite copyright permission letters?

After your dissertation has been approved in ProQuest by the McKelvey Registrar, make sure you have checked the following, if you plan to have copies bound.

 Have you spoken with your department administrator, to find out if your program pays for any copies to be bound?

You may need to present proof that you have completed your degree to a prospective employer before you receive your diploma. In that case, only after you have been notified that your submission has been approved, you may request a Degree Certification by contacting the McKelvey Registrar.

Questions from students may be addressed to the McKelvey Registrar by email at McKelveyRegistrar@wustl.edu. Questions about the use of copyrighted materials, permissions, and fair use may be addressed to your subject librarian or Olin Library's Copyright Help email address.