



# Learning, Design, and Technology

## Doctoral Student Handbook

2019 Edition

For students starting their Ph.D. on or after July 1, 2019

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LDT handbook Version date: July 1, 2019

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## Preface

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The Learning, Design, and Technology faculty congratulate you on your admittance into our doctoral program. The faculty is committed to working with you to foster learning experiences that will enable you to achieve your professional goals.

The Learning, Design, and Technology faculty believe that the program should afford flexibility for each student, while adhering to high standards of quality. We aim for the development of core disciplinary knowledge, research-oriented practices, and individual professionalism. This handbook should be viewed as general information to guide you through the process as opposed to the final word in developing your program of study. Your adviser, your doctoral committee, and ultimately, the faculty as a whole are the final arbiters of the details of each student's individualized program of study. Please note that this document is an evolving document. We believe that when uncertainties or inconsistencies occur, when improvements can be made in the process, or when the program needs to be updated to be reflective of the dynamic world outside the University, it is important to make revisions. Therefore, it is especially important that you work closely with your adviser and committee as you develop your program of study.

We recommend that you review this handbook in detail to help you prepare for your program-planning meeting with your adviser. Then, use it to ask questions, and as a point of discussion with your adviser and committee as you proceed through each step of the process.

We wish you the most rewarding experience during your work at Penn State. Remember that we are here to challenge you and help you attain your professional goals.

*The Learning, Design, and Technology Faculty*

# **Ph.D. Degree**

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The Ph.D. in Learning, Design, and Technology (LDT) is a significant and serious undertaking. It is essential for doctoral students to be committed to the development and pursuit of higher knowledge in the field. The Ph.D. degree typically prepares students for the professoriate or research posts within universities, labs, schools, corporations, the military, health professions and related educational and training environments. The Ph.D. focuses on research and develops students to become capable of adding new knowledge to the field.

## **Objectives for Doctor of Philosophy Graduates**

Upon completion of the Doctor of Philosophy program, LDT Ph.D. graduates will be able to:

- Design, study, and advance learning environments that are technology-enhanced and culturally-situated, based on strong theoretical and ethical frameworks.
- Discuss the role of culture and equity in learning practices and processes as well as their implications for designing learning for all.
- Design and conduct high-quality research with statistical and qualitative interpretations.
- Demonstrate strong written and oral communication skills.
- Provide leadership that extends the professional and theoretical knowledge base of the field.

The Ph.D. in LDT is intended for advanced professionals who have a master's degree and wish to strengthen their abilities to conduct scholarly work and research in the field. They study an area to advance core knowledge of the field—not necessarily with an eye toward the practical applications of their discoveries. [Note: A Master's degree is not required for admission into doctoral programs; however, students should estimate that the doctoral program is approximately 75-90 credits beyond the undergraduate degree including master-level courses, doctoral and dissertation credits.]

Because the Ph.D. prepares graduates to contribute to and extend their field and because contribution to the field involves engagement in formal research, requirements for the Ph.D. include significant preparation in the areas of statistics and research methodology. The Ph.D. degree is competency-based and has no minimum credit requirement by the Graduate School. That is, your program requirements will be designed to fulfill a set of competencies, rather than a set number of credits. An LDT doctoral degree typically includes approximately 45-60 credits of doctoral-level coursework beyond 30 credits of master's coursework in LDT or a related field.

The doctoral committee is charged with translating general guidelines into a specific program for each doctoral student. Committee members mesh the diverse backgrounds and career

goals of doctoral degree candidates with program requirements established by the Graduate School and the Learning, Design, and Technology program area.

The LDT doctoral program includes three sets of exams:

- A **qualifying exam**, which is typically taken after approximately 18 credits of doctoral coursework have been completed (after completing your Year 2 poster presentation).
- A **comprehensive exam**, which is taken when coursework has been completed, or is near completion, but before the candidate proposes a final dissertation study.
- A **dissertation defense**, which is taken when the candidate has finished collecting, analyzing, and writing up the results of the dissertation study. This is the last step in the doctoral degree.

In addition to these two exams, the doctoral program also includes LDT program-level assessments during the third and fifth semester of enrollment (assuming full time enrollment). Details of these assessments are provided later in the document.

The doctoral qualifying committee consists of two LDT faculty members. Both comprehensive exam and dissertation committees typically include four members of the Graduate Faculty. The committee must comprise at least two LDT faculty members (including the thesis adviser), one outside field member, and one outside unit member. In cases where the outside field member and outside unit member are the same person, the fourth member may be either a minor adviser or a third LDT faculty member. Additional information about doctoral committees is available in the [Graduate Bulletin](http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-602-phd-committee-formation/) (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-602-phd-committee-formation/>).

# **Doctoral Degree Overview in LDT**

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Your doctoral degree program consists of three major phases.

These three phases include:

1. Admission through your Qualifying Exam.
2. Qualifying through your Comprehensive Exam.
3. Dissertation study including: research design, data collection, analysis, interpretation, writing and defense.

## **Admission through Qualifying Exam phase (~ 3 full-time semesters),**

Your first phase in the LDT doctoral program begins with admission. After you are admitted, you will receive a letter where you are assigned a faculty adviser. Questions can be addressed to this person or to the Professor-in-Charge before you start your coursework. If you were hired as a Graduate Assistant (GA), your employment begins on the date listed on your employment contract and you are expected to come to campus for training on your position on that date.

Upon arrival to the University Park campus, the week before classes start, you will attend a day long orientation for newly admitted students in our Department as well as an LDT program specific orientation. After attending orientation, carefully review the program requirements in this handbook. Sketch out a preliminary plan for your studies based on your personal and professional goals and time constraints. Next, you should contact your adviser by email to make an appointment to develop your program of study for your first year of study. He or she will review the Graduate School and LDT requirements to help you plan appropriate coursework to help you attain your career goals.

During your third semester, you and your adviser select one other graduate faculty member for your Program Qualifying Exam Committee. This person will be the second reader of your qualifying exams and is typically a member of your doctoral committee. Your second reader should be familiar with your work and in alignment with your emerging perspectives. These two faculty members will guide you through this first major phase of your coursework.

During this time of your doctoral program, you will be primarily taking courses within the LDT program. These courses will provide you with current theories, methods, and skills used in our field as well as a chance to engage in real-world projects to apply what you are learning to real learning environments. In addition, you will engage in mentored research and gain exposure to various aspects of research with your adviser through your LDT 594 experiences as you engage in research on your adviser's projects.

During this early phase of your program, you should identify an area of interest that you will pursue as your primary area through the remainder of your Ph.D. program. During classes and your LDT 594 experiences you should read and write about your topic, gaining an understanding of the work that has been done and the work that you could add to this field. To support your engagement in this process, you will also participate in two LDT program-level assessments – a poster presentation on an empirical study in the fall semester of year 2, and a presentation on your proposed dissertation study ideas in the fall semester of year 3 (assuming full time enrollment).

You are ready to take your qualifying exam when you have accomplished all of the following:

- identified an area of specialization within the LDT fields,
- completed 18 LDT credits,
- enrolled for and completed at least 3 credits of LDT 594,
- selected your program committee member,
- applied to take your qualifying exam the first month of the semester, and
- the LDT faculty have voted in favor of your readiness for the exam.

The qualifying examination period with follow-up defense is described in depth later in this handbook. Once you have passed your qualifying exam, you officially become a doctoral candidate. Becoming a doctoral candidate is an important benchmark in any graduate program, and in LDT, we see our doctoral candidates taking on more and more collegial roles as they become active members of our community.

### **Qualifying through Comprehensive Exam phase (~ 3 full-time semesters),**

During this phase, you complete your coursework in accordance with the plan approved at the qualifying meeting. You must make progress on your residency plan requirements and continue your involvement in the three important aspects of academic life: research, teaching and scholarship. During this time, you will still stay active in research with your adviser in LDT 594. You will begin to further specialize in your own area of research, and faculty will look to you to take increasing leadership within the LDT program.

Faculty members will have an increased expectation of your performance in the doctoral program. They will expect to see you as a supportive discussion participant in each class you take, mentoring students into the rigor of academic community. They will turn to you to share your developing expertise in class presentations, participation in scholarly works, leading classroom discussion (online and residentially), and participating in professional development activities on and off-campus.

During this phase, you will form your dissertation committee. This committee will ultimately guide your dissertation research study as well as serve as professional references for your future employment. Work with your adviser to choose your dissertation committee carefully.

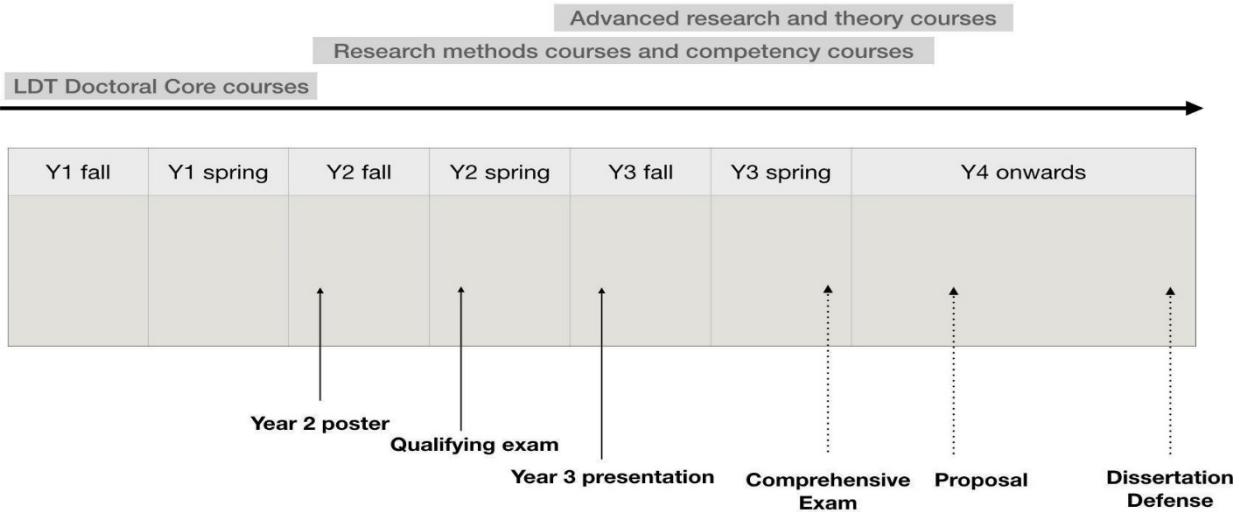
Your comprehensive exam is a written and oral examination related to your proposed dissertation area as well as general LDT knowledge and competencies. Once you have passed your comprehensive exam, you move into the formal dissertation phase of the program.

**The Dissertation study phase** (~2-4 full-time semesters but can be more depending on the study that you conceptualize and your pace of work completion)

The dissertation study phase is the most challenging phase of any graduate program. You are finished with your classes and have conceptualized your study. You now need to work through the Office of Research Protection to gain permission to run a study. You will independently conceptualize your research and you will be responsible for data collection, analysis, and interpretation, and you will write up the results of your research. Your adviser and committee are there to support you through this process as you take the lead to show you are capable of adding to our field.

# Ph.D. Program Timeline and Milestones

## LDT Ph.D. Timeline



In this section you will find an overview of the main milestones that will form a part of your Ph.D. program of study and activity.

(Note: solid lines represent fixed schedules based on program and graduate school guidelines; dotted lines represent flexible scheduling by the student and committee)

### Year 1:

During the first year of your doctoral course work, you will take a series of LDT core preparatory courses including, LDT 527, LDT 581, LDT 561, LDT 594, LDT 583, and one more elective course as decided by you and your adviser. These courses will provide a strong foundation in learning theories and frameworks, learning design frameworks, as well as basic research methods and skills. You will also have the opportunity to engage in a research project with your adviser. (Students on an F-1 visa should note that LDT 527 and LDT 581 are both offered online and should plan their schedule carefully as visa restrictions only allow enrollment in one online course per semester.)

### Year 2:

During year 2 of your doctoral coursework, you will continue to work closely with your advisor to select courses to fulfill LDT competency and research requirements. A list of potential courses are provided later in this document. During early fall semester of year 2, you will be required to present your first-year project in a poster session, which should be directly linked to your qualifying exam taken in spring of year 2.

### *Poster presentation Year 2:*

Early in the fall semester of year 2 of coursework, along with other members of your cohort, you will present a poster session based on an empirical study that you have conducted as part of your coursework in year 1. The poster session will be open to all faculty and students in the LDT program and is a chance for you to share your emerging interests and ideas with the LDT community and gain feedback. The session is designed as a way for you to share and get feedback on your work; as well, this experience allows you to have an experience similar to an academic conference in a supportive environment. Your poster will be evaluated by two, pre-determined LDT faculty members to assess emerging competencies in design, research, and scholarly writing and presentation. The following categories will be reviewed: importance of topic, clarity of purpose/question, appropriateness of method, soundness of conclusions, clarity of information, organization, and presentation, and delivery and interaction with audience. After the poster presentation, you will receive formative feedback on your work with suggestions for courses or engagements that might serve to further your interests and competencies.

### *Qualifying exam Year 2:*

Soon after the poster session, you should meet with your adviser to discuss feedback received and also to select a qualifying exam committee member, who is usually another LDT faculty member who can advise on your qualifying exam topic. Your qualifying exam question will be provided to you by your qualifying exam committee approximately a month after the poster session. You will have time to work on your qualifying exam during the fall semester and break, and your exam documents will be due to your committee by 5 p.m. on the first day of classes in the spring semester. You will also hold an oral defense of your qualifying exam during the spring semester of year 2.

### **Year 3:**

During year 3, you will continue to round out your coursework with advanced research and methods courses as well as advanced theory and design courses that will help to inform your future dissertation work. In the fall of year 3, you will present a conference-style paper based on your proposed dissertation work – this presentation will be scheduled on the same day as poster presentations made by students in year 2. Once again, the presentation sessions will be open to the whole LDT community including students and faculty. You will receive formative feedback on your presentation from the two identified LDT faculty members, as well as your qualifying exam committee (if they are different).

During year 3, you should begin the process of selecting your dissertation committee and scheduling your comprehensive exams.

### **Year 4 onwards:**

From the end of year 3, your focus will be on your comprehensive exam, writing and defending your dissertation proposal, and finally conducting, analyzing, writing, and defending your dissertation. The timeline for these benchmarks should be decided in close consultation with your adviser. The graduate school at Penn State requires all doctoral candidates (post qualifying exam) to meet with and report on progress annually to their dissertation committee. Students who are making insufficient progress may be at a risk for termination from the program.

#### *Comprehensive exam (Year 4 onwards)*

The comprehensive exam is a summative exam that consists of a written portion and an oral defense. The exam will involve the entire dissertation committee and the outcomes of the comprehensive will determine whether the student can continue to move forward or if additional requirements must be met.

#### *Proposal (Post comprehensive exam)*

The dissertation proposal (chapters 1, 2, and 3 of the dissertation) should be provided to the committee and approved at a committee meeting before beginning dissertation data collection.

#### *Dissertation (Post proposal approval)*

The Ph.D. dissertation challenges or substantiates important theories related to learning, design, and technology. It is firmly grounded in existing or original theory, is based on data collected by the investigator, and is analyzed using appropriate experimental or qualitative methods. The study must employ robust research methodologies: surveys, formative evaluations, or replication studies are not allowed as the primary data collection tools. The dissertation must create new knowledge and contribute to the theoretical base of our field. Continuous enrollment in LDT 594, 601, or 611 is required after the comprehensive exam is passed.

#### *Note about committee meetings:*

Most graduate faculty at Penn State are on 9-month appointments so you should plan to hold all committee and exam meetings during the academic year, i.e., starting approximately the first day of classes in the fall semester and no later than the graduation date in the spring semester. Any committee meetings held outside these time frames must first be approved by your adviser and your other doctoral committee members prior to planning and scheduling. Students working on dissertations and theses are expected to consult the graduate school deadlines well in advance for filing paperwork and scheduling defenses during the 9-month academic calendar year. You should not plan for committee meetings or defenses during the summer though you can consult with your advisor should extraordinary circumstances arise that require accommodation. However, you should be aware that since most faculty are on 9-month appointments, some of your committee members may not be able to accommodate this special request, even if such arrangements are approved by your advisor.

# Ph.D. Course requirements

LDT Ph.D. coursework and requirement are based on the parameters published in the graduate school bulletin (<https://bulletins.psu.edu/graduate/programs/majors/learning-design-technology>). The following paragraphs are presented verbatim from the graduate bulletin to help with your planning.

*Ph.D. students in LDT must complete a set of core competencies in instructional design, learning sciences and technology, research methodology, and research apprenticeship. Doctoral students must complete a minimum of 30 LDT credits to include 9 credits of LDT doctoral core courses, 9 credits of LDT 594, and at least 12 credits of 500-level graduate LDT courses based on competency selection.*

*All Ph.D. students must also complete a communication requirement consisting of one course in applied statistics, and either one course in advanced statistics or one course in advanced qualitative analysis. Course work offered by outside departments may be scheduled as part of the student's program with approval of the student's Ph.D. committee and the Director of Graduate Studies.*

*To complete the residency requirements as defined by Graduate Council, the Ph.D. student must spend at least two consecutive semesters enrolled as a full-time student at the University Park campus.*

## 1. Prerequisites

### Introductory Courses

STAT 800 Intro to Statistics, EDPSY 406 Applied Statistical Inference for the Behavioral Sciences, or equivalent

LDT 415 Systematic Instructional Development (or equivalent)

## 2. Courses

### LDT Doctoral Core (9 credits)

LDT 527	Designing Constructivist Learning Environments
LDT 581	Theoretical Foundations of Learning, Design, and Technology
LDT 583	Survey of Research in Learning Sciences and Technology

### LDT Core Competency Courses (12-18 credits)

#### Choose from the following:

LDT 467	Emerging Web Technologies and Learning
LDT 505	Integrating Mobile Technologies into Learning Environments
LDT 549	Current Topics in Emerging Technologies
LDT 550	Learning Design Studio

LDT 566	Using computers as learning tools
LDT 577	Computer Supported Collaborative Learning
LDT 597	Special Topics Courses (various topics)
LDT 832	Designing e-learning Within Course Management Systems
LDT 897	Special Topics

### **Research Design Requirements (18 credit minimum)**

ADTED 550	Qualitative Research in Adult Education (or equivalent)
LDT 574	Applied Qualitative Research for Work Practice, Innovation, and Systems Design
LDT 575	Designing Experimental Research in Learning, Design, and Technology (EDPSY 475 can be substituted for LDT 575)
LDT 576	Design-Based Research Methods

Any two or more advanced research courses from the following list:

ADTED 551	Qualitative Data Analysis
EDPSY 505	Statistical Applications in Educational Research
EDPSY 506	Advanced Techniques for Analyzing Educational Experiments
EDPSY 507	Multivariate Procedures in Educational Research
EDPSY 515	Foundations of Educational Research
LDT 544	Video in Instruction, Research, and Training
STAT 501	Regression Methods
STAT 502	Analysis of Variance and Design of Experiments

- *Note:* For students interested in quantitative methods for their dissertation, the sequence of courses of EDPSY 406, 505, 506, and 507 are the basis for the advanced measurement courses such as HLM, IRT, and SEM.
- *Note:* For students interested in qualitative methods for their dissertation, the sequence of courses of ADTED 550, LDT 576, and ADTED 551 or LDT 544 is suggested with an additional analysis course as needed from C&I, anthropology, linguistics, and other fields.

In addition to course requirements, all graduate students at Penn State are expected to abide by the rules of conduct and professional integrity as listed under GCAC-801 and under graduate student policies (<http://gradschool.psu.edu/current-students/student/>). This includes an expectation of the “highest ethical, moral, and professional standards as scholars, and as future faculty, professionals, and leaders in their respective fields. Meeting this expectation is a component of satisfactory scholarship for graduate students, in addition to meeting academic standards such as, but not limited to, minimum required grade-point average or grades in required courses for the program” (para 1, <http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-800/gcac-801-conduct/>).

# **Qualifying Examination**

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The purpose of the Qualifying Exam is summative as well as diagnostic. It provides data for the faculty to use to predict your ability to complete successfully the LDT Ph.D. program and to make significant contributions to the program and to the field.

At this time, the faculty will use all of the available evidence to predict your potential for:

- completing coursework,
- completing the comprehensive examination,
- completing residency,
- completing the dissertation, and,
- synthesizing and generating knowledge to allow for graduation with a Ph.D.

Because it is summative, the outcomes of the qualifying exam can range from pass, revise and resubmit, or fail. In support of its diagnostic purpose, after the Qualifying Examination you will receive recommendations for actions necessary to support your program. These actions may include new courses to take based on your emerging interests, spending more time on writing, taking writing classes, taking additional research classes, completing new readings, and other scholarly supports. In some cases, there may be also required remediation to take courses again or even the qualifying exam again. Finally, the Qualifying Examination exists as a forum for Ph.D. students to negotiate the requirements for completing the program, including residency, and courses with their adviser and Qualifying Exam Committee member.

## **Eligibility and Administration of the Qualifying Exam**

Graduate school policies dictate that the qualifying exam be taken early in a student's program. The student must have completed at least three (3) credits of LDT 594 or equivalent, and have had broad exposure to the field of LDT. The examination may be given after at least 18 LDT credits have been earned, including doctoral core courses and basic research methods and apprenticeship courses, and should ideally be taken within three full-time semesters of study (or the part-time equivalent, not including summers) after entry into the doctoral program. In order to complete the Qualifying Exam, you must be registered either full or part time during the semester in which it is completed.

In consultation with the student's academic adviser, the student will form a Qualifying Exam Committee consisting of two LDT faculty members in total. Then, the qualifying exam committee will develop an examination question based on the student's interests, and the student will write a scholarly paper to address the question. The qualifying exam consists of a written paper as well as an oral defense. The oral defense of the qualifying exam is scheduled a minimum of two weeks after submission of the written paper and is conducted with the Qualifying Exam Committee and the student.

It is your responsibility to arrange with all parties an acceptable meeting time for the exam. It is your responsibility to arrange for a room and work with the graduate program staff assistant to ensure the examination documents from the graduate school are ordered.

### **Student protocols during the examination period**

A qualifying exam is open book, open notes, and open bibliography. Although the exam is open, you may not use, copy, or paste previously composed text materials. In making citations, follow APA style (6<sup>th</sup>). You must cite and synthesize the relevant literature to support your response. We encourage you to be thoughtful and thorough in your response. You are to write the answer on your own, without any collaboration, assistance, or other input from friends, peers, professional or informal editors, or other faculty. Your response may be externally evaluated for evidence of plagiarism. As with all work conducted during the LDT program, students are expected to abide by any and all academic integrity policies of the program, College and University during the examination. Please refer to <https://www.ed.psu.edu/current-students/academic-integrity> for Penn State and the College of Education's policies on academic integrity.

The instructions for the qualifying exam will direct you to:

- Answer the questions with 20-25 double-spaced pages (excluding references), 12-point font (Times or Times New Roman) with 1" margins all around. This exam period is approximately 3 months in length.
- Turn in your final copy as a word document (.doc or .docx) **and** as a .pdf through email to both committee members. Questions or clarifications will only be provided within three (3) days of the receipt of the exam question document—send all questions or comments to both committee members.

### **Qualifying Exam Oral Defense**

An oral defense of 1.5 hours will be scheduled to defend your qualifying exam response. The following qualifying materials must also be prepared for the exam: (1) course plan; (2) statement of goals; and (3) residency plan.

### **To Apply for the Examination**

Students taking the qualifying exam will first need to complete a form for the appropriate semester *within the first two weeks of classes* and submit it to the LDT program assistant who will then make copies of the form and your transcripts. At the next faculty meeting, the LDT faculty will review each student's transcript and form, and they will approve or deny each student's readiness for the qualifying exam by a majority vote.

### **Evidence of a Successful Candidate**

During your Qualifying Examination your Qualifying Exam Committee will be looking to see evidence of the following skills, abilities, and understanding, which are important indicators of success in the LDT program:

- *Scholastic Aptitude/Analytic Ability*: a high level of scholastic aptitude and ability to critically read empirical and theoretical literature, analyze problems, identify issues, and find patterns, trends, and problems in the literature. Synthesize across multiple studies and articles to develop conceptual models, preliminary design suggestions, and codify the studies into themes and/or a framework.
- *Theoretical Understanding*: ability to understand and use theories in the field in general, with significant understanding in your emerging area of expertise.
- *Intellectual Courage*: ability to generate and defend original thoughts and take a variety of positions.
- *Communication Ability*: ability to develop an academic paper that is readable, coherent, on-topic, and well-organized and that advances an argument, as well as the ability to speak clearly, respectfully, and logically.
- *English Language Competence*: English language competence in listening, comprehension, and speaking skills through evaluation of an oral presentation and oral responses to questions posed by the faculty at the qualifying exam.
- *Professional Commitment*: commitment to the field of LDT as a whole.

All program committee decisions and advice will be based upon a consideration of the following information:

- The quality of your *qualifying exam written paper* as defined by the six items above.
- The quality of your *qualifying exam oral examination* as defined by the six items above.
- *Coursework*: performance in LDT and required methodological courses, including maintaining a 3.0 grade point average (minimum), with the expectation of higher performance. No Fs, Ds, or DFs.
- *Statement of Goals*: a short paper reflecting on your professional goals, and the research, technology and design skills necessary to attain those professional goals.
- *Residency Plan*: plans for engaging in research and practice scholarship within the immediate and broader LDT community (details on p. 20)
- *Research Engagement*: your participation in LDT 594 and other activities related to theoretical, qualitative, quantitative, and design-based research.
- *Class Participation*: willingness and ability to state and defend your thoughts and positions during classes.

- *Professional Involvement:* commitment that you bring to the program and the field. The following activities are indicators of your professional involvement:
  - Professional Roles/Job Performance (experience in the field and/or in internships)
  - Residency Plan
- *Course Plan:* An organized presentation of how you plan to meet all of the requirements of the program, including how any transfer courses substitute for required coursework. You may use the doctoral program planning sheet (in the appendix) to assist with your planning.

## **Outcomes of the Qualifying Examination**

The outcomes of the Qualifying Examination include:

- Pass (High, average, below-average competence).
- Fail with the opportunity to retake the exam.
- Fail with recommendation for termination from the program.

In addition, each student will receive feedback and suggestions on next steps for their career. See the qualifying exam evaluation form provided in the appendix for more details.

# **Residency Requirement**

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## **Graduate School Requirements**

To meet residency requirements, the Ph.D. candidate, over some twelve-month period during the interval between admission and completion of the Ph.D. program, must spend at least two consecutive semesters (summer sessions are not included) as a registered full-time student engaged in academic work at the University Park campus. A graduate student who is “in residence” at the University is expected to be properly registered. In residence means that the student is pursuing graduate credits and/or an advanced degree by:

- attending classes or seminars for credit (LDT 601 may not be used for residency).
- doing a thesis, term project, independent study, or similar research or scholarly work in a University laboratory or other research facility.
- consulting in person or by other means of communication with one or more faculty members on scholarly matters, research projects, and/or dissertation.
- using the library, computer center or other University information resources.
- using other University facilities provided for graduate study.

For doctoral students who are not working, 9 or more credits per semester are required to fulfill the residency requirement.

Doctoral students who are self-supporting or using other academic awards must show evidence of *reduction in full-time work* while in residence, and must register for 6 credit hours at University Park to fulfill the residency requirement.

Similarly, full-time Penn State University employees must register for the full number of credits allowed by the University while in residence (e.g., 6 credits per semester) and must be certified by the department as devoting half-time or more to graduate studies and/or thesis research to meet the degree requirements.

## **The Intent of Residency**

The intent of residency is to provide you with professional immersion to foster the acquisition of appropriate professional norms and values through an extended opportunity to reflect on your work and develop a coherent point of view about the major issues and problems in your field. This residency, therefore, is seen as an opportunity to:

- perform concentrated, uninterrupted work on your academic preparation through intense attention to coursework, projects, research, and active participation in academic life.
- become socialized in the values and norms of the profession.
- develop increasing levels of professional independence and responsibility.

- foster the transition from student to colleague.
- engage in frequent, meaningful, out-of-class interaction with faculty, especially on substantive issues.
- become involved in considerable out-of-class interaction with fellow students on substantive issues.
- become involved in professional activities of various kinds.
- develop familiarity with professional resources and develop knowledge of how to access and use them.

## The Residency Plan

A residency plan will be submitted to your program committee during the qualifying exam. This plan should be divided into the following categories: Research/Scholarship, Teaching, Professional Service, and General Professional Participation. In some cases, if your goals and career plans include significant focus on managing and advancing design knowledge, you may also choose to pursue activities listed under Development, Consultation, and Course Management. The plan should also indicate the status of the activities as one of the following: completed, in progress, or to be completed during your residency. You should be as specific as possible when you describe your plan and should include a timeline/schedule for completing these activities. Your program committee will evaluate the residency plan using the following criteria:

- relevance to your professional goals
- quality of participation
- quantity of participation
- variety of participation and activities
- demonstration of initiative
- demonstration of collaboration
- demonstration of independence
- opportunity for written, oral, and electronic communication
- evidence of reduction in full-time work load

The status and completion of your planned residency activities will be reviewed at two points in the process – first, at the comprehensive exam during the review of your dossier for the Ph.D., and then at your final oral defense.

## Sample Residency Activities

The following items are provided as sample residency activities; however, you should feel free to be creative in your proposed plan. You do not need to list every item suggested below – pick those activities that are most appropriate for your career goals and be specific in outlining your plans (e.g., don't just indicate that you will co-author a research article, specify whether you will be first or second author and some possible outlets that you will seek for publication).

- *Research and Scholarship*

- author/co-author book review
  - conduct collaborative research with students and/or faculty
  - critique a colleague's research article draft
  - develop a grant proposal
  - author/co-author a research/practice article for publication
  - present a paper at a state, regional, national, or international conference
- *Teaching*
    - work as a teaching assistant
    - teach a course
    - serve as a guest lecturer in a course
    - tutor fellow students
    - develop course instructional/evaluation materials
    - serve as a mentor for junior students
  - *Professional and University Service*
    - edit a professional newsletter
    - serve in a graduate student organization
    - serve on department, college, or university committees
    - serve on a professional committee
    - review text for publishers
    - serve in a professional elected or appointed office
    - organize a professional conference
    - serve as chair at a professional meeting
    - serve as a journal field reviewer
    - organize an invited speaker session
    - organize study groups, seminars, forums, lecture series
  - *General Professional Participation*
    - serve as a research participant
    - attend and participate in professional colloquia and seminars
    - attend and participate in state, national, and/or international professional meetings
    - host visitors to campus
    - observe colleagues in an innovative or exemplary program
    - participate in a study group or professional network
    - initiate and lead a seminar with faculty participation
  - Development, Consultation, and Project Management
    - serve as a director or associate director of a project
    - participate in a consultation activity
    - prepare a consultation report for an actual client

- develop specifications and products for instructional applications (including course materials)
- participate as a planner or instructional designer on a project
- participate as an evaluator on a project
- serve as a field test subject for the formative evaluation of an instructional project

# **Comprehensive Examination**

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The comprehensive examination consists of a written and oral examination of two components: a 20-25 page literature review on the area of your dissertation topics as well as 12-15 page mini-proposal that outlines your proposed research questions and methods. You should discuss this exam and your readiness to take all its parts with your adviser prior to scheduling it.

## **The Comprehensive Exam Process**

The exam process consists of these steps:

- completing the proposal, and
- completing the oral exam.

## **The Committee**

Prior to taking the comprehensive exam, you must formulate your full dissertation committee and complete the appropriate Graduate School paperwork, providing the names and signatures of your dissertation committee, and filing a completed (signed and dated) doctoral committee form with the LDT program support staff. *You are responsible for gathering committee signatures and filing this signed doctoral committee form with the LDT program staff at least three (3) weeks before your comprehensive exam date.*

The doctoral committee form is on the LDT website or check with the administrative staff in the Department Office.

## **Completing the Written Exam**

The written portion of the comprehensive exam consists of two interrelated parts, which serve to demonstrate the student's proficiency and substantive knowledge of related theoretical and empirical work within the specific area of research, the student's ability to synthesize and relate these ideas to the discipline, and to qualify the student to move on to conduct his/her dissertation research. The comprehensive exam requires the student to independently research and write two papers: (1) a 20-25 page literature review that acts as a synthesis of the most pertinent and important literature related to the proposed dissertation topic. This literature review should build on the student's prior work and serve as a clear segue to the formal dissertation proposal; (2) a 12-15 page mini proposal, which outlines 2-3 research questions that the student might pursue (based on the presented literature review) along with research design and methodological details to answer the questions. Once completed, the written exam should be sent to the entire dissertation committee.

## **Completing the Oral Exam**

The oral exam is the final step in the comprehensive exam process. Therefore, the members of the LDT faculty and your supporting field or minor adviser (if applicable) will have an opportunity to ask you any questions they deem appropriate to judge your capability. They may cover any or all of the following:

- any part of the written component of your comprehensive examination (e.g., literature review or mini-proposal),
- any part of your residency preparation,
- your experience and professional growth as a result of graduate work to date,
- any questions about the LDT or minor area that arise via discussion.

In order to orally defend your exam, you should note that the graduate school requires that prior to taking this exam, you have:

- removed all outstanding incompletes or missing grades.
- maintained a 3.00 GPA.
- substantially completed your coursework (your adviser is to verify this prior to your filing your intention).

## **Criteria for Evaluation**

During the oral examination, the members of your doctoral program committee and the faculty representing your supporting field will evaluate your performance during the oral examination using the following criteria:

- integration and synthesis of themes in the field
- independent and original thought
- clarity of the position taken, and
- logic, cogency, and coherence of the reasoning and arguments

Based on the committee's assessment of the written and oral portions of the comprehensive exam, the recommendation will be a pass or a fail.

## Dissertation Proposal Meeting

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After you defend your comprehensive exam, you will start working on your dissertation proposal in close consultation with your adviser. The dissertation proposal includes chapters 1-3 of your dissertation. The dissertation proposal usually includes the following components: a clear and detailed statement of the problem to be addressed as well as justification of the importance of the problem from both theoretical and practical perspectives; a thorough review of literature related to the problem; overall design of the proposed study including theoretical framework, research questions, data collection strategies, proposed data analysis and interpretation frameworks.

You must gain approval from Penn State's IRB (and any other applicable IRB bodies if the study has multiple sites) for your study's design and implementation. Although IRB approval needs to be obtained before you present your dissertation proposal, you should be prepared to modify your IRB in response to committee feedback and proposal changes that are identified as necessary. Data collection should not begin without a revised and approved IRB form as well as approval from your advisor.

You should submit your IRB approval to your committee along with your proposal document at least 2 weeks before your scheduled proposal meeting date. It is your responsibility to schedule the meeting and to reserve a room for the meeting.

After the proposal meeting, the committee will vote on whether you can proceed with your dissertation study as well as offer suggestions for changes. If changes are recommended, you should work with your adviser to address those changes and get your committee's approval to proceed onward to the dissertation study. See the appendix for a proposal evaluation form.

# The Dissertation Process

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Our faculty encourages you to become involved in research and data gathering early and consistently in your program. Research may be a part of your coursework, collaboration with faculty, or may be done independently. Early research can help you explore a dissertation topic, serve as a pilot study or become part of your dissertation proposal. However, formal approval of a dissertation proposal by your committee must precede the serious pursuit of your study or data collection for the dissertation study. There are several formal steps in conducting your study:

- forming your dissertation committee
- presenting your prospectus
- writing and obtaining approval of your dissertation proposal
- applying to use human subjects
- continuously registering for dissertation credit
- orally defending your study, and
- meeting graduate school publication requirements and deadlines.

## Forming your Dissertation Committee

The dissertation committee can be separate from your Qualifying Exam Committee. Following the completion of the qualifying examination, the responsibility of the Qualifying Exam Committee is complete. At this time, you need to form a Dissertation Committee to direct your dissertation. This committee may, but does not have to, consist of the same members as your Program Committee. You are encouraged to include faculty who can support your line of research. During your academic program, your interests may change. Those changes should be taken into consideration during the formation of the Dissertation Committee.

This Dissertation Committee must consist of a minimum of four active members of the Graduate Faculty, two of whom must be LDT faculty. A faculty member or practitioner from outside of Penn State who has expertise in your research may be added as a special (fifth) member of the committee with the approval of the program. *At least one of the committee members must be from a department other Learning and Performance Systems.*

When you form your dissertation committee, you must designate one member as the supervisor of your thesis who will usually, but not necessarily, serve as your chair. You may select a different member of the committee to serve as your Chair. The Chair ensures that the dissertation process is followed according to the Graduate School requirements. The Thesis Adviser supervises the dissertation. The Graduate School requires that all members of your committee be members of the Graduate Faculty. It is your responsibility to ask each potential committee member about their status as a Graduate Faculty Member. The policy related to committee doctoral committee formation can be found here:

<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-602-phd-committee-formation/>.

## **Writing and Obtaining Approval of your Dissertation Proposal**

Before you proceed to write a dissertation, your committee must accept your detailed proposal for that dissertation. This phase takes place after your comprehensive examination. The proposal should contain:

- (a) a detailed rationale for the study,
- (b) the context of the study in related literature, and
- (c) the proposed means to gather and analyze the data.

This is typically considered the first three chapters of the dissertation (problem statement, literature review, and method).

When the committee has accepted your proposal, there is, in a sense, a contract between you and the faculty of the LDT program, which the committee represents. This contract would hold that if you complete the study according to the proposed outline and to the standards necessary for quality work, the faculty would accept the dissertation. An approved copy of the proposal must be signed by your committee and retained in your file as a record of that contract. In general, you should always get approval of your thesis chair on any draft of a prospectus, proposal, or dissertation prior to circulating it to the entire committee. You must allow 2 weeks for committee review and in general, it is a good idea to allow about that long for your adviser to review your work as well as an additional week for incorporating revisions based on adviser feedback.

## **Applying to Use Human Subjects**

If your dissertation research will involve the use of human subjects (e.g. students in a university class or public school), the procedures you propose to use to protect the rights of those human subjects must be reviewed by the University Compliance Office for the Protection of Human Subjects in the Graduate School. Approval must be obtained prior to involving any subjects in your study and before defending your proposal. This process requires the completion of an online application form. It is best to allow at least three weeks for this review and to plan for another week for minor revisions and a subsequent review.

## **Continuously Registering for Dissertation Credit (Ph.D. only)**

Ph.D. candidates must be continuously registered for LDT 594, LDT 601 (full-time students), or 611 (part-time students) during all semesters (except summers) after the completion of the comprehensive examination until the completion of the dissertation. [Details of this requirement can be found in the Graduate School Bulletin.](#)

## **Orally Defending Your Dissertation Study**

After you have completed the dissertation to the satisfaction of your thesis adviser, you will schedule your oral defense with your committee and inform the Program Staff Assistant who will notify the Graduate School of the time and location of the defense.

During your defense, you may be asked questions on any aspect of the Learning, Design, and Technology field; however, it is customary to focus the inquiry on your research.

Often the committee will have suggestions concerning the final form for the dissertation and will pass you on the examination but not accept the dissertation. When the dissertation has been changed to meet the committee's suggestions, the dissertation is accepted, and each member of the committee will sign the signatory page of the dissertation. The thesis adviser is encouraged not to bring you before the committee prematurely. Be sure to heed his/her advice. In order for a thesis to be acceptable, there should be no more than minor editing, a condition that you can remedy within a few days following the examination. A thesis that would require major editing to be considered acceptable should be reported as a failure with the condition that the candidate would be granted a second examination when the adviser considers the thesis acceptably revised.

The committee member from outside of the Learning and Performance Systems department is required by the Graduate School to write an evaluation of that paper which is submitted to the Graduate School. A copy of the evaluation is sent to the Graduate officer who shares its contents with the thesis adviser.

## **Meeting Graduate School Publication Requirements and Deadlines**

Because of the intricate nature of the rules and calendar requirements of the Graduate School for publication of the dissertation, you are urged to strictly follow the guidelines established in the [Thesis Information Bulletin](#). You should know that the Graduate School has very stringent deadlines for submitting a draft of your thesis, scheduling your defense, obtaining signatory page approval, and submission of the final copy of your thesis. You should also be aware that these deadlines come very early each semester. We emphasize that meeting these deadlines is your responsibility as is attaining the degree of accuracy required by the Graduate School. These dates and all the details of typing and reproduction may be obtained from the Office of Publications of the Graduate School. Get them and keep them handy. Again, we emphasize that this is *your responsibility*.

## **Additional Policies and Procedures of Note**

### **Deadlines for submitting signatory pages to the Graduate Coordinator**

In order to reduce problems of getting signatures and approvals on final papers for Masters theses and Dissertations (which are submitted to the graduate school), it is now necessary for all approved papers (theses and dissertations) to be submitted to the LDT Program Staff

Assistant, *at least two weeks* prior to the graduate school deadline. That will ensure sufficient time for administrative review and signoff.

### **Guidelines for Acceptable Written Quality of Dissertation Drafts**

The role of the thesis chair is to interact with the candidate with regard to the *content* of the thesis, not to edit it or discuss formatting issues. All drafts submitted to the thesis chair should be in nearly final form and should meet acceptable standards for written English in published journals. If you are not certain that your document is ready for review, you may hire an editor to make the needed corrections. If a thesis chair deems that a draft is not of sufficient quality, the adviser will stop the review and return the draft to the candidate, even if doing so may cause the student to miss graduate school or thesis defense deadlines. The responsibility to produce a quality draft is yours. If you need assistance in locating an editor, check the list posted on the LDT website. It may be wise to set aside sufficient funds to plan to hire an editor regardless of your facility with spoken or written English. Your dissertation is to be your finest work to date and we encourage you to make it a completely finished and professional presentation.

### **Ethical Behavior**

It is important for you to know about the ethical behavior policies of the Graduate School. The Pennsylvania State University recognizes the basic rights and responsibilities of the members of the University and accepts its obligation to preserve and protect those rights and responsibilities. Further, the University must provide for its members the opportunities and protections that best serve the nature of the educational process.

[The Code of Conduct](#) governing the behavior of members of the University must ensure the basic rights of individuals as well as reflect the practical necessities of the community. The code also must prohibit or limit acts that interfere with the basic purposes, necessities, or processes of the University or with the rights of its members. Finally, the code must reconcile the principles of maximum freedom and necessary order.

Violations of the Code of Conduct shall be adjudicated by appropriate University mechanisms, established in consultation with faculty, students, and staff. The mechanism for adjudicating cases of alleged misconduct on the part of student members of the University is the discipline system described in the following section of this document. Student members of the University are those who have been accepted for admission to the University or who are registered or enrolled in any credit or noncredit course or program offered by the University. There shall be clearly defined channels and procedures for such adjudication and the right of appeal. Sanctions shall be commensurate with the seriousness of the offense and may include separation (suspension, dismissal, and expulsion) from the University. Repeated violations justify increasingly severe sanctions.

Code of Conduct -Misconduct that may result in disciplinary action consists of the following offenses:

1. Violation of written University policy or regulations contained in any official publication or administrative announcement of The Pennsylvania State University.
2. Academic dishonesty, including, but not limited to, cheating and plagiarism.
3. Disruption of operations of the University as defined in the "Open Expression and Disruption" statement.

LDT faculty and all other Graduate Faculty are required to uphold high standards and ethical behavior, and are required to report any suspected cases of academic dishonesty. There are extremely serious and grave consequences for infringement and you are responsible for understanding your rights to due process, if charged. Further information is available from judicial affairs, the graduate school, and the College of Education Academic Integrity Committee.

In addition, no student shall pay for advising, review, or supervising of services beyond set time and fee costs. No student will pay any individual faculty member for committee service including any travel costs for attending a defense.

This section is subject to ongoing changes. For the most up-to-date policy changes, please refer to: <http://gradschool.psu.edu/graduate-education-policies/>

# Teaching Experience for Doctoral Students

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In recognition of the importance of gaining teaching experience in the preparation of doctoral students, the LDT program offers teaching apprenticeships in undergraduate courses. Students who participate in a teaching apprenticeship should register for LDT 602: Supervised experience in college teaching.

## Rationale

Our program has a history of preparing professors to teach at higher education institutions. About half of our doctoral graduates work initially as assistant professors. In order to ensure their teaching success, PhD students are encouraged to seek out opportunities as teaching apprentices at the graduate level.

## Teaching Apprenticeship

We describe what we mean by a "teaching apprenticeship" to guide you, and to communicate to the graduate school the purposes and intentions of the apprenticeship. A teaching apprenticeship is a supervised teaching experience in which a candidate teaches or co-teaches with a faculty member. In this spirit we offer the following guidelines:

- Teaching apprentices will conduct up to 35% of the course contact hours
- Teaching apprentices will be supervised by a full-time member of the LDT faculty who is an active member of the graduate faculty at the University Park campus
- The instructor/professor of record will attend all class sessions, except in extenuating circumstances
- The syllabus will be developed either by the instructor of record or jointly with the teaching apprentice, but not by the apprentice alone
- Final grades will be assigned by the instructor of record, but he/she may involve the teaching apprentice in the assessment and evaluation processes
- Course materials and student mentoring will be accomplished primarily by the instructor of record, but may include the assistance of the apprentice
- Any session that is taught primarily by the apprentice will be reviewed either verbally or in writing by the instructor of record and a review of teaching effectiveness will be held orally at least once during the semester in which the apprenticeship takes place

Teaching apprentices may assist with group facilitation in and out of class, but will not be assigned as a primary facilitator. The Graduate School at Penn State has established rigorous guidelines for students who will assist in teaching graduate level courses (500 or 800 level). Please refer to this page for specific policies that apply to teaching apprenticeships within 500 or 800 level courses. (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-900/gcac-902-student-instructional-assistants-in-graduate-courses/>). You will also need to sign a Conflict of Interest form (<http://www.gradschool.psu.edu/current-students/student/graduate-student-instructional-assistant-gsia-conflict-of-interest-coi-disclosure-form/>) if your teaching apprenticeship is within a 500 or 800 level course.

## LDT Graduate Employment

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The Learning, Design, and Technology Program provides a Listserv for students enrolled in the program. One of the services provided by the Listserv is the posting of job announcements directed to various members of the program who forward them to the Listserv. Members of the faculty often receive job announcements from employers seeking LDT graduates.

Types of positions posted on the Listserv include University positions (both teaching positions, research positions, and design positions within various departments - often as support for University professors), and corporate/industry positions. While the Learning, Design, and Technology Listserv is not the only source of information on job possibilities, it is a very useful tool for students to see what types of opportunities are available.

The Listserv and job announcements posted also provide a good indication of the types of skills and competencies sought after by universities and corporations when hiring faculty, researchers, and designers. You may also make some of your course selections based on this information.

One of the best things you can do to help to prepare yourself for future employment is to study appropriate job listings from L-LDT and *The Chronicle of Higher Education* as well as job boards at conferences such as AERA, ICLS, AECT, and ISTE. This will help you identify currently needed skills and desirable qualifications.

Among the specific vita building tasks you can take on are:

- Writing and publishing research in refereed (peer-reviewed) journals
- Presenting research at national research conferences
- Writing and publishing in non-refereed journals or book chapters
- Teaching at the university level as a guest lecturer or by enrolling in 602 credits
- Serving the University and/or Profession on committees

## **Course Listings**

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The most current course lists for LDT can be found at:

<https://bulletins.psu.edu/graduate/programs/majors/learning-design-technology/>

## **Forms and Links for Graduate Study**

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The most current forms and URLs for LDT students can be found at:

<https://ed.psu.edu/lps/ldt/student-life>