



DOCTORATE IN TEACHING, LEARNING, AND TECHNOLOGY

Instructional Design and Technology or *Learning and Instruction* concentrations (48 credits minimum beyond master's)

The doctorate in Teaching, Learning, and Technology (TLT) is a 48-credit, post master's Ph.D. program with concentrations in either *Learning and Instruction* or *Instructional Design and Technology*. The TLT Ph.D. program employs a scientist/practitioner model of learning. That is, research is not separate from application or practice. Our doctoral students collaborate closely with faculty to generate new theories and classification systems, innovative curricula that make the most of promising technologies, authentic approaches to assessing learning, and a wide range of creative methods of teaching and learning in a global world highly interconnected by technology.

In keeping with the scientist/practitioner model, our doctoral students learn through innovative approaches, including research-based strategies for curriculum delivery, online synchronous and asynchronous environments, and a wide range of other technology-enhanced designs for learning.

The College of Education is a nationally ranked graduate school at Lehigh University, a private institution located in the Lehigh Valley between Philadelphia and New York City. Lehigh actively recruits a diverse student body and welcomes inquiries from all interested students. To learn more about the TLT doctoral program, visit www.lehigh.edu/education/tlt or contact the TLT Program Director (TLTProgram@Lehigh.edu 610-758-3230).

TLT Ph.D. Curriculum

All TLT doctoral students take a common core of 12 credits of foundational coursework and 12 credits of research coursework. For their professional cognate, students then choose between either the *Instructional Design and Technology* or the *Learning and Instruction* concentrations. Finally, students round out their total of 48 credits (minimum) past the master's degree by pursuing directed research projects and professional sub-specialities, as shown below:

<p>Foundations 12 credits (4 required courses)</p>	<p>TLT 401. Overview of Teaching and Learning (3) TLT 403. Instructional Design (3) TLT 402. Critical Reading & Writing (3) Educ 471. (CPsy 471) Diversity and Multicultural Perspectives [or equivalent] (3)</p>
<p>Research 12 credits (3 required courses, 1 elective, additional as required by adviser)</p>	<p><i>Required:</i> Educ 403. Research (3) Educ 408. Introduction to Statistics (3) Educ 409. Analysis of Experimental Data (3)</p> <p><i>Electives (select at least one):</i> Educ 405. Qualitative Research Methods Educ 410. Univariate Statistical Models (3) Educ 411. Multivariate Statistical Models (3) Educ 412. Advanced Applications of Psychometric Principles (3) Educ 416. Quasi-Experimentation and Program Evaluation (3) Educ 461. Single-Subject Research Design (3)</p> <p>Or other statistical research course in TLT, COE, or A&S as approved by advisor.</p>

Professional Cognate 12 credits (1 required course + 3 electives)	<p><i>Instructional Design and Technology</i></p> <p><i>Required:</i> TLT 454. Applied Instructional and Interface Design Principles (3)</p> <p><i>Electives (select at least 3):</i> Educ 451. Applied Principles of Cognitive Psychology TLT 458. Introduction to Multimedia Programming and Resource Development for Learning (3) TLT 460. Advanced Multimedia Programming and Resource Development for Learning (3) TLT 456. Instructional Design and Development Studio (3) TLT 476. Assessment of Instructional Technologies (3) Educ 491. Advanced Seminars: (with subtitle) (1-6) Educ 496. Doctoral Research Seminar (3) Or other instructional design and technology elective course in TLT, COE, or A&S as approved by advisor.</p>	<p><i>Learning and Instruction</i></p> <p><i>Required:</i> TLT 480 Curriculum Theory and Design.</p> <p><i>Electives (select at least 3):</i> Educ 451. Applied Principles of Cognitive Psychology TLT 470. Technology for Teaching and Learning (3) TLT 454. Applied Instructional and Interface Design Principles (3) TLT 458. Introduction to Multimedia Programming and Resource Development for Learning (3) TLT 474: Large-scale Planning and Implementation of Educational Technology (3) Educ 491. Advanced Seminars: (with subtitle) (1-6) Educ 496. Doctoral Research Seminar (3) Or other learning and instruction elective course in TLT, COE, or A&S as approved by advisor.</p>
Supervised research projects 6 credits minimum	<p><i>Required:</i> TLT 486. Doctoral Research Project (3) TLT 499. Dissertation (3)</p> <p><i>Elective:</i> Field experience (Educ 493, 494, or 495), additional topic seminars, dissertation proposal or maintenance of candidacy, or elective with permission of advisor.</p>	<p><i>Required:</i> TLT486. Doctoral Research Project (3) TLT 499. Dissertation (3)</p> <p><i>Elective:</i> Field experience (Educ 493, 494, or 495), additional topic seminars, dissertation proposal or maintenance of candidacy, or elective with permission of advisor.</p>
Professional sub-specialty 6 credits	These credits are intended to advance the students' research agenda or career goals (such as a enhanced subject matter knowledge, mentored field/practical experiences with outreach programs, specialized coursework, college teaching, grant writing, and the like) with advisor approval.	

Clearances

Depending upon the specific courses you choose or research activities you engage in while pursuing your master's degree program, it may become necessary to obtain proper school placement clearances in accordance with Pennsylvania Department of Education regulations. See the TLT website for more information.

Qualifying Examination

The intent of Qualifying Examination is to measure both breadth and depth of understanding. These examinations may be either written or oral, or both, and are tailored to the individual student's program of study. Qualifying Examinations are designed to measure mastery within the TLT concentration. In order to be eligible to take Qualifying Examinations, students MUST complete TLT 401, TLT 403 and a minimum of 18 credits and a maximum of 30 credits total. Students cannot take additional degree coursework beyond 30 credits until they have passed the Qualifying Examination.

Student success on Qualifying Examination is judged by a committee of at least three members. Once a student completes the Qualifying Examination satisfactorily, he or she is reclassified from *graduate student* to *doctoral student* and moves on to complete the remainder of his or her coursework and begin the General Examination requirements.

Doctoral Research Project (General Examination)

The General Examination is intended to demonstrate that a doctoral student is capable of completing their degrees in a timely fashion by requiring students to apply the same types of research and writing skills they will need to complete their dissertations. The Doctoral Research Project, therefore, typically takes the form of a small empirical pilot study on the same topic as the intended dissertation. This pilot study enables the student to answer some question or set of questions that help in the design of the later dissertation. This pilot research project should be completed near the completion of the student's coursework and at least seven months before the doctoral degree is awarded.

The Doctoral Research Project is completed under the direction of a TLT faculty member and its success is judged by a Doctoral Research Project Committee composed of at least three faculty members. Once a student completes the Doctoral Research Project satisfactorily, he or she moves on to dissertation proposal, completion, and defense.

Application

The TLT doctoral program admits students at the post-master's level. Applicants may come from a wide range of prior academic backgrounds. Admitted students may, however, be required to take additional courses to remediate specific academic deficiencies. Admission is from a competitive pool with admission consideration once per year. Completed applications must be submitted no later than close-of-business on December 1.

Elements of a Complete Application

To be considered for admission, applicants to the TLT doctoral program must submit all of the following:

1. Completed application form.
2. GRE scores (current within the last 5 years).
3. At least two letters of recommendation.
4. A statement that discusses the following:
 - a. Why the applicant believes Lehigh's TLT doctoral program is the best place for him/her.
 - b. What the applicant hopes to be able to do with the degree when he/she finishes.
 - c. A clearly identified research interest with a clear linkage between that interest and the research agenda (research, publications, presentations) of a specific faculty member in the Teaching, Learning, and Technology Program.
5. Two extended student papers or publications demonstrating strong writing ability and the potential to develop persuasive written arguments in English.
6. Official transcripts from all colleges or universities attended.

Additional Requirements for Foreign-educated Applicants:

7. Transcripts from a foreign institution **MUST** be evaluated for equivalency before being sent to Lehigh University. Credential evaluation means converting foreign academic credentials into their U.S. educational equivalents. By converting your educational qualifications into their U.S. equivalents, the evaluation allows academic institutions or employers in the U.S. to understand them. Lehigh University does not promote these services; we inform you of their existence. Please request that these services mail you a course-by-course evaluation converted to U.S. credits and grades.
 - World Education Services <http://www.wes.org/>
 - Educational Credentials Evaluators, Inc. <http://www.ece.org/>
 - Global Credential Evaluators, Inc. <http://www.gcevaluators.com>
8. Foreign students must also supply TOEFL (Test of English as a Foreign Language) scores.

Admissions Interview

Applicants may be asked to come to campus for a face-to-face interview or to participate in a conference call or other electronically mediated interview where an in-person interview is impractical.

Frequently Asked Questions

How much of the doctoral program is class-based and how much is independent research?

As shown in the table, above, you will take about 42 credits of coursework in addition to your independent qualifying research project, comprehensive examination preparation, and dissertation project.

I live some distance away and am hoping to continue working while I pursue my doctorate. Do you have online classes? When do your classes meet?

With the exception of an occasional course or two, this is not an online program, so most of the classes you take will meet face-to-face on campus. However, those meetings are only once per week for 3 hours from either 4-7:00 or 7-10:00 p.m. to accommodate those who are working full time.

How much room is there to customize one's program of study?

Your coursework will be individualized according to the concentration you decide to pursue. Also, many of your course assignments will be project-based, which will allow you to apply concepts you are learning to your particular area of interest. In addition, your choice of research topic and projects are also up to you --in consultation with your faculty adviser and within the broader context of the field, of course.

How long does the doctoral program generally take to complete and will working stretch out my time-to-completion a lot longer?

Part-time students who are working full time typically take 3 credits per "regular semester" (Fall/Spring) and 3 credits each of the two summer sessions for a total of 12 credits per year. Full time students take 9 credits per regular semester and 3 credits each summer session for a total of 24 credits per year. Therefore, continuing to work will stretch out time-to-completion for your doctoral program.

The total amount of time it takes to finish, however, is contingent upon how many credits you are able to take each year and how long it takes you to get through the qualifier, comps, and dissertation. There are a lot of variables involved here... so, as you might imagine, time-to-completion for a doctoral program varies widely among individuals. That said, the university does place a 7-year limit from start to finish.

How many students are in the program?

The number of students in our doctoral program is intentionally limited by the number faculty we have available to mentor them through their research projects. Currently enrollments are approximately 20-25 students.

Are there graduate assistantships available?

Yes, we typically are able to provide assistantships for full-time students who are interested. Those positions are usually to work on some sort of grant-funded project.

How "techie" do I need to be coming into the program?

The Instructional Design and Technology concentration of the TLT doctoral program assumes that students coming in are very interested in technology and have a basic level of technology skill. This doctoral program then builds on those interests/skills and expects students to be developing their own research agenda that explores how technology's affordances might facilitate teaching and learning processes. Technology expertise is not a prerequisite for the Learning and Instruction concentration.

I'm not sure what I want to do, but am very interested in student learning/teaching. Is that enough?

High interest is good, but keep in mind that Lehigh's TLT Ph.D. program is designed to prepare *researchers* in the field of Teaching, Learning, and Technology for academic jobs, most likely at research-intensive institutions. This is not an applied/practitioner's degree program, like our master's programs and a typical Ed.D. program. Before applying, you'll want to be sure your ultimate goals are a good match with the intended outcome of this curriculum. Also, as you'll see on the second page of this brochure, your application will need to include your "clearly identified research interest" and a linkage between that interest and our faculty members' current research programs. So, you'll want to be pretty clear about this before applying. Our faculty will be happy to discuss this with you further.