LEARNING, DESIGN, AND TECHNOLOGY

Graduate Program Head	Susan Land
Program Code	LDT
Campus(es)	University Park (Ph.D., M.S., M.Ed.) World Campus (M.Ed.)
Degrees Conferred	Doctor of Philosophy (Ph.D.) Master of Science (M.S.) Master of Education (M.Ed.) Dual-Title Ph.D., M.S., and M.Ed. in Learning, Design, and Technology and Comparative and International Education
The Graduate Faculty	View (https://secure.gradsch.psu.edu/gpms/?searchType=fac&prog=LDT)

This program provides advanced professional preparation in the development of effective, efficient instructional materials and the use of technology to support learning in a variety of educational settings. The program of study applies skill and knowledge from the fields of the learning sciences, instructional design, computer technologies, and research methodologies to study educational designs and their effect on learning. Graduates are employed as instructional designers by corporate, agency, and military training departments; entrepreneurial consulting companies; public school districts; museums, nature centers, and other informal learning settings; community college learning resource centers; and colleges and universities.

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (https://gradschool.psu.edu/graduate-admissions/how-to-apply/). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (https://gradschool.psu.edu/graduate-education-policies/).

Official transcripts from all post-secondary institutions attended (http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission/), letters of reference, application letter, and writing assignment are required for admission (for master's or doctorate degrees). Doctoral applicants may be asked to submit an additional writing assignment. GRE scores will not be accepted.

Degree Requirements

Master of Education (M.Ed.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-700 Professional Degree Policies (https://gradschool.psu.edu/graduate-education-policies/).

At least 18 credits must be taken at the 500 level or above, with at least 6 credits at the 500 level. Students in the M.Ed. program are required to complete a program of a minimum of 30 approved credits including:

Code	Title	Credits
Required Courses		
LDT 415A	Systematic Instructional Development	3
or LDT 415B	Systematic Instructional Development for Teachers	
LDT 467	Emerging Web Technologies and Learning	3
LDT 527	(or equivalent)	3
21 credits of professional application courses chosen in consultation with an adviser. These courses can be chosen from, but are not limited to:		21
LDT 401	Gaming to Learn	
LDT 433	Teaching and Learning Online in K-12 Settings	
LDT 440	Educational Technology Integration	
LDT 449	Video in the Classroom	
LDT 505	Integrating Mobile Technologies into Learning Environments	
LDT 550	Learning Design Studio	
LDT 566	Computers as Learning Tools	
LDT 581	Theoretical Foundations of Learning, Design, and Technology	
LDT 832	Designing e-learning Within Course Management Systems	
Culminating Experience		
All students will compile a portfolio as they move through the courses, and this portfolio will be presented to the adviser as the capstone experience (students do not need to enroll in any additional courses to complete the capstone experience).		
Total Credits		**30**

Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (https://gradschool.psu.edu/graduate-education-policies/)

At least 18 credits must be taken at the 500 level or above, with at least 6 credits at the 500 level. Students in the M.S. degree program are required to complete a minimum of 36 approved credits including:

Code	Title	Credits
Required Courses		
LDT 415A	Systematic Instructional Development	3
or LDT 415B	Systematic Instructional Development for Teachers	
LDT 467	Emerging Web Technologies and Learning	3
LDT 527	(or equivalent)	3
12 credits chosen in consultation with an adviser. These courses can be chosen from, but are not limited to:		12
LDT 401	Gaming to Learn	
LDT 433	Teaching and Learning Online in K-12 Settings	
LDT 440	Educational Technology Integration	
LDT 449	Video in the Classroom	
LDT 505	Integrating Mobile Technologies into Learning Environments	
LDT 550	Learning Design Studio	
LDT 566	Computers as Learning Tools	
LDT 581	Theoretical Foundations of Learning, Design, and Technology	
LDT 832	Designing e-learning Within Course Management Systems	

Research Methods Courses

6 credits of research methods courses with adviser approval, which can include, but are not limited to:		6
STAT 500	Applied Statistics	
STAT 800	Applied Research Methods	
ADTED 550	Qualitative Research in Adult Education	
LDT 574	Applied Qualitative Research for Work Practice, Innovation, and Systems Design	
LDT 575	Designing Experimental Research in Learning, Design, and Technology	
LDT 576	Design-based Research Methods, Applications for Educational Research	
EDPSY 406	Applied Statistical Inference for the Behavioral Sciences	
EDPSY 575	Seminar in Educational Psychology	
EDPSY 505	Statistical Applications in Educational Research	
Culminating Experience		
LDT 594	Research Topics (to conduct their research project)	3
LDT 600/610	Thesis Research (to write and produce a master's thesis)	6
Total Credits		**36**

Doctor of Philosophy (Ph.D.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (https://gradschool.psu.edu/graduate-education-policies/)

Credit and course requirements: 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.

Code	Title	Credits
Required Courses		
LDT Doctoral Core Courses		
LDT 527		3
LDT 581	Theoretical Foundations of Learning, Design, and Technology	3
LDT 583	Survey of Research in Learning Sciences and Technology	3
Core Competency Courses		
Core competencies are represented by a number of courses including (but not limited to): [1]		12
LDT 505	Integrating Mobile Technologies into Learning Environments	
LDT 550	Learning Design Studio	
LDT 586	Diffusion and Adoption of Innovations and Change	
LDT 544	Video for Instruction, Training, and Research	
LDT 549	Current Topics in Emerging Technologies	
LDT 574	Applied Qualitative Research for Work Practice, Innovation, and Systems Design	
LDT 575	Designing Experimental Research in Learning, Design, and Technology	
LDT 576	Design-based Research Methods, Applications for Educational Research	
LDT 832	Designing e-learning Within Course Management Systems	
Research Courses		
LDT 594	Research Topics	9
Total Credits		**30**

[1] As an example, a doctoral student interested in the instructional design core competency might be advised to take LDT 550, LDT 549, and LDT 832, while a student interested in learning sciences and technology might be advised into LDT 505, LDT 574, LDT 576, and LDT 544. The 12 credits of core competencies plus additional course work for the doctoral program will be determined in consultation with the Ph.D. committee.

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.

Doctoral exams and committees
The qualifying exam is recommended to be taken early in a student's program, after a minimum of 18 credits of post-baccalaureate work, and within three semesters (not including summers and assuming full-time study) of entry into the doctoral program. Students must submit an application to take the qualifying exam, and the LDT faculty must approve the application . In order to complete the qualifying exam, students must be registered either full- or part -time during the semester in which it is completed and show no deferred or failing grades in courses related to the degree program on their graduate transcript.

Prior to the comprehensive exam, the student, in consultation with his or her adviser, will convene a Ph.D. committee that meets all Graduate Council requirements (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/). After the completion of all course work, the doctoral student must complete a comprehensive examination. All doctoral candidates must produce and write a doctoral dissertation and hold a final oral examination in defense of the dissertation.

Dual-Titles

Dual-Title M.Ed., M.S., and Ph.D. in Learning, Design, and Technology and Comparative and International Education

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/).

Admission Requirements
Students must apply and be admitted to the graduate program in Learning, Design, and Technology and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the Comparative and International

Education dual-title program. Refer to the Admission Requirements section of the Comparative and International Education Bulletin page (http://bulletins.psu.edu/graduate/programs/majors/comparative-international-education/). Doctoral students must be admitted into the dual-title degree program in Comparative and International Education prior to taking the qualifying examination in their primary graduate program.

Degree Requirements

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Learning, Design, and Technology. In addition, students must complete the degree requirements for the dual-title in Comparative and International Education, listed on the Comparative and International Education Bulletin page (http://bulletins.psu.edu/graduate/programs/majors/comparative-international-education/).

The qualifying examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Learning, Design, and Technology and must include at least one Graduate Faculty member from the Comparative and International Education program. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. There will be a single qualifying examination, containing elements of both Learning, Design, and Technology and Comparative and International Education. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for Ph.D. committees (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/), the Ph.D. committee of a Learning, Design, and Technology and Comparative and International Education dual-title Ph.D. student must include at least one member of the Comparative and International Education Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Comparative and International Education, the member of the committee representing Comparative and International Education must be appointed as co-chair. The Comparative and International Education representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Learning, Design, and Technology and Comparative and International Education. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

Minor

A graduate minor is available in any approved graduate major or dual-title program. The default requirements for a graduate minor are stated in Graduate Council policies listed under GCAC-600 Research Degree Policies (https://gradschool.psu.edu/graduate-education-policies/) and GCAC-700 Professional Degree Policies (https://gradschool.psu.edu/graduate-education-policies/), depending on the type of degree the student is pursuing:

- GCAC-611 Minor - Research Doctorate (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-611-minor-research-doctorate/)
- GCAC-641 Minor - Research Master's (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-641-minor-research-masters/)
- GCAC-709 Minor - Professional Doctorate (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-709-professional-doctoral-minor/)
- GCAC-741 Minor - Professional Master's (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-741-masters-minor-professional/)

Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (https://gradschool.psu.edu/graduate-funding/) section of The Graduate School's website. Students on graduate assistantships must adhere to the course load limits (https://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants/) set by The Graduate School.

A limited number of graduate assistantships are available to students in this program.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Design and Technology (LDT) Course List (https://bulletins.psu.edu/university-course-descriptions/graduate/ldt/)

Learning Outcomes

Master's Degrees

1. Know/Think: Graduates will demonstrate practical knowledge of the core theories and best practices in the field of learning, design, & technology (LDT).
2. Apply/Create: Graduates will be able to design and develop educational resources in accordance with the core theories and best practices in LDT.
3. Apply/Create: Graduates will demonstrate the ability to analyze and integrate teaching/learning technologies to unique educational contexts in accordance with the core theories and best practices in LDT.
4. Communicate/Think: Graduates will be able to convey ideas or arguments in clear, concise, well-organized papers, proposals, and portfolios as well as in formal, oral presentations.
5. Professional practice: Graduates will demonstrate knowledge of the professional standards, and values, integrity, and ethics in the LDT field and at Penn State through written or oral products, and professional interactions with colleagues.

Doctor of Philosophy (Ph.D.)

1. Know/Think: Graduates will demonstrate in-depth knowledge of the core theories and research methods in the field of learning, design, & technology (LDT). The core demonstration will include the comprehension of theories of learning sciences and LDT to conceptualize problems of educational practice.

2. Apply/Create: Graduates will be able to formulate and execute an independent research project that significantly furthers knowledge and theories in LDT.

3. Apply/Create: Graduates will demonstrate the ability to apply theories to inform/develop unique designs and solutions to educational problems.

4. Communicate/Think: Graduates will be able to convey ideas or arguments in clear, concise, well-organized papers and proposals as well as in formal, oral presentations.

5. Professional practice: Graduates will demonstrate knowledge of the professional standards, and values, integrity, and ethics in the field and at Penn State through written and oral products, and professional interactions with colleagues.

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Contact

Campus	University Park
Graduate Program Head	Susan Land
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Heather Toomey Zimmerman
Program Contact	Darlene G Glab 301 Keller University Park PA 16802 dgg11@psu.edu (814) 863-9768
Program Website	View (http://ed.psu.edu/lps/ldt/)

Campus	World Campus
Graduate Program Head	Susan Land
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Heather Toomey Zimmerman
Program Contact	Darlene G Glab 303 Keller Building University Park PA 16802 dgg11@psu.edu (814) 863-9768
Program Website	View (http://www.worldcampus.psu.edu/degrees-and-certificates/instructional-systems-educational-technology-masters/overview/)