

# Doctor of Philosophy - Learning Sciences

## Plan Description

The Learning Sciences Ph. D. is an academic program with an emphasis on the design and evaluation of learning environments, including but not limited to technology-rich environments. Students take core courses in: 1) the learning sciences, 2) research methods and statistics, and 3) advanced studies in a specialization area. The specialization areas are: (a) learning technology, (b) educational data science and statistics, (c) learning policy and organizational change, and (d) cognitive and developmental sciences. All students will be actively involved in research and research-related activities throughout their program of study. **Students in the Post-Bachelor Learning Sciences strand will be eligible to earn a Master of Science in Educational Psychology.** The program will prepare students for a variety of professional careers related to teaching and learning in both academic and nonacademic settings. Graduates of the program will be prepared for a variety of professional ~~positions~~ **positions** (e. g., university and community college faculty, curriculum specialists, learning and technology specialists, employee ~~training~~ **training** specialists, program evaluators, and instructional technology coordinators). For more information about your program, including your graduate program handbook and learning outcomes, please visit the Degree Directory.

## Plan Admission Requirements

Application deadlines Applications available on the UNLV Graduate College website. Admission **to the Post-Master's Track** will be limited to the most qualified applicants based on a combination of the following: **1.** An undergraduate grade point average of 3.00 or above. **2.** If graduate course work has been completed, a graduate grade point average of 3.00 or above. **3.** Preference given to students whose scores relate to the 50th percentile or better on the verbal and quantitative sections of the Graduate Record Examination (GRE). **4. ~~A score of 600 or above on the Test of English as a Foreign Language (TOEFL) is also required for students~~ Students** who do not speak English as their first language **must meet the TOEFL requirements set by the Graduate College (impl. note: add link-<https://www.unlv.edu/graduatecollege/english-proficiency>)** **5.** Three letters of reference from university faculty or other individuals qualified to judge the applicant's academic potential. **6.** The applicant's statement of professional interests and goals. **7. A scholarly or professional writing sample. 8. Students must have a ~~master's~~ master's degree to be considered for admission. 9. Graduate College application is available online. Admission to the ~~Post-Bachelor's~~ Post-Bachelor's Track will be limited to the most qualified applicants based on a combination of the following: 1. An undergraduate grade point average of 3.25 or above. 2. If graduate course work has been completed, a graduate grade point average of 3.25 or above. 3. Preference given to students whose scores relate to the 50th percentile or better on the verbal and quantitative sections of the Graduate Record Examination (GRE). 4. A score of 600 or above on the Test of English as a Foreign Language (TOEFL) is also required for students who do not speak English as their first language. 5. Three letters of reference from university faculty or other individuals qualified to judge the applicant's academic potential. 6. The applicant's statement of professional interests and goals. 7. Students must have a bachelor's degree to be considered for admission. 8. Graduate College application ~~is~~ **is** available online. All domestic and ~~international~~ **international** applicants must review and follow the Graduate ~~College~~ **College** Admission and Registration ~~Requirements~~ **Requirements**. Students are accepted into a degree program as described in the Graduate Catalog. The faculty and corresponding sub-disciplines and sub-plans within the described programs are subject to change at any time.**

## Plan Requirements

~~Total Credits Required: 67-69~~

### ~~New Core~~ Subplan 1 Requirements: Post-Master's Track

Total Credits: 69

#### Course Requirements

##### Proseminar Course-Credits: ~~1~~ 3

~~EPY 701 Proseminar in Educational Psychology~~

~~1-2~~

EDH 707 Designing & Critiquing Research In Education

3

##### Learning Sciences Core – Credits: 15

EPY 690 Introduction to the Learning Sciences	3
EPY 717 Analysis of Applied Learning Principles and Educational Media	3
EPY 767 Human Learning and Cognition	3
EPY 770 Cognition and Instruction	3
CIT 778 Instructional Design	3

##### Core Research Courses – Credits: 15

EPY 718 Qualitative Research Methodologies	3
EPY 722 Inferential Statistics and Experimental Design	3
EPY 723 Psychometrics I	3
EPY 730 Advanced Research Methods	3
EPY 732 Multiple Regression	3

##### Additional Research Courses – Credits: 6

Complete two of the following courses:

EPY 716 Evaluation Research Methods	3
EPY 719 Advanced Qualitative Research	3

EPY 724 Psychometrics II	3
EPY 726 Advanced Evaluation Research Methods	3
EPY 729 Qualitative Case Study Research	3
EPY 731 Mixed Methods Research	3
EPY 733 Multivariate Statistics	3
EPY 734 Structural Equation Modeling	3
EPY 738 Discourse Analysis	3
EPY 745 Categorical/Nonparametric Data Analysis	3
EPY 746 Multilevel Statistical Models: Theory and Application	3

## Specialization Courses – Credits: 9

Complete 9 credits of advisor-approved coursework within one of the following specialization areas: (a) Learning Technologies, (b) Educational Data Science and Statistics, (c) Learning Policy and Organizational Change, or (d) Cognitive and Developmental Sciences.

### Illustrative learning technology courses include, but are not limited to:

CS 620 Human-Computer Interaction	3
CIT 770 Foundations in Technology & Learning	3
CIT 773 Interaction Design	3
CIT 774 Behavioral Sciences & Technology	3
CIT 775 Affect & Technology	3
CIT 776 Emerging Technologies for Learning	3
CIT 780 Educational Technology Research and Practice	3
MIS 746 Information Systems Project Management	3
MIS 764 Electronic Commerce	3
<b>CS 641 Advanced Internet Programming</b>	<b>2</b>
<b>CS 641L Advanced Internet Programming Lab</b>	<b>1</b>
<b>CS 651 Multimedia Systems Design</b>	<b>2</b>
<b>CS 651L Multimedia Systems Design Lab</b>	<b>1</b>
<b>CS 680 Computer Graphics</b>	<b>3</b>

### Illustrative data science and statistics courses include, but are not limited to:

EPY 734 Structural Equation Modeling	3
PSY 712 Psychometrics	3
ITE 651 Managing Big Data and Web Databases	3
MIS 776 Business Intelligence	3

**Illustrative learning policy and organizational change courses include, but are not limited to:**

EPL 731 Leadership in a Digital Age	3
EPL 732 School and Community Leadership	2
EPL 737 Systematic Professional Development and Instructional Supervision	3
EPY 742 Language Diversity, Educational Policy & Equity	3
EDH 738 Public Policy in Higher and Post-Secondary Education	3
EDH 739 Organization Change & Innovation in Higher Education	3
PSC 723 Policy Analysis	3
<b>EPL 731 Leadership in a Digital Age</b>	<b>3</b>

**Illustrative cognitive and developmental sciences courses include, but are not limited to:**

EPY 777 Cognitive Development	3
EPY 768 Problem Solving and Reasoning	3
PSY 721 Developmental Science	3
PSY 718 Cognitive Science	3
COM 781 Seminar in Argumentation	3
PHIL 634 Philosophy Cognitive Science	3
PHIL 640 Theory of Knowledge	3

**Elective Courses – Credits: 6**

Student must take a minimum of 6 credit hours of advisor-approved elective courses that fall within any of the other program specialization areas or their own specialization courses.

**Internship – Credits: 3**

EPY 794 Internship	3 – 6
[After] (See Degree Requirement #4 below)	

## Degree Requirements

**1.** Students must maintain a GPA of 3.00 or higher for all course work taken at the doctoral level, **and a B or better in required core courses.** **2.** Residence Credit Requirement: A minimum of 50 percent of the total credits required to complete the doctoral degree not including transferred and dissertation credits must be earned at UNLV after admission to the doctoral degree program. **3.** Each student must satisfy a scholarly paper requirement by the time he or she has completed 36 credits (Review I). The student must be primarily responsible for carrying out and reporting a study under the supervision of a program faculty member. The requirement may be fulfilled in one of two ways. First, the study may involve the collection and analysis of some empirical data (for example, a pilot study) resulting in a scholarly paper that is submitted to either a professional journal or as a proposal to an annual conference of a national organization. Second, the paper may consist of a literature review that is ~~submitted~~ **submitted for** publication in a quality, ~~peer-reviewed~~ **peer-reviewed** journal or submitted for presentation at a national conference. Prior to beginning, projects must be approved by a supervising faculty member. Once completed, students must submit to the program coordinator: (a) a copy of the paper, (b) a submission acknowledgment, and (c) a completed Review I form from the supervising faculty member. **4.** Students must complete a one-semester or summer internship (EPY 794) with an employer. The purpose of the internship is to provide students with real-world experience in designing, implementing, or evaluating a learning environment, so as to augment students' depth of knowledge and skills as Learning Scientists. The internship is also intended to enhance students' employability. The internship, which may be paid or unpaid, must be with an employer (for example, text book publisher, school district, U. S. military, hotel/casino, museum); these may include appropriate units at UNLV outside of ~~academic departments~~ **departments** ~~department-s~~ **academic departments.** The internship may, however, ~~also~~ **also** be part of an academic research partnership involving these entities. The student is responsible for securing an internship opportunity. The internship may be completed at any point in the program prior to advancement to candidacy. The internship must result in an academic research product (paper or report) that is partially or fully authored by the student. Proposals for internships that specify the employer, end product, and nature of the work must be approved by the student's advisor before the internship commences. **5.** In consultation with his/her advisor, a student will organize a dissertation committee of at least three program members. In addition, a fourth member from outside the program, known as the Graduate College Representative, must be appointed. An additional committee member may be added at the student and department's discretion. The committee must be chaired by a program faculty member with a primary affiliation ~~with~~ **with** the ~~Department~~ **Department** of Educational Psychology and ~~Higher~~ **Higher** Education or co-chaired by such a faculty member and a program faculty member with a primary affiliation in another department. Please see Graduate College policy for committee appointment guidelines. **6.** Students must successfully complete a preliminary examination. This formal assessment will focus on areas of knowledge that are most relevant to the student's dissertation topic. The student and his/her committee will determine the content of this examination. The student and his/her committee will determine the content of this examination format in that it will focus on in-depth reading and writing directly related to the student's proposed dissertation topic as well as on the student's mastery of previously learned core information. **7.** After successfully completing **Review I (i. e., satisfying the scholarly paper requirement product requirement)** and **Review II (i. e., passing the preliminary examination examination),** students can **then** submit a formal dissertation ~~proposal~~ **p**

proposal to their ~~doctoral doct oral~~ doctoral committee and submit the accompanying ~~"Prospectus Approval" Approval~~ "Dissertation Prospectus" form ~~from~~ to the Graduate College. The doctoral committee will **meet and** determine ~~the acceptability of whether to accept or reject~~ the prospectus. **A prospectus can be accepted provisionally given that the student follows the committee's suggestions in the dissertation. 8. Upon completion** The student must submit and successfully defend his/her dissertation after a minimum of 54 credits of initial coursework and a minimum of 12 credits of dissertation coursework and have it completed by the ~~full dissertation, a defense will be scheduled~~ eligible to earn the Doctor of Philosophy-Learning Sciences. This defense will be scheduled and conducted in accordance with the Graduate ~~College's~~ College's policies for thesis and dissertation completion. **It is the student's responsibility to file the required "Notification of Oral or Written Examination" form with the Graduate College in a timely manner.**

## Plan Graduation Requirements

The student must submit all required forms to the Graduate College and then apply for graduation up to two semesters prior to completing his/her degree requirements.

The student must submit and successfully defend his/her dissertation by the posted deadline. The defense must be advertised and is open to the public.

After the dissertation defense, the student must electronically submit a properly formatted pdf copy of their dissertation to the Graduate College for format check. Once the dissertation format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for dissertation defenses, format check submissions, and the final ProQuest submission can be found here.

## ~~New Core~~ Subplan 2 Requirements: Post-Bachelor's Track

Total Credits: 99

### ~~New Core~~ Course Requirements

#### ~~New Core~~ Learning and Development Courses-Credits: 6

EPY 711 Human Growth and Development	3
EPY 712 Foundations of Learning and Cognition	3

#### ~~New Core~~ Research Courses-Credits: 9

EPY 702 Research Methods	3
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EPY 721 Descriptive and Inferential Statistics: An Introduction	3
EPY 723 Psychometrics I	3

### **New** ~~Core~~ Elective Courses-Credits: 12

Students must complete a minimum of 12 credit hours of advisor-approved electives.

### **New** ~~Core~~ Thesis-Credits: 6

EPY 749 Thesis	3 – 6
[After] After successfully completing the requirements above, students are eligible to earn the Master of Science - Educational Psychology.	

### **New** ~~Core~~ Proseminar Course-Credits: 3

EDH 707 Designing & Critiquing Research In Education	3
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### **New** Learning Sciences Core-Credits: 15

CIT 778 Instructional Design	3
EPY 690 Introduction to the Learning Sciences	3
EPY 717 Analysis of Applied Learning Principles and Educational Media	3
EPY 767 Human Learning and Cognition	3
EPY 770 Cognition and Instruction	3

### **New** Core Research Courses-Credits: 12

EPY 718 Qualitative Research Methodologies	3
EPY 722 Inferential Statistics and Experimental Design	3
EPY 730 Advanced Research Methods	3
EPY 732 Multiple Regression	3

### **New** ~~Core~~ Additional Research Courses-Credits: 6

Complete two of the following courses:

EPY 716 Evaluation Research Methods	3
EPY 719 Advanced Qualitative Research	3

EPY 724 Psychometrics II	3
EPY 726 Advanced Evaluation Research Methods	3
EPY 729 Qualitative Case Study Research	3
EPY 731 Mixed Methods Research	3
EPY 733 Multivariate Statistics	3
EPY 734 Structural Equation Modeling	3
EPY 738 Discourse Analysis	3
EPY 745 Categorical/Nonparametric Data Analysis	3
EPY 746 Multilevel Statistical Models: Theory and Application	3

### **New-Core Specialization Courses-Credits: 9**

Complete 9 credits of advisor-approved coursework within one of the following specialization areas: (a) Learning Technologies, (b) Educational Data Science and Statistics, (c) Learning Policy and Organizational Change, or (d) Cognitive and Developmental Sciences.

### **New-Core Illustrative learning technology courses include, but are not limited to:**

CIT 770 Foundations in Technology & Learning	3
CIT 773 Interaction Design	3
CIT 774 Behavioral Sciences & Technology	3
CIT 775 Affect & Technology	3
CIT 776 Emerging Technologies for Learning	3
CIT 780 Educational Technology Research and Practice	3
CS 620 Human-Computer Interaction	3
CS 641 Advanced Internet Programming	2
CS 641L Advanced Internet Programming Lab	1
CS 651 Multimedia Systems Design <i>(Inactive-Hidden)</i>	2
CS 651L Multimedia Systems Design Lab	1
CS 680 Computer Graphics	3
MIS 746 Information Systems Project Management	3
MIS 764 Electronic Commerce	3

### **New-Core Illustrative data science and statistics courses include, but are not limited to:**

EPY 734 Structural Equation Modeling	3
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ITE 651 Managing Big Data and Web Databases	3
MIS 776 Business Intelligence	3
PSY 712 Psychometrics	3

**~~New-Core~~ Illustrative learning policy and organizational change courses include, but are not limited to:**

EDH 738 Public Policy in Higher and Post-Secondary Education	3
EDH 739 Organization Change & Innovation in Higher Education	3
EPL 731 Leadership in a Digital Age	3
EPL 732 School and Community Leadership	2
EPL 737 Systematic Professional Development and Instructional Supervision	3
EPY 742 Language Diversity, Educational Policy & Equity	3
PSC 723 Policy Analysis	3

**~~New-Core~~ Illustrative cognitive and developmental sciences courses include, but are not limited to:**

COM 781 Seminar in Argumentation	3
EPY 768 Problem Solving and Reasoning	3
EPY 777 Cognitive Development	3
PHIL 634 Philosophy Cognitive Science	3
PHIL 640 Theory of Knowledge	3
PSY 721 Developmental Science	3
PSY 718 Cognitive Science	3

**~~New-Core~~ Elective Courses-Credits: 6**

Student must take a minimum of 6 credit hours of advisor-approved elective courses that fall within any of the other program specialization areas or their own specialization courses.

**~~New-Core~~ Internship-Credits: 3**

EPY 794 Internship [After] (See Degree Requirements #4 below)	3 - 6
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## New-Core Dissertation-Credits: 12

EPY 799 Dissertation

3-24

### New-Core Degree Requirements

1. Students must maintain a GPA of ~~3.00-25~~ 3.00 or higher for all course work taken at the doctoral level, and a B or better in ~~required~~ core courses. 2. Residence Credit Requirement: A minimum of 50 percent of the total credits required to complete the doctoral degree not including transferred and dissertation credits must be earned at UNLV after admission to the doctoral degree program. 3. Each student must satisfy a scholarly paper requirement by the time he or she has completed 36 doctoral credits (Review I). The student must be primarily responsible for carrying out and reporting a study under the supervision of a program faculty member. The requirement may be fulfilled in one of two ways. First, the study may involve the collection and analysis of some empirical data (for example, a pilot study) resulting in a scholarly paper that is submitted to either a professional journal or as a proposal to an annual conference of a national organization. Second, the paper may consist of a literature review ~~that~~ that is ~~submitte d-submitted-sub-mitted~~ submitted for publication in a quality, peer-reviewed journal or submitted for presentation at a national conference. Prior to beginning, projects must be approved by a supervising faculty member. Once completed, students must submit to the program coordinator: (a) a copy of the paper, (b) a submission acknowledgment, and (c) a completed Review I form from the supervising faculty member. 4. Students must complete a one-semester or summer internship (EPY 794) with an employer. The purpose of the internship is to provide students with real-world experience in designing, implementing, or evaluating a learning environment, so as to augment students' depth of knowledge and skills as Learning Scientists. The internship is also intended to enhance students' employability. The internship, which may be paid or unpaid, must be with an employer (for example, text book publisher, school district, U. S. military, hotel/casino, museum); these may include appropriate units at UNLV ~~outside-of-academic-depart-ments-academ-ic-departments~~ of academic ~~d-epartments~~ departments. The internship may, however, also be part of an academic research partnership involving these entities. The student is responsible for securing an internship opportunity. The internship may be completed at any point in the program prior to advancement to candidacy. The internship must result in an academic research product (paper or report) that is partially or fully authored by the student. Proposals for internships that specify the employer, end product, and nature of the work must be approved by the student's advisor before the internship commences. 5. In consultation with his/her advisor, a student will organize a dissertation committee of at least three program members. In addition, a fourth member from outside the program, known as the Graduate College Representative, must be appointed. An additional committee member may be added at the student and department's discretion. The committee must be chaired by a program faculty member with a primary ~~affiliation~~ affiliation with the ~~Depart-ment~~ Department of Educational Psychology and Higher Education or co-chaired by such a faculty member and a program faculty member with a primary affiliation in another department. Please see Graduate College policy for committee appointment guidelines. 6. Students must successfully complete a preliminary examination. This formal assessment will focus on areas of knowledge that are most relevant to the student's dissertation topic. The student and his/her committee will determine the content of this examination. The student and his/her committee will determine the content of this examination format in that it will focus on in-depth reading and writing directly related to the student's proposed dissertation topic as well

as on the student's mastery of previously learned core information. 7. After successfully completing Review I (i. e., satisfying the scholarly ~~paper requirement~~ product requirement) and Review II (i. e., passing the preliminary ~~examination~~ examination), students can then submit a formal ~~dissertation~~ dissertation proposal to ~~their t heir~~ their doctoral committee and submit the accompanying ~~"Prospectus Approval"~~ ~~"Prospect-us-Approval"~~ "Dissertation Prospectus" form ~~from~~ to the Graduate College. The doctoral committee will meet and determine whether to accept or reject the ~~acceptability of~~ prospectus. A prospectus can be accepted provisionally given that the student follows the committee's suggestions in the ~~prospectus~~ dissertation. 8. ~~Upon completion~~ The student must submit and successfully defend his/her dissertation after a minimum of 84 credits of initial coursework and a minimum of 12 credits of dissertation coursework and have it completed by the ~~dissertation, a~~ posted deadline to be eligible to earn the Doctor of Philosophy-Educational Psychology. This defense will be scheduled and conducted in accordance with the Graduate College's policies for thesis and dissertation completion. It is the student's responsibility to file the required "Notification of Oral or Written Examination" form with the Graduate College in a timely manner. The defense ~~will~~ must be ~~scheduled~~ advertised and ~~conducted in accordance with~~ is open to the ~~public~~ public. 9. After the ~~dissertation disserta-tion~~ dissertation defense, the student must electronically submit a properly formatted pdf copy of their dissertation to the Graduate ~~College's policies~~ College for format check. Once the dissertation format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for ~~thesis~~ dissertation defenses, format check submissions, and ~~dissertation completion~~ the final ProQuest submission can be found here.

## ~~New Core~~ Plan Graduation Requirements

1. The student must submit all required forms to the Graduate College and then apply for graduation up to two semesters prior to completing his/her degree requirements.
2. The student must submit and successfully defend his/her thesis after 27 credits of initial coursework and a minimum of 6 credits of thesis coursework to be completed by the posted deadline to be eligible to earn the Master of Science-Educational Psychology. The defense must be advertised and is open to the public.
3. After the thesis defense, the student must electronically submit a properly formatted pdf copy of their thesis to the Graduate College for format check. Once the thesis format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for thesis defenses, format check submissions, and the final ProQuest submission can be found here.
4. The student must submit and successfully defend his/her dissertation by the posted deadline. The defense ~~must~~ must be ~~advertised adverti-sed~~ advertised and is open to the public.
5. After the dissertation defense, the student must electronically submit a properly formatted pdf copy of their dissertation to the Graduate College for format check. Once the dissertation format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for dissertation defenses, format check submissions, and the final ProQuest submission can be found here.