Introduction

Welcome to the Department of EHD at Clemson University. We wish you success at every stage of your academic journey.

This handbook is intended to familiarize you, as a graduate student in Learning Science, with the requirements, policies and procedures involved throughout your graduate experience. The rules and regulations provided in this handbook govern our academic program and describe the duties and responsibilities of graduate students in the department. Each student is expected to be familiar with the contents of this handbook.

These rules and requirements are in addition to and subordinate to those described in the Graduate School Announcements, which you can find at www.registrar.clemson.edu/html/catalogGrad.htm or through the Graduate School office in E-108 Martin Hall.

Contact Information

Learning Sciences Program Coordinator: Dr. Debi Switzer
debi@clemson.edu
211A Tillman Hall
Phone: 864-656-5098

The Program Coordinator is your first contact should any issue arise regarding your academic progress or the program curriculum.

Department Administrative Assistant: Janet Arnold
arnold5@clemson.edu
209 Tillman Hall
Phone: 864-656-7645
Purpose of the Learning Sciences Program

This program is designed for individuals who seek practical and theoretical training as research scientists, developers, practitioners in professional, non-profit, and academic settings.

Learning Sciences advances understanding of learning processes and the design of innovative learning environments. Students in the Learning Sciences program will learn to develop, deliver, revise, and evaluate effective learning experiences, and implement rigorous research studies in their chosen context.

Learning Sciences believes an interdisciplinary approach offers solutions to understand, design, and implement change as learning is studied across a range of informal and formal real-world settings. The interdisciplinary and personalized nature of the program offers students opportunities to build a strong base of disciplinary knowledge augmented with discrete skills relevant to their area of specialization. Students benefit from multiple perspectives as they apply theoretical, research, and design work to specific topics in learning. For example, they may seek answers to questions regarding best strategies for ensuring that students excel in science, technology and math, or how to leverage digital media to create innovative environments for learning. Psychology, cognitive science, computer science, sociology, technological fields, and anthropology often contribute a context to Learning Sciences.

In general, students in the Learning Sciences Ph.D. program will:

- Develop, deliver, evaluate, and revise effective learning experiences
- Design and implement rigorous research studies
- Analyze and disseminate high quality research
- Apply leadership skills in areas such as Academia, Business, Government, and Healthcare
Advisory Committee

Each graduate student must have a major advisor who will also be the chair of the student’s advisory committee. The major advisor must be a member of the Learning Sciences Advisory Committee.

Your Major Advisor

Once admitted you will be assigned an initial advisor. This advisor will help you begin to plan your degree program and will be available to offer guidance on activities that support your development as a doctoral student and answer any questions you may have. By the end of the first year, you should identify a Major Advisor from among the program faculty with whom you will work throughout the course of your studies. Your Major Advisor helps plan your curriculum and guides your research activities and the preparation of your dissertation.

Advisory Committee

You will form an Advisory Committee in consultation with your Major Advisor. Your Advisory Committee will approve your curriculum, supervise your graduate program, administer your comprehensive examination, evaluate your dissertation proposal and dissertation defense, and initiate the recommendation for awarding your degree. Your Major Advisor will serve as the chair of your Advisory Committee.

A majority of your Advisory Committee must be regular faculty of the Department of Education and Human Development (EHD) faculty. One member must be from outside EHD. A minimum of four faculty is required for a Ph.D. Committee.

Plan of study (GS2)

Your graduate degree curriculum should be planned very early in your program, and the graduate degree curriculum form (form GS2) should be filed by the time you have completed about nine credit hours. In any case, you must file a form GS2 with the Graduate School no later than the last day of classes of the term before the term in which you plan to graduate. The GS2 represents the formulation of an individual student’s curriculum as approved by your Advisory Committee. Courses in excess of those required for the degree should not be listed on the GS2.

Advisory Committee approval of your plan of study is indicated by their signatures on the GS2. The form must also be approved by the EHD department chair, and the deans of the college and Graduate School. The form is available on the Graduate School’s website at www.grad.clemson.edu/forms/GeneralForms.php.

Prior to graduation, you may revise your degree curriculum as needed subject to the necessary Advisory Committee and dean approvals. If your curriculum is changed, or the membership of your Advisory Committee is changed, you must submit a revised GS2.
Requirements for the Doctoral Degree

Minimum degree requirements for the Ph.D.

<table>
<thead>
<tr>
<th>Minimum Degree Requirements for the Ph.D. in Learning Sciences</th>
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<tbody>
<tr>
<td>Total hours of coursework</td>
</tr>
<tr>
<td>Core courses required*</td>
</tr>
<tr>
<td>Cognate courses required*</td>
</tr>
<tr>
<td>Comprehensive Exam</td>
</tr>
<tr>
<td>Proposal Defense</td>
</tr>
<tr>
<td>Doctoral Research</td>
</tr>
<tr>
<td>Dissertation Defense</td>
</tr>
</tbody>
</table>

*approved by the student’s Advisory Committee

Core Courses

All doctoral students are required to take all core courses below, constituting a total of 24 credits.

Research Courses: minimum 12 credit hours (4 courses)

- EDF 9270 Quantitative Research Designs and Statistics for Educational Contexts
- EDF 9770 Multiple Regression/General Linear Model in Educational Research
- EDF 9790 Qualitative Research in Education
- An advanced methods research course (these are evident by having as a prerequisite either EDF 9770 or EDF 9790).

LS Core Courses: 12 credit hours (4 courses)

- Doctoral Seminars:
  - EDF9010 Seminar in the Learning Sciences I
  - EDF9020 Seminar in the Learning Sciences II
- Two Learning Theory courses, examples:
  - ED LT 9070 Sociocultural Theories of Learning
  - EDF 9300 Bioecological Perspectives on Learning and Development
  - EDF 9550 Theoretical Bases of Instruction
Cognate courses

All doctoral students are required to take 18 credit hours (6 courses) for a cognate.

The cognate courses are selected by the student and his or her doctoral committee to develop a context in which to embed learning sciences. The selection of the six or more cognate courses may be from more than one content area, as the aim is to give the student a rich background into the multidimensional nature of their focus context. Courses might be chosen from a variety of content areas, for example: Architecture, Communication Studies, Computer Science, Digital Production Arts, Education, Family and Community Studies, Graphic Communications, Human-Centered Computing, Human Factors Psychology, Industrial Psychology, Sociology, Anthropology, History, Communication, and Information Design.

These decisions are normally made with your Major Advisor on consultation with your committee, and are designed to enhance your understanding of your cognate area. Credit received for graduate-level courses in other departments may be counted toward your degree, provided those courses involve subject matter that is relevant to your cognate. You must consult with and receive approval from your Major Advisor before taking such classes with the intention of having them count as part of your cognate.

Courses taken prior to admission to the program

A course taken before admission (at Clemson or another institution) that is equivalent to one of the course requirements, including those from an earned master’s degree, may be substituted for a required course by demonstration of competency and/or providing evidence of equivalency to the student’s Advisory Committee. A special examination may also be offered to meet these requirements. The student must make his or her request in writing to their Advisory Committee for each course, accompanied by an official transcript, catalog description, and syllabus or other supporting documentation. Under no circumstances can this process be started before a student has chosen a dissertation chair and formed their committee.
Sample Curriculum Map:

First Year

Fall
EDF 9010 Seminar in the Learning Sciences I
Theories of Learning course
EDF 9270 Quantitative Research Designs and Statistics for Educational Contexts

Spring
Theories of Learning course
EDF 9770 Experimental and Nonexperimental Research Methods in Education II
Cognate Course

Second Year

Fall
EDF 9020 Seminar in the Learning Sciences II
EDF 9790 Qualitative Research in Education
Cognate Course

Spring
Cognate Course
Cognate Course
Advanced Research Course

Third Year

Fall
Cognate Course
6 hrs dissertation

Spring
Cognate Course
6 hrs dissertation

Fourth Year

Fall
6 hrs of dissertation
Academic Requirements

Maximum enrollment

The upper limits on graduate student enrollment per semester, as outlined in the table below, refer to graduate and undergraduate credits combined and should be attempted only by the most qualified students. Should the six-week and three-week sessions run concurrently, the total credits are not permitted to exceed the upper limit for the six-week session. Graduate students paid solely on an hourly basis are not classified as graduate assistants but are subject to the same limitation in credit loads.

<table>
<thead>
<tr>
<th>Student Category</th>
<th>Semester</th>
<th>6-Week Session</th>
<th>3-Week Session</th>
</tr>
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<tbody>
<tr>
<td>Full-time Students</td>
<td>18</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>1/4-time Graduate Assistants</td>
<td>15</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>1/2-time Graduate Assistants</td>
<td>12</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Persons employed full time</td>
<td>9</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Quarter-time, and half-time graduate assistants are defined as those who contribute an average of 10, and 20 clock hours per week, respectively, of service to the University for the entire semester. A person employed full time is defined as anyone employed five full working days per week regardless of the employer(s). A graduate student who becomes employed full time while the assistantship is in force must notify the Graduate School and the department providing the assistantship.

Minimum enrollment

A minimum enrollment is required for appointment as a graduate assistant. During the academic year, the minimum enrollment is nine semester hours for all graduate assistants. Minimum enrollment in the summer sessions is three semester hours per session. An assistantship may be withdrawn at any time for failure to maintain satisfactory enrollment status.
Doctoral Comprehensive Examination

The comprehensive examination will serve to examine your ability to apply the knowledge you’ve assimilated in your core and cognate coursework, and often an additional reading list assigned by your committee. Examination questions will be prepared by your Advisory Committee and tailored to your area of study and research topic. Your major advisor will inform you once the examination coverage has been determined. You may discuss the expected areas and format of the exam with your Advisory Committee members.

Timing and Content

The timing of this exam shall be at the discretion of your Major Advisor, but will typically be three written exams within a two week period. One session will be devoted to examining your foundational knowledge in learning sciences, a second focused on a topic in your area of study, and a third on the methodology to be used during your dissertation research. Each of the three written exams are expected to be no more than ten pages in length.

Grading the Qualifying Exam

All members of your advisory committee will grade your performance on that exam and report the results to your Major Advisor. Grades of Pass (P), Marginal (M) and Fail (F) will be assigned for each question based on their consensus.

- If you receive a P grade on all questions, you may continue in the Ph.D. program.
- If you receive an M grade on any question, you will be given a short oral or written exam at the discretion of your advisory committee. The sole purpose of the M-grade exam is for the examining committee to obtain additional information in order to determine the final outcome of your exam. The results of the M-grade exam may carry additional committee-determined stipulations such as taking a graduate level course selected by the committee and achieving an A in that course.
- If you receive an F grade on more than 1 question on your first attempt, you will not be permitted to continue in the Ph.D. program. If you receive an F grade on 1 question, you must retake that question (a replacement question will most likely be developed). If you receive an F on a second attempt, you will not be permitted to continue in the Ph.D. program.

Satisfactory performance on the comprehensive examination will result in you being declared eligible to defend your dissertation proposal.
Ph.D. Proposal Defense

Once you have passed your Comprehensive Exam, the Proposal Defense may be scheduled. You provide a written plan for your dissertation research that includes, at a minimum,

- An introduction to your project clearly stating your research objectives;
- A review of relevant research to establish uniqueness and originality;
- A description of the method/procedure you will employ;
- A description establishing the significance of the proposed work.

Your committee may require more, for example the full first three chapters (introduction, literature review, and method).

Prior to the proposal defense, the student must have also obtained IRB approval (if applicable) and permission to conduct research from the appropriate school districts.

You then defend this plan orally to your advisory committee (and additional observers as approved by the committee). Your advisory committee listens to and then discusses the proposal, and if a consensus is reached that the proposal passes a rigorous appraisal, the defense is passed and the results (including committee feedback and signatures) forms the contract for the dissertation research.

If a consensus cannot be reached, the process must be repeated with significant changes at a later date.

The signed proposal is maintained by the department administrative assistant.
Admission to Doctoral Candidacy

Admission to the Graduate School does not qualify a student as a candidate for a doctoral degree. Such candidacy depends on the acceptance by the dean of the Graduate School of a written request for admission to candidacy. You should file this request, Form GS5, once you have completed a major share of the prescribed graduate residence doctoral course work (research credits excepted), have successfully undertaken the comprehensive examination, and successfully defended your dissertation proposal. Your request for admission to candidacy must list each of the major and minor subjects to be offered for the degree and must contain the title of your proposed dissertation. The request must bear the signed approval of your Major Advisor and the department chair.

You must be admitted to candidacy for the Ph.D. degree at least six months prior to your dissertation defense.

Graduate School Deadlines

The Graduate School sets deadlines for the following items. The specific dates are determined according to the academic calendar for the semester in which you plan to graduate.

<table>
<thead>
<tr>
<th>Form/process</th>
<th>Approximate deadline*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit your final GS2 to Enrolled Services</td>
<td>End of the term prior to the term in which you plan to graduate</td>
</tr>
<tr>
<td>Submit GS5 to Enrolled Services</td>
<td>Six months prior to defense</td>
</tr>
<tr>
<td>Complete online application for diploma (formerly Form GS4)</td>
<td>Within the first four weeks of the term in which you will graduate</td>
</tr>
<tr>
<td>Written notification of defense submitted to Enrolled Services</td>
<td>At least 10 days prior to your defense.</td>
</tr>
<tr>
<td>Submit completed thesis/dissertation electronically for formatting review</td>
<td>Two weeks prior to graduation</td>
</tr>
<tr>
<td>File GS7 with Enrolled Services</td>
<td>Two weeks prior to graduation</td>
</tr>
<tr>
<td>All revisions requested by the Manuscript Review Office must be completed and approved by the Manuscript Review Office</td>
<td>One week prior to graduation</td>
</tr>
</tbody>
</table>

*Refer to the Graduate School’s website for actual deadline dates (www.grad.clemson.edu/Deadlines.php). All Graduate School forms are available online at www.grad.clemson.edu/forms/GeneralForms.php.
Ph.D. Dissertation Defense

An oral examination given at least three weeks before graduation will serve to examine your dissertation research. (See deadlines set by the Graduate School for the specific date for each term at www.grad.clemson.edu/deadlines.html.) You are required to provide a broad and penetrating interpretation of your research project and conclusions. Your committee members should receive a final draft copy of the dissertation at least ten working days before the examination. This examination will be conducted under the authority of your Advisory Committee. All college faculty members will be invited to participate in the examination and to provide comments to your Advisory Committee. The exam is graded on a Pass/Fail basis. A majority is needed to pass.

Successful completion of this examination and your dissertation will result in a recommendation (GS7 Form) by your Advisory Committee to the Graduate School that the Ph.D. degree be awarded.

Unsatisfactory performance on the final examination will result in a requirement for complete re-examination (with or without recommendations for additional work) or dismissal.

Residence for Doctoral Degree

Residence is a necessary concept in graduate education, particularly in the preparation of the dissertation. The purpose of residence is to require you to spend a specified minimum amount of time in direct personal association with members of the faculty of the University and under direct advisement of your Major Advisor and Advisory Committee, and to participate in other normal activities pertinent to graduate education such as seminars and close association with other student researchers.

To receive the Doctor of Philosophy degree, you must complete at least 15 hours of graduate credit including research credit hours (991) on the Clemson University campus in a continuous 12-month period.

For students employed substantially more than ½-time, a statement specifying the manner in which the residence requirement is to be satisfied shall be formulated by your Advisory Committee and included in your curriculum. Also, upon completion of the final examination, your Advisory Committee will forward to the Graduate School a statement approved by the department chair and college dean certifying that residence requirements have been met.

Exceptions to the residence requirement may be granted by the dean of the Graduate School. Major Advisors seeking an exemption to this policy must submit an academic plan for the student that is signed by the Major Advisor and the department chair.
Assessment Benchmarks

Each student in the Learning Sciences program will undergo an annual review. The purpose of this task is to review the student's progress in the program and provide feedback. The review will include evaluation of the following benchmarks:

1. Preliminary Literature Review / Annotated Bibliography (documented in Seminar I).

2. Professional Competence (documented by student for committee). These competencies will be fulfilled before the student is awarded the doctoral degree.
   a. Students will teach a college/university undergraduate class and/or demonstrate competency in instructional methods as they relate to higher education.
   b. Students will have a national presentation as a primary presenter accepted and/or demonstrate competency in scholarly communication within a professional setting.
   c. Students will submit a manuscript for publication (national level preferred) as a primary author and/or demonstrate competency in scholarly writing in an external resource.

3. Comprehensive Examination

   The comprehensive examination consists of three written examinations during a two week period to be determined by your advisor. Earning a “passing” score for each of the three portions of the examination will allow the candidate to proceed to a dissertation proposal defense. A “marginal” score on any of the three portions will require an additional oral examination.

4. Dissertation Proposal includes a written proposal and an oral defense.

5. Dissertation Defense includes a written dissertation and an oral defense.
Assistantships

_reduction of pay_

Normally, your agreed-upon workload will be submitted as hours worked for each payroll period. However, if the amount of work you perform consistently deviates below the required workload, your pay will be reduced accordingly. Due to the procedure in which time sheets are currently used, it may be necessary to implement any pay reductions in the pay period following the one in which the work deficiency actually occurred. Pay also may be withheld from students who violate the vacation policy (see below).

_vacation policy_

As a rule, graduate assistants do not accrue paid vacation time. Your work timeframe should not be perceived to be the same as the semester class schedule. Generally, graduate assistants work on the same calendar as faculty with 9-month appointments unless different work expectations are distinctly articulated in your offer letter. The department offers the following time off, with pay, to assistants in good standing: two weeks at Christmas, and one week at Spring Break. Any leave beyond this allotment requires approval of your Major Advisor and notification of the Program Coordinator and department chair. In the event of a death in your immediate family, illness of a close family member or personal illness or hardship, you may request up to four weeks leave without pay per semester and one week of leave without pay per summer session from your immediate supervisor.

_holidays_

Graduate students are entitled to take as holidays the days on which the University is officially closed. See the official University holiday schedule at http://www.clemson.edu/employment/benefits/holiday.html

_termination of pay_

Pay for any session will end when you leave Clemson or are no longer available for work assignments. Normal termination dates for the spring and fall semesters for students not continuing into the next session is graduation day. Any deviations from these dates must be approved by your Major Advisor or the department chair.