Teaching and Learning, Ph.D.

Ph.D. Required Research Courses

Students admitted to doctoral programs must complete the program's research requirements.

Required Ph.D. Core Courses

All Ph.D. students in the Department of Teaching and Learning must complete one or both of the following Ph.D. core courses, depending upon program requirements.

- EDTL:7004 Schooling in the United States 3
- EDTL:7033 Seminar on Teacher Education 3

Required Ph.D. Cognates

All Ph.D. students in the Department of Teaching and Learning must complete two approved cognate areas as part of their doctoral study plan. Most comprehensive exams in the department are designed to cover the student's core area plus two cognate areas, so selection of cognate areas is important. Cognates also may enhance students' employment possibilities, since they represent a minor area of study.

The following list of cognates offered by program areas in the department is not exhaustive; students may select cognates from this list, or they may customize their own cognate areas in consultation with their advisors.

Curriculum Theory and Development

Three of these:
- EDTL:4876 Advanced Methods for Teaching and Learning in a Culturally Responsive Classroom 3
- EDTL:6570 Foundation of School Mathematics Curriculum 3
- EDTL:7004 Schooling in the United States 3
- EDTL:7075 Educational Ethnography 3
- EPLS:6265 Standards-Based Education and Accountability 3
- EPLS:6381 Analysis and Appraisal of Curriculum 3
- PSQF:6255 Construction and Use of Evaluation Instruments 3

Foreign Language and ESL Education

Both of these:
- EDTL:6400 Fundamentals of Second Language Assessment 3
- EDTL:6483 Second Language Classroom Learning 3

One of these, chosen in consultation with faculty:
- EDTL:6403 Language Policy and Planning 3
- EDTL:6480 Issues in Foreign Language Education 3

EDTL:6484 Reading in a Second Language 3
EDTL:6497 Principles of Course Design for Second Language Instruction 3

Gifted Education

Administrative Strand

Two of these, chosen in consultation with faculty:
- EPLS:4110 Administration and Policy in Gifted Education 2
- EPLS:4111 Evaluation of Gifted Programs 1
- EPLS:4113 Staff Development for Gifted Programs 1

Programming Strand

Both of these:
- EDTL:4066 Curriculum Concepts in Gifted Education 3
- EDTL:4199 Program Models in Gifted Education 3

Psychology Strand

Two of these, chosen in consultation with faculty:
- RCE:4120 Psychology of Giftedness 3
- RCE:4121 Identification of Students for Gifted Programs 3
- RCE:4137 Introduction to Educating Gifted Students 3
- RCE:5226 Assessment of Giftedness 3
- RCE:5237 Seminar in Gifted Education 3

Global Education

All of these:
- EDTL:6840 Theories and Perspectives in Global Education 3
- EDTL:6841 Infusing a Global Perspective into the Curriculum 3
- EDTL:6842 Examining Power, Resistance, and Change Through Global Education 3

Language, Literacy, and Culture

Both of these:
- EDTL:7015 Ph.D. Seminar in Language, Literacy, and Culture (when topic is introduction to language, literary, and culture) arr.
- EDTL:7015 Ph.D. Seminar in Language, Literacy, and Culture (topic chosen in consultation with advisor) arr.

General Emphasis

This course:
- EDTL:7008 Seminar: Research and Current Issues (topic chosen in consultation with advisor) arr.

Elementary Emphasis

One of these:
- EDTL:6104 Literature for Children II 3
Most courses for the Ph.D. should be numbered 5000 or above. At least 30 s.h. must be taken in the core area of foreign language education. Students and their advisor discuss core area course work and cognate area specializations. Their progress toward the degree and their scholarship development is reviewed by the program’s faculty and discussed by students and their advisor each year.

The Ph.D. in teaching and learning (foreign language and ESL education) requires the following course work. Students may be able to count some courses completed for the master’s degree toward the 80 s.h. required for the Ph.D.

### Required Courses

#### Foreign Language Education Core

Students must complete the following (21 s.h.).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:6400</td>
<td>Fundamentals of Second Language Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6403</td>
<td>Language Policy and Planning</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6409</td>
<td>Cultural Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6483</td>
<td>Second Language Classroom Learning</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6484</td>
<td>Reading in a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6497</td>
<td>Principles of Course Design for Second Language Instruction</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7406</td>
<td>Proposal Writing for Second Language Research</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must complete both of the following Ph.D. core courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:7004</td>
<td>Schooling in the United States</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7033</td>
<td>Seminar on Teacher Education</td>
<td>3</td>
</tr>
</tbody>
</table>

### Core Electives

Students may take the following courses in addition to, but not instead of, the courses listed under "Foreign Language Education Core" above. Students must have their advisor’s consent to substitute other courses as electives.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:6402</td>
<td>Second Language Program Management</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6480</td>
<td>Issues in Foreign Language Education</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7015</td>
<td>Ph.D. Seminar in Language, Literacy, and Culture (when topic is relevant)</td>
<td>arr.</td>
</tr>
<tr>
<td>SLA:6920</td>
<td>Multimedia and Second Language Acquisition</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, students must complete an approved cognate area; see “Required Ph.D. Cognates” under Ph.D. Required Research Courses [p. 1] in this section of the Catalog.

The program requires 16 s.h. of course work in research methods. Three courses must be taken from the “First Tier Requirements” list, and two courses must be taken from the “Second Tier Requirements” list. Students who have little experience with social/behavioral sciences research methods when they enter the program may be advised to take remedial courses in research methods.
course work in research methods, which does not count toward the 16 s.h. requirement.

First Tier Requirements
These courses should be taken in the first two years of study (10 s.h.).
Both of these:
- EDTL:7405 Research Methods in Second Language Teaching and Learning 3
- PSQF:6243 Intermediate Statistical Methods 4

One of these:
- EDTL:7070 Introduction to Qualitative Methods in Literacy Research 3
- EPLS:7373 Qualitative Research Design and Methods 3
- PSQF:7331 Seminar: Educational Psychology I - Current Topics (when topic is qualitative educational research methods) 3
- RCE:7338 Essentials of Qualitative Inquiry 3

Second Tier Requirements
Two additional research methods courses should be chosen in consultation with a student's advisor. These courses should be taken after the first tier courses have been completed (6 s.h.).

Advanced Qualitative Courses
- EDTL:7071 Critical Discourse Analysis in Educational Research 3
- EDTL:7072 Advanced Methods of Literacy Research: Qualitative Data Analysis and Reporting 3
- EDTL:7073 Ethnographic Methods, Theories, and Texts 3
- EDTL:7075 Educational Ethnography 3
- EDTL:7751 Advanced Qualitative Data Analysis 3

Advanced Research Design Courses
- EDTL:7410 Mixed Methods Research 3
- PSQF:6265 Program Evaluation 3
- PSQF:7331 Seminar: Educational Psychology I - Current Topics (when the topic is conducting research online) arr.

Advanced Quantitative Courses
- EPLS:6206 Research Process and Design 3
- EPLS:6209 Survey Research and Design 3
- EPLS:6370 Quantitative Methods for Policy Analysis 3
- PSQF:6244 Correlation and Regression 4
- PSQF:6246 Design of Experiments 4
- PSQF:6247 Nonparametric Statistical Methods 3

Remedial Course Work
These courses may be required if a student is not familiar with research methods in social/behavioral sciences.
- EALL:5150 Introduction to Educational Research 3
- PSQF:4143 Introduction to Statistical Methods 3

Comprehensive Examination
In order to qualify to take the comprehensive examination, students must successfully complete the required course work and an extended research activity. After successful completion of the required course work and the research activity, and upon recommendation of the program's faculty, a student is eligible to sit for the comprehensive examination. Completion of the required course work and research activities does not guarantee advancement to the examination.

After passing the comprehensive examination, students consult with their advisor to choose a Ph.D. dissertation committee of at least five faculty members, who approve the dissertation proposal. The student then conducts research under the primary guidance of the advisor.

Admission
Applicants to the Ph.D. program in teaching and learning (foreign language and ESL education) must meet the admission requirements of the Graduate College. They should have at least two years of experience teaching foreign language or ESL and should hold a master's degree or have completed a significant amount of graduate course work in a foreign language or foreign language education. Applicants must have a g.p.a. of at least 3.00 in graduate course work. International applicants whose first language is not English must score at least 100 (Internet-based) on the Test of English as a Foreign Language (TOEFL) with a speaking score of 26 and a writing score of 25.

Application materials should include a statement of purpose explaining the applicant's professional goals, transcripts of all undergraduate and graduate work, Graduate Record Exam (GRE) General Test scores, a sample of academic writing, and three letters of recommendation.

Language, Literacy, and Culture
The Doctor of Philosophy in teaching and learning (language, literacy, and culture) requires a minimum of 88-90 s.h. of graduate credit. The program brings together scholarly traditions and contemporary theory in literacy and cultural studies. Course work provides a broad background in relevant theoretic and research literature and opportunities to conduct original studies that explore the nature of literacy practices both in and out of school. Graduates find employment in university and college teaching, research, curriculum development, and administration of literacy programs.
Required Courses

Students complete an introductory seminar in language, literacy, and culture; at least 9 s.h. of additional doctoral seminars in the program; approved cognate areas (see "Required Ph.D. Cognates" under Ph.D. Required Research Courses [p. 1] in this section of the Catalog); and 9-12 s.h. of graduate course work outside the Department of Teaching and Learning with 6 s.h. of those outside the College of Education. Students also earn 10-12 s.h. of dissertation credit.

Students are required to take 19 s.h. in research course work. Both of these:

- EDTL:7070 Introduction to Qualitative Methods in Literacy Research 3
- PSQF:6243 Intermediate Statistical Methods 4

Additional credit hours as outlined below:

- A sequence of courses that meets the specific research interests of a student (selected in consultation with an advisor and the language, literacy, and culture faculty) 12
- Semester hours may be taken in any combination of qualitative, quantitative or other relevant research paradigms
- Courses may be taken either within or outside of the College of Education

It is recommended that students take EALL:5150 Introduction to Educational Research (3 s.h.) early in their programs of study.

And, students complete one of these core courses:

- EDTL:7004 Schooling in the United States 3
- EDTL:7033 Seminar on Teacher Education 3

Comprehensive Examination and Dissertation

As students near the completion of their course work, they identify several key strands for review and synthesis. With guidance from their advisors, students prepare for three forms of written and oral exams: they answer take-home questions in two areas of literacy; they submit a substantive issues paper, typically a report of an exploratory study or a review of research literature on a topic of special interest; and they design a syllabus for a literacy course and write a reflective commentary that demonstrates understanding of the relationship between theory and practice.

Following successful completion of all components of the comprehensive exam, students work with a faculty member to develop a proposal for a study that will make an original contribution to the understanding of some aspect of literacy. After the proposal has been approved, students conduct research and report their findings under the primary guidance of a dissertation chair.

For detailed information, see Language, Literacy, and Culture on the Department of Teaching and Learning website.

Admission

Applicants to the Ph.D. in teaching and learning (language, literacy, and culture) must meet the admission requirements of the Graduate College. They should have at least three years of experience teaching or tutoring language or literacy (reading, writing, English, language arts) and should have earned a master's degree in a literacy-related field. Application materials should include a statement of purpose explaining the applicant's reasons for pursuing graduate study and describing future goals; transcripts of all undergraduate and graduate course work; Graduate Record Exam (GRE) General Test scores; a sample of academic writing; and three letters of recommendation.

Applications for admission and for financial aid are reviewed December 1 each year.

Mathematics Education

The Doctor of Philosophy in teaching and learning (mathematics education) requires a minimum of 80-90 s.h. of graduate credit. The program prepares supervisors, teacher education personnel, community college personnel, and researchers in mathematics education. It is administered by the College of Education.

Students must update graduate course work completed more than 10 years before admission to the program. The Ph.D. program in mathematics education requires the following course work.

Required Courses

Students must complete EALL:5150 Introduction to Educational Research during the first year of their Ph.D. program. They also must complete an additional minimum of 15 s.h. in qualitative and quantitative course work, with at least 9 s.h. from one area (qualitative or quantitative) and at least 6 s.h. from the other. Students select from courses listed under Ph.D. Research Requirements on the College of Education website.

Students must complete one of the following Ph.D. core courses.

- EDTL:7004 Schooling in the United States 3
- EDTL:7033 Seminar on Teacher Education 3

In addition, students must complete an approved cognate area; see "Additional Requirements" below.

Students must complete a minimum of 24 s.h. of graduate work in the departments of Computer Science, Mathematics, and Statistics and Actuarial Science, as approved by their advisor. Electives are encouraged in the pure mathematics and applied mathematics sequences.

Students who completed their mathematics requirement at another institution must complete at least 6 s.h. of additional course work in mathematics at the University of Iowa, chosen with advisor approval. They also must complete at least six courses in mathematics education, including EDTL:5535 Current Issues in Mathematics Education and EDTL:7535 Seminar: Research in Mathematics Education.

Additional Requirements

Students concentrate in two additional comprehensive examination areas in either the mathematical sciences or
education. A minimum of three courses usually are required for a comprehensive examination area, but candidates should consult with faculty members in the areas selected to determine which courses they should take in order to adequately prepare for the examinations.

Students must complete a total of at least 36 s.h. in College of Education courses; this includes the course work listed above. They must complete an approved cognate area; a partial list of potential cognate areas is available from the mathematics education program.

Upon completing the program, a student must have a cumulative g.p.a. of 3.00 or higher in all graduate work in mathematics, all University of Iowa graduate work in mathematics, all graduate work, and all University of Iowa graduate work.

**Comprehensive Examination**

Students take three written comprehensive examinations, one in mathematics education and two in other fields of education or mathematics; an oral examination follows the written examinations.

**Dissertation**

Students must earn 10 s.h. of dissertation credit in EDTL:7493 Ph.D. Thesis. Each candidate completes a dissertation on a research problem in mathematics education. A prospectus of the proposed research must be presented to the dissertation committee before the candidate undertakes the study. Upon completion of the dissertation, the candidate defends the dissertation in an oral examination.

**Admission**

Applicants to the Ph.D. in teaching and learning (mathematics education) must meet the admission requirements of the Graduate College. They must have an undergraduate major in mathematics or the equivalent, a current teaching license/certificate, and at least two years of teaching experience are strongly preferred. A faculty review committee makes admission decisions.

### Science Education

The Doctor of Philosophy in teaching and learning (science education) requires a minimum of 85 s.h. of graduate credit. The program is designed for individuals who aspire to positions as college and university science educators; major supervisors in national, state, and local systems; teachers in small liberal arts colleges; instructors of general education science courses at major universities; research directors in science education; and professionals in medical and/or allied health education.

The Ph.D. in teaching and learning (science education) requires the following course work.

### Required Courses

All Ph.D. students in science education must complete EALL:5150 Introduction to Educational Research during the first year of their Ph.D. program. They also must complete an additional minimum of 15 s.h. in qualitative and quantitative course work, with at least 9 s.h. from one area (qualitative or quantitative) and at least 6 s.h. from the other. Students select from courses listed under Ph.D. Research Requirements on the College of Education website. Course selections must be consistent with other requirements for the degree.

All doctoral students in science education must complete one or both of the following Ph.D. core courses. Students may not substitute other courses for these.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:7004</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7033</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, all doctoral students in the Department of Teaching and Learning must complete an approved cognate area; see “Required Ph.D. Cognates” under Ph.D. Required Research Courses [p. 1] in this section of the Catalog.

### Science Education

All of these (15 s.h.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:6757</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6759</td>
<td>3</td>
</tr>
<tr>
<td>Graduate-level science education courses chosen in consultation with advisor</td>
<td>9</td>
</tr>
</tbody>
</table>

### Education

All of these (9 s.h.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EALL:5150</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:6200</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:6275</td>
<td>3</td>
</tr>
</tbody>
</table>

### Research in Science Education

Both of these (21 s.h.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:7750</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7755</td>
<td>18</td>
</tr>
</tbody>
</table>

### Science Area

Students complete a family of courses (total of 12 s.h.) in a major science area.

### Dissertation

Ph.D. students earn 10 s.h. of thesis credit in EDTL:7493 Ph.D. Thesis.

### Admission

Applicants to the Ph.D. in teaching and learning (science education) must meet the admission requirements of the Graduate College. They should have completed a bachelor’s degree in a science area (or combination of science areas), in science education, or in elementary education with a science emphasis; have a cumulative g.p.a. of at least 3.00 on undergraduate and graduate work; and have a combined score of at least 300 on the verbal and quantitative portions of the Graduate Record Exam (GRE) General Test. Applicants must submit three letters of recommendation; a statement of purpose describing their reasons for pursuing graduate work
Teaching and Learning, Ph.D.

Social Studies Education

The Doctor of Philosophy in teaching and learning (social studies education) requires a minimum of 90 s.h. of graduate credit. The program prepares secondary department chairs, supervisors, curriculum directors, teacher education personnel, and college instructors in the social sciences and in social studies education.

The required 90 s.h. of credit includes course work and the dissertation (10 s.h.).

Required Courses

Students are required to complete 16 s.h. of course work focused on research methodology.

This course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSQF:6243</td>
<td>Intermediate Statistical Methods</td>
<td>4</td>
</tr>
</tbody>
</table>

One of these:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:7070</td>
<td>Introduction to Qualitative Methods in Literacy Research</td>
<td>3</td>
</tr>
<tr>
<td>EPLS:7373</td>
<td>Qualitative Research Design and Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:7331</td>
<td>Seminar: Educational Psychology I - Current Topics (when topic is qualitative educational research requirements)</td>
<td>arr.</td>
</tr>
<tr>
<td>RCE:7338</td>
<td>Essentials of Qualitative Inquiry</td>
<td>3</td>
</tr>
</tbody>
</table>

In consultation with advisor, 9 s.h. of research methodology course work appropriate to dissertation design from these:

Qualitative Methodology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:7071</td>
<td>Critical Discourse Analysis in Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7073</td>
<td>Ethnographic Methods, Theories, and Texts</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7410</td>
<td>Mixed Methods Research</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7751</td>
<td>Advanced Qualitative Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7953</td>
<td>Seminar: Single Subject Design Research</td>
<td>3</td>
</tr>
<tr>
<td>EPLS:5195</td>
<td>Research in Cross-Cultural Settings</td>
<td>3</td>
</tr>
<tr>
<td>EPLS:5240</td>
<td>Topics in Education (when topic is introduction to historical methodology)</td>
<td>arr.</td>
</tr>
<tr>
<td>HIST:7197</td>
<td>The Art and Craft of Historical Writing</td>
<td>arr.</td>
</tr>
<tr>
<td>PSQF:6265</td>
<td>Program Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>RCE:7444</td>
<td>Qualitative Research in the Multicultural Context</td>
<td>3</td>
</tr>
</tbody>
</table>

Quantitative Methodology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPLS:6206</td>
<td>Research Process and Design</td>
<td>3</td>
</tr>
<tr>
<td>EPLS:6209</td>
<td>Survey Research and Design</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:6220</td>
<td>Quantitative Educational Research Methodologies</td>
<td>3</td>
</tr>
</tbody>
</table>

PSQF:6244 Correlation and Regression 4
PSQF:6246 Design of Experiments 4
PSQF:6247 Nonparametric Statistical Methods 3
PSQF:6249 Factor Analysis and Structural Equation Models 3
PSQF:6252 Introduction to Multivariate Statistical Methods 3

Students that want to take a course that is not listed above to receive credit toward their program requirements must obtain prior approval from their advisor and from the social studies education program.

In addition, students must complete one or both of the following Ph.D. core courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:7004</td>
<td>Schooling in the United States</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:7033</td>
<td>Seminar on Teacher Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Seminars and courses numbered 5000 or above are required in each of the study areas that constitute the major.

Students must take the following courses in social studies and global education (12 s.h.).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:6833</td>
<td>History and Foundations of Social Studies Education</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6840</td>
<td>Theories and Perspectives in Global Education</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6841</td>
<td>Infusing a Global Perspective into the Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:6842</td>
<td>Examining Power, Resistance, and Change Through Global Education</td>
<td>3</td>
</tr>
</tbody>
</table>

The remaining course work must be distributed among approved cognate areas (see "Required Ph.D. Cognates" under Ph.D. Required Research Courses [p. 1] in this section of the Catalog), history, social sciences or related areas, and professional education, depending on a student’s background and goals.

Comprehensive Examination

Students take three three-hour examinations, one in each of the study areas. Depending on the distribution of course work, the nine hours of written examinations may be rearranged. The Ph.D. examining committee consists of five members, who are selected according to the nature of the student’s Ph.D. program and distribution of course work. An oral examination is conducted by the committee following the written exam.

Dissertation

Ph.D. candidates, in consultation with their committee, may choose to complete a dissertation organized by either chapters or publishable articles, depending on their career goals and the nature of their study. In either case, the scholarly pursuit must be on a philosophical or social science research problem in social studies education. The candidate must present a prospectus of the proposed scholarship to the committee before undertaking the dissertation. Upon completion, the candidate defends the dissertation in an oral exam.
Admission

Applicants to the Ph.D. program in teaching and learning (social studies education) must meet the admission requirements of the Graduate College. They must have a bachelor's degree in history, the social sciences, or education; a master's degree in history, the social sciences, or education; a cumulative g.p.a. of at least 3.00; and a combined verbal and quantitative score of at least 310 on the Graduate Record Exam (GRE) General Test. At least two years of teaching experience is strongly preferred. Applicants who did not write a thesis as part of their M.A. must submit seminar papers or field research as equivalents.

Special Education

The Doctor of Philosophy in teaching and learning (special education) requires a minimum of 90 s.h. of graduate credit. The program prepares students for teaching and research positions in higher education, and for curriculum, supervisory, and research positions in state and local education agencies. The program permits students to study and practice extensively in their special education interest area and in an interest area outside of special education.

The Ph.D. curriculum includes an emphasis on research skills, all facets of special education, an approved cognate area (see "Required Ph.D. Cognates" under Ph.D. Required Research Courses [p. 1] in this section of the Catalog), and at least one specialization area.

Required Courses

This course:
EALL:5150 Introduction to Educational Research 3

Quantitative Research Requirements (13-15 s.h.)
Both of these:
PSQF:4143 Introduction to Statistical Methods 3
PSQF:6243 Intermediate Statistical Methods 4

Two of these:
EPLS:6206 Research Process and Design 3
PSQF:6220 Quantitative Educational Research Methodologies 3
PSQF:6244 Correlation and Regression 4
PSQF:6246 Design of Experiments 4
PSQF:6247 Nonparametric Statistical Methods 3
PSQF:6249 Factor Analysis and Structural Equation Models 3
PSQF:6252 Introduction to Multivariate Statistical Methods 3

Qualitative Research Requirements (6 s.h.)
This course:
EDTL:7953 Seminar: Single Subject Design Research 3

One of these:
EDTL:7410 Mixed Methods Research 3
EPLS:7373 Qualitative Research Design and Methods 3

Ph.D. Core Course

One of these:
EDTL:7004 Schooling in the United States 3
EDTL:7033 Seminar on Teacher Education 3

Proseminar Courses

Both of these:
EDTL:7943 Proseminar: Issues, Trends, and Research in Special Education 3
EDTL:7944 Proseminar: Issues, Trends, and Research in Special Education II 3

Minor

Students also must complete an interdisciplinary minor in a discipline outside of special education (minimum of 12 s.h.).

Comprehensive Examination and Dissertation

In addition, students are required to write the comprehensive examination and complete a doctoral dissertation, earning a minimum of 10 s.h. in the following course.
EDTL:7493 Ph.D. Thesis 10

Admission

Applicants to the Ph.D. program in teaching and learning (special education) must meet the admission requirements of the Graduate College. They must have master's degree or equivalent in special education; those without an M.A. thesis must have completed an equivalent project. Applicants should have a graduate g.p.a. of at least 3.50 and a combined verbal and quantitative score of at least 300 on the Graduate Record Exam (GRE) General Test. Applicants whose first language is not English must score at least 100 (Internet-based) on the Test of English as a Foreign Language (TOEFL). Applicants should have at least one year of full-time teaching experience with exceptional children; several years are preferred.

Application materials must include a completed Graduate College application form, copies of official transcripts for all college course work, an official report of Graduate Record Exam (GRE) General Test scores, three current letters of recommendation, and evidence of experience and/or teacher licensure/certification. An interview may be requested.

Final admission decisions are made by the special education graduate admissions committee.