Twin Cities Campus

Education, Curriculum, and Instruction Ph.D.

Curriculum & Instruction

College of Education and Human Development

Link to a list of faculty for this program.

Contact Information:
Department of Curriculum and Instruction, 125 Peik Hall, 159 Pillsbury Drive SE, Minneapolis, MN 55455 (612-625-2545; fax: 612-624-8277).
Email: cigs@umn.edu
Website: http://cehd.umn.edu/ci

- Program Type: Doctorate
- Requirements for this program are current for Fall 2019
- Length of program in credits: 75
- This program does not require summer semesters for timely completion.
- Degree: Doctor of Philosophy

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

By focusing on the curricular and instructional processes central to all educational endeavors, graduate programs within the Department of Curriculum and Instruction prepare students for academic and professional roles in K-12 education, post-secondary education, research settings, educational service agencies, and business and industry.

The PhD degree includes formal tracks in the following: arts in education; culture and teaching; elementary education; learning technologies; literacy education; science, technology, engineering and mathematics (stem) education; second language education; and social studies education.

Students must have an interest in research in education or a related field; students plan a program of coursework that prepares them to conduct scholarly research in an area of expertise related to a track listed above.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

A master's degree is preferred for admission to some of the tracks within the PhD program, but it is not always required.

Other requirements to be completed before admission:
Generally a bachelor's degree with licensure and/or teaching experience fulfills the requirement. For some areas, however, there is no equivalent undergraduate program. In that case, 15 to 20 credits of undergraduate coursework determined acceptable by faculty is adequate.

Special Application Requirements:
Applicants must submit transcripts from every college attended (even those where a degree wasn't earned), scores from the GRE, scores from the TOEFL/IELTS/MELAB (if applicable), three letters of recommendation from individuals familiar with their scholarship and research potential, a clearly written statement of career interests, goals, and objectives, a diversity statement, and a resume. Some program tracks require an example of academic writing. Doctoral applications are reviewed by department faculty once per academic year.

Applicants must submit their test score(s) from the following:

- GRE

International applicants must submit score(s) from one of the following tests:

- TOEFL
  - Internet Based - Total Score: 79
  - Internet Based - Writing Score: 21
  - Internet Based - Reading Score: 19

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

- Paper Based - Total Score: 550
- IELTS
  - Total Score: 6.5
- MELAB
  - Final score: 80

Key to test abbreviations(GRE, TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

39 credits are required in the major.
12 credits are required outside the major.
24 thesis credits are required.

This program may be completed with a minor.

Use of 4xxx courses towards program requirements is not permitted.

A minimum GPA of 3.00 is required for students to remain in good standing.

A total of 75 credits is required for the education, curriculum and instruction PhD program. Requirements include core coursework required by all students, major coursework in the student's selected track, research methodology coursework, and a minimum of 12 credits in a minor or supporting program. All PhD students must also complete 24 doctoral thesis credits. Specific courses and additional work vary depending upon the track and are planned in consultation with the faculty advisor.

Program Sub-plans

Students are required to complete one of the following sub-plans.
Students may complete the program with more than one sub-plan.

Arts in Education

The PhD program's arts in education track presents opportunities for students with experience in schools or other informal educational settings to develop necessary philosophical, theoretical, and methodological competence to make scholarly contributions to the field. Working as researchers, scholars, policy makers, and practitioners, graduates become educational leaders in universities, colleges, K-12 school districts, museums, community arts organizations, and government agencies.

Students typically carry out dissertation inquiry in local urban and suburban schools, several renowned art museums in the Minneapolis-St. Paul area, and within the initial teacher licensure program at the University. Both qualitative and quantitative research methods have guided PhD candidates' inquiry on the following: rightness of aesthetic-based problem solving, design thinking, and media arts theory and practice in arts classrooms; teaching critical literacy in and through the arts; innovation in culture-based arts education; and other knowledge building questions specific to art teacher development and retention.

Faculty and students are committed to understanding equity and social justice in both research and teaching. Graduate students often work closely with faculty in the development, implementation, and evaluation of national, state, and local arts education initiatives.

Arts in education students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework

CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)

Major Coursework

Required courses are listed; others selected in consultation with faculty advisor for a total of 15 credits. CI 8085 is a required course as well, though it may be taken as either a major requirement course or as a research elective course.

CI 5075 - The Social, Historical and Cultural Foundations of Arts Education (3.0 cr)
CI 5078 - Application of Aesthetic Theory in Education (2.0 cr)
CI 8075 - Seminar: Art Education (2.0 cr)
CI 8079 - Arts Based Research in Education (3.0 cr)

Research Coursework

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.

CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)

Research Electives

9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.

Take 9 or more credit(s) from the following:

- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)
- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program

12 credits outside the track, selected in consultation with faculty advisor

Elective

3 credits selected in consultation with faculty advisor

Culture and Teaching

The culture and teaching (CaT) track engages the study of education as a cultural phenomenon. Students in CaT study a range of educational processes that take place both in and beyond the borders of schools, and explore alternative epistemologies and pedagogies. Faculty and students are dedicated to seeking better understandings of issues pertaining to equity and social justice in both research and teaching. The track is interdisciplinary and collaborative, so students' work will encompass many different approaches, methods, and perspectives.

Some of CaT's courses focus on the ways in which teachers are prepared to teach; engage in ongoing professional development; and develop their own personal and professional identities within collegial communities. Other courses examine the salience of understanding white racial identity for pedagogy and social change; as well as the implications of globalization and immigration for teaching, learning, and curriculum. Still other courses explore popular culture and media in relation to contemporary critical theory and teaching practices. "Culture" in CaT includes thinking about "high" and "popular" cultures, the cultures of teaching and the cultures of learning, and how our responses to all influence and are influenced by everyday meanings and practices.

CaT students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)

Major Coursework

15 credits total, with 9 credits selected in consultation with faculty advisor. CI 8159 will be taken twice for a total of 6 credits.
CI 8159 - Culture and Teaching Colloquium (3.0 cr)

Research Coursework

CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)

Research Electives

9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.
Take 9 or more credit(s) from the following:

- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)
- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program

12 credits outside the track, selected in consultation with faculty advisor

Elective

3 credits selected in consultation with faculty advisor

Elementary Education

This sub-plan is optional and does not fulfill the sub-plan requirement for this program.

The PhD program's elementary education track is designed to help professionals acquire and contribute to the advancement of knowledge and leadership necessary to address the dynamic challenges of contemporary education at the elementary level. Emphasized within the track are, for example, the following: a focus on interdisciplinary approaches to curriculum development, the use of inquiry as a key pedagogical approach, the importance of a strong understanding of diversity and its social and educational implications, and child development and learning theories as the foundation for research and teaching in elementary settings.

Elementary students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

Core Coursework
CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)
Major Coursework
15 credits selected in consultation with faculty advisor
Research Coursework
CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)
Research Electives
9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.
Take 9 or more credit(s) from the following:
•CI 8085 - Narrative Inquiry in Education (3.0 cr)
•CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
•CI 8146 - Critical Ethnography in Education (3.0 cr)
•CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
•CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
•CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
•CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
•CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
•CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
•CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
•CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
•CI 8689 - Language and Education Policy (3.0 cr)
•CI 8913 - Interpretive Research (3.0 cr)
•OLPD 5056 - Case Studies for Policy Research (3.0 cr)
•OLPD 5061 - Ethnographic Research Methods (3.0 cr)
•OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
•OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
•EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
•EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
•EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
•EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
•EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
•EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
•EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
•EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
•EPSY 8251 - Statistical Methods in Education I (3.0 cr)
•EPSY 8252 - Statistical Methods in Education II (3.0 cr)
•EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
•EPSY 8265 - Factor Analysis (3.0 cr)
•EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
•EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
•EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
•EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
•AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
•ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
•LING 5462 - Field Research in Spoken Language (3.0 cr)
Minor or Supporting Program
12 credits outside the track, selected in consultation with faculty advisor
Elective
3 credits selected in consultation with faculty advisor

Learning Technologies

The PhD's learning technologies (LT) track prepares students for research and practice related to multimedia, design, K-12 technology integration, and online distance learning. PhD graduates often earn academic positions in higher education or become directors and leaders of development or research within business and industry. Coursework in LT includes hands-on learning and use of current technologies, development of technological solutions, research methods, and theory of curriculum, instruction, and learning.

The PhD degree is targeted primarily at students interested in pursuing research careers. Student research, culminating in a dissertation, typically evaluates various learning technologies issues and interventions. Common areas of study include conditions affecting educational technology use in schools, higher education, and business settings, and tend to focus on psychological, sociological, and philosophical factors. For example, recent graduates have studied the impact of technology on learning and cognition, variables that mediate effective technology use in education, and issues related to ethical technology use.

LT students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework
CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)
Major Coursework
15 credits selected in consultation with faculty advisor
Research Coursework
CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)
Research Electives
9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.
Take 9 or more credit(s) from the following:
- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)
- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program
12 credits outside the track, selected in consultation with faculty advisor
Elective
3 credits selected in consultation with faculty advisor

Literacy Education

The Literacy Education track helps students become literacy leaders. Working in schools and other educational settings, students develop an understanding of literacy as a set of socially and culturally situated practices. We take literacy to be plural and intersectional, defined by a range of skills that enable us to navigate multiple disciplines and thrive as lifelong learners. Faculty and students cooperate on projects that advance theory, research, and practice in the (overlapping) core areas of reading education, childrens and adolescent literature, critical literacy, English education, translanguaging literacy, as well as multimodal, digital and culturally-relevant literacies.

We are committed to equity and a vision of an inclusive future. To advance these goals,
- we engage in research, teaching, and outreach that supports culturally and linguistically diverse learners,

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

- we advance understanding of childrens literature as a force for social transformation,
- we develop literacy teachers and leaders for diverse schools,
- we apply multiple theoretical and research perspectives to problems and questions central to the field of literacy,
- we advocate for justice literacy, race literacy, eco-literacy, digital literacy, and other new literacies as tools that empower us to face global challenges,
- we strive to influence literacy policies to address inequities and benefit all learners.

Literacy students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework

CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)

Major Coursework

15 credits selected in consultation with faculty advisor

Research Coursework

CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)

Research Electives

9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.

Take 9 or more credit(s) from the following:

- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)
- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program

Minor or Supporting Program

Elective

3 credits selected in consultation with faculty advisor

Science, Technology, Engineering, and Mathematics Education

The doctoral program's STEM education track at the University of Minnesota is interdisciplinary, focusing on science education,

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

mathematics education, engineering education or agricultural education. Students pursuing this track will choose an area of emphasis in one of the four specializations, while simultaneously participating in scholarly work that spans all areas of STEM education. This integrated-style is one of the first in the nation, and is designed to prepare scholars to conduct thoughtful disciplinary and interdisciplinary research in STEM education in order to assume roles as university faculty members, educational leaders, policy makers, and researchers.

STEM students must take 6 credits of core coursework, 9 credits of STEM core coursework, 9 credits of focus area specific (science or mathematics or engineering or agriculture) coursework, 15 credits of research coursework, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework

CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)

STEM Core Coursework

CI 8571 - Equity, Policy, and Social Justice in STEM Education (3.0 cr)
CI 8572 - Learning Theory and Classical Research in STEM Education (3.0 cr)
CI 8573 - Nature of Inquiry in STEM Education (3.0 cr)

STEM Focus Area Coursework

Students take 9 credits, with faculty advisor approval, in their focus area: science education or mathematics education or engineering education or agricultural education.

Science Education

3 required credits are listed; 6 additional credits must be taken in consultation with faculty advisor.
CI 8574 - History and Philosophy of Science in Education (3.0 cr)

or **Mathematics Education**

9 credits required in consultation with faculty advisor

or **Engineering Education**

9 credits required in consultation with faculty advisor

or **Agricultural Education**

6 required credits are listed; one additional "AFEE" 3 credit course must be taken in consultation with faculty advisor.
AECM 8090 - Seminar: Agricultural Education and Extension (1.0 - 3.0 cr)
AECM 8094 - Research in Agricultural Education and Extension (1.0 - 6.0 cr)

Research Coursework

Students must take CI 8134 and CI 8135, as well as a minimum of 6 credits of statistics and one research elective course, for a total of 15 credits.

CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)

Statistics Requirement

Students must take a minimum of 6 credits of graduate-level Statistics in consultation with their advisor

Research Electives

3 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.

Take 3 or more credit(s) from the following:

- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)
- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.

- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program

12 credits outside the track, selected in consultation with faculty advisor.

Second Language Education

The PhD track in second language education (SLE) focuses on the study of language use, teaching, learning, and policy across a range of educational and community settings, including programs that serve language minority and language majority learners: ESL/EFL, foreign language education, and bilingual and immersion education. The PhD track is designed to assume roles as university faculty members, researchers, policy makers, and educational leaders. Independent scholarship is the cornerstone of the PhD.

The SLE PhD track has four specializations that correspond to the program's primary focus areas and faculty expertise:
1) Second language acquisition and classroom discourse research examines language learning processes and the way language is used by learners and their interlocutors in or out of school.
2) Second language pedagogy and teacher development research examines teachers' classroom practices and strategies as well as professional identities, experiences and attitudes.
3) Language policy research involves analysis of the formation, implementation, and negotiation of language policy in national, school, community, and private spheres.
4) Languages and cultures across schools and communities research examines connections across homes, schools, and communities with an emphasis on the experience.

SLE students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework

CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)

Major Coursework

Required courses are listed; others selected in consultation with faculty advisor for a total of 15 credits.
CI 8161 - Research Experience I: Study Design and Planning (3.0 cr)
CI 8162 - Research Experience II: Data Analysis and Manuscript Preparation (3.0 cr)

Research Coursework

CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)

Research Electives

9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.
Take 9 or more credit(s) from the following:

- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)
- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program

12 credits outside the track, selected in consultation with faculty advisor.

Elective

3 credits selected in consultation with faculty advisor.

Social Studies Education

The PhD program's social studies education track focuses on issues related to curriculum, instruction, and assessment in K-12 social studies. Full-time graduate students generally have opportunities to supervise student teachers, teach introductory social studies classes, and conduct and publish research with one or more faculty members. Doctoral students are required to complete a research internship with one or more of the faculty as part of their study for the degree. Graduate students are strongly encouraged to present research papers at professional conferences, specifically the National Council for the Social Studies and the American Educational Research Association. Recent PhD graduates have conducted research in the areas of intercultural relations, moral development, multicultural gender-fair curriculum, social studies instructional issues, and the standards movement as it relates to social studies education. Graduates have assumed positions as instructional leaders in the public schools, curriculum development specialists, social studies assessment specialists, and college/university faculty.

Social Studies students must take 6 credits of core coursework, 15 credits of major coursework, 15 credits of research coursework, 3 credits of electives, and 12 credits outside the track. Unless otherwise noted, credits need to be selected in consultation with the student's faculty advisor. 24 doctoral thesis credits are also required.

Core Coursework

CI 8131 - Curriculum and Instruction Core: Critical Examination of Curriculum in Context (3.0 cr)
CI 8132 - Curriculum and Instruction Core: Teaching Theory and Research (3.0 cr)

Major Coursework

15 credits selected in consultation with faculty advisor.

Research Coursework

CI 8134 - Foundations of Research in Curriculum and Instruction I (3.0 cr)
CI 8135 - Foundations of Research in Curriculum and Instruction II (3.0 cr)

Research Electives

9 additional credits to be selected based upon student's research methodology. If student wishes to take a course not selected below, they should first consult with their faculty advisor to make sure it will count as a research elective.
Take 9 or more credit(s) from the following:

- CI 8085 - Narrative Inquiry in Education (3.0 cr)
- CI 8145 - Using Mixed Methods in Educational Research (3.0 cr)
- CI 8146 - Critical Ethnography in Education (3.0 cr)
- CI 8147 - Critical Discourse Analysis in Educational Research (3.0 cr)
- CI 8149 - Qualitative Research: Coding, Analysis, Interpretation, and Writing (3.0 cr)
- CI 8153 - Research Approaches to Classroom Discourse (3.0 cr)
- CI 8155 - Immigrant Families and U.S. Schools (3.0 cr)
- CI 8165 - Queer and Feminist Theories: Collective Memory Research Methods (3.0 cr)
- CI 8371 - Applied Social Network Analysis in Education (3.0 cr)
- CI 8645 - Indigenous Language Revitalization and Activist Research Methods (3.0 cr)
- CI 8671 - Sociolinguistic Research Approaches to Education (3.0 cr)
- CI 8689 - Language and Education Policy (3.0 cr)
- CI 8913 - Interpretive Research (3.0 cr)
- OLPD 5056 - Case Studies for Policy Research (3.0 cr)

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024

- OLPD 5061 - Ethnographic Research Methods (3.0 cr)
- OLPD 5528 *{Inactive}*(1.0 - 3.0 cr)
- OLPD 8502 - Advanced Evaluation Theory and Theory crafting (3.0 cr)
- EPSY 5221 - Principles of Educational and Psychological Measurement (3.0 cr)
- EPSY 5243 - Principles and Methods of Evaluation (3.0 cr)
- EPSY 5244 - Survey Design, Sampling, and Implementation (3.0 cr)
- EPSY 8215 - Advanced Research Methodologies in Education (3.0 cr)
- EPSY 8222 - Advanced Measurement: Theory and Application (3.0 cr)
- EPSY 8224 - Performance Assessment Design and Analysis (3.0 cr)
- EPSY 8225 - Operational Measurement: Test Score Quality Assurance, Standard Setting, and Equating (3.0 cr)
- EPSY 8226 - Applications of Item Response Theory Models (3.0 cr)
- EPSY 8251 - Statistical Methods in Education I (3.0 cr)
- EPSY 8252 - Statistical Methods in Education II (3.0 cr)
- EPSY 8264 - Advanced Multiple Regression Analysis (3.0 cr)
- EPSY 8265 - Factor Analysis (3.0 cr)
- EPSY 8266 - Statistical Analysis Using Structural Equation Methods (3.0 cr)
- EPSY 8267 - Applied Multivariate Analysis (3.0 cr)
- EPSY 8268 - Hierarchical Linear Modeling in Educational Research (3.0 cr)
- EPSY 8282 - Statistical Analysis of Longitudinal Data (3.0 cr)
- AMST 8289 - Ethnographic Research Methods: Research Strategies in American Studies (3.0 cr)
- ANTH 8203 - Research Methods in Social and Cultural Anthropology (3.0 cr)
- LING 5462 - Field Research in Spoken Language (3.0 cr)

Minor or Supporting Program

12 credits outside the track, selected in consultation with faculty advisor.

Elective

3 credits selected in consultation with faculty advisor.

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 29, 2024