*Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Term of Admission to Ph.D. Program: Current Date:*

DOCTOR OF PHILOSOPHY (Ph.D.) DEGREE PLANNING TOOL

Math, Science & Engineering

## Department of Curriculum and Instruction, University of Illinois at Urbana-Champaign

MSE DOCTORAL PROGRAM SUGGESTED PROGRAM OF STUDY: (minimum 64 hours beyond master’s plus Research Specialization)

* MST Proseminar I & II 4 credit hours
* “Breadth” and “Depth” Courses minimum of 32 credit hours

• Thesis Research 4–32 credit hours

• Research Specialization minimum of 16 hours in addition to the above 64 hours

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| --- | --- | --- |
| INTRODUCTORY COURSES – Take at beginning of program | *Sem. Planned* | *Semester Taken* |
| CI 550: Methods of Ed. Inquiry *(or equivalent)* Part of research specialization requirements. Course should be taken during first semester of doctoral program. |  |  |
| CI 536: MST Proseminar I (2 credits) |  |  |
| CI 546: MST Proseminar II (2 credits) |  |  |

### 

### “BREADTH” COURSES (minimum of 16 credits):

### Ph.D. students will take at least one course (4 semester hours) from each of the following four foundational areas. Faculty advisors will help students determine where courses “fit”.

|  |  |  |  |
| --- | --- | --- | --- |
| *Breadth Area* | *Course* | *Sem. Planned* | *Semester Taken* |
| Historical/Philosophical Foundations |  |  |  |
| Learning & Instruction |  |  |  |
| Critical Studies/Equity |  |  |  |
| Curriculum & Teacher Education |  |  |  |

### “DEPTH” COURSES (AREA OF SPECIALIZATION) (minimum of 16 credits)

In addition to the breadth areas, students will choose coursework that enables them to focus deeply on a specific area. This area of focus might be within one of the above areas or it might cut across or go beyond the four areas. Students must consult with their advisors to choose their focal area and appropriate coursework for that area. This focal area will then help define an emphasis for the student's independent research, culminating in the doctoral dissertation. Particular sub-areas of the MSE Division (e.g., elementary mathematics) might have additional or more focused specific requirements.

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| --- | --- | --- |
| *Course* | *Sem. Planned* | *Semester Taken* |
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### EARLY RESEARCH PROJECT To be completed within the first 2 years of course work

ERP Committee Members (advisor + 2 faculty)

ERP Proposal Human Subjects Approval (if involving human subjects):

ERP Project Committee Defense:

### PH.D. RESEARCH REQUIREMENT: (Minimum of 16-20 semester hours)

(Refer to <http://education.illinois.edu/current-students/graduate/coe-graduate-handbook/phd/research-requirement> for specific requirements).

*Select one Research Specialization*

|  |  |  |
| --- | --- | --- |
| *Interpretive* | *Qualitative* | *Quantitative* |
| Foundational Research Methods (CI 550 or equivalent) | Foundational Research Methods (CI 550 or equivalent) | Foundational Research Methods (CI 550 or equivalent) |
| Highly Recommended: Basic quantitative methods course (e.g., CI 590 Quantitative Research Literacy) | Highly Recommended: Basic quantitative methods course (e.g., CI 590 Quantitative Research Literacy) | Strongly recommended: Qualitative or mixed-methods course |
| Basic methods course | Basic methods course | Basic Course 1 (e.g., EPSY 580 ) |
| Advanced methods course | Advanced methods course | Basic Course 2 (e.g., EPSY 581 |
| Advanced methods course | Advanced methods course | Advanced methods course |
|  |  | Advanced methods course |

### RESIDENCY REQUIREMENT 2 consecutive semesters with 12 “real” hours each (or 8 credits with assistantship).[[1]](#footnote-1) Refer to <http://education.illinois.edu/students/grad_handbook/phd> for more specifics.

# Fulfilled?: Dates:

### QUALIFYING EXAMINATIONS (Typically by end of Year 3)

General Field Quals (Anticipated semester: ) Completed:

Readers (Advisor + 2 faculty):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Special Field Quals (Anticipated semester: ) Completed:

Readers (Advisor + 2 faculty):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### PRELIMINARY ORAL EXAM (Must provide a copy of IRB approval when filing “Request for Appointment of Committee Examination” 3-4 weeks in advance)

IRB approval:Paperwork for exam filed (3-4 weeks in advance)\_\_\_\_\_\_ Exam completed:

Committee members (Advisor + at least 3 faculty. Must include at least 1 outside CI, & at least 2 tenured):

### THESIS CREDITS: 4-32 semester hours.

### FINAL ORAL EXAM

Planned: Completed: OTHER HIGHLY RECOMMENDED ACTIVITIES FOR MSE PH.D. STUDENTS

### PROFESSIONAL ASSOCIATION MEMBERSHIP(S):

PROFESSIONAL CONFERENCE ATTENDED:

Title:

Conference: Status:

### CONFERENCE PROPOSAL SUBMITTED:

Title:

Conference: Status:

MANUSCRIPT SUBMITTED:

Title:

Journal: Status:

*Annual Review Completed (Use department form--on CI website): [Date, Adviser Initials]*

|  |  |
| --- | --- |
| **Year 1:** | **Adviser:** |
| **Year 2:** | **Adviser:** |
| **Year 3:** | **Adviser:** |
| **Year 4:** | **Adviser:** |
| **Year 5:** | **Adviser:** |

*Note:* Copies to be filed annually with adviser and department*.*

APPENDIX

EXAMPLES OF COURSES FOR BREADTH REQUIREMENTS

*NOTE: SOME OF THESE COURSES MIGHT BE OFFERED RARELY, WHILE OTHER COURSES NOT LISTED HERE MIGHT HAVE BEEN RECENTLY DEVELOPED. YOU SHOULD NOT FEEL BOUND TO THESE LISTS. CONSULT WITH YOUR ADVISOR ABOUT WHICH COURSES YOU SHOULD TAKE TO FULFILL THE BREADTH AREAS.*

**Historical and Philosophical Foundations**

CI 542 Science education and philosophy of science

CI 530 Issues and trends in mathematics education

CI 543 Constructivism and mathematics, science, and technology education

CI 544 Science inquiry and educational reform

CI 547 Sociopolitical perspectives in mathematics and science education

CI 590 MSE Research design in mathematics and science education

## **Learning and Instruction**

CI 507 DL Digital Learning

CI 533 Problem solving in mathematics teaching and learning

CI 534 Teaching and learning Geometry

CI 535 Teaching and learning Algebra

CI 537 Discourse in STEM classrooms

CI 507 RT Reflective teaching

CI 531 IEM Investigative approach to teaching elementary mathematics

CI 541 Learning in science

CI 543 Constructivism and mathematics, science, and technology education

CI 544 Science inquiry and educational reform

CI590IFM Informal and formal mathematical learning

CI 590PML Psychology of mathematics learning

CI 590 UBL Ubiquitous Learning and New Media

## **Critical Studies and Equity**

CI 547 Sociopolitical perspectives in mathematics and science education

CI508 Urban schools and schooling

CI 590 EET Equity issues in K-12 educational technology

CI 590 LEE Large-scale looks at equity in education

## **Curriculum and Teacher Education**

CI 531 IEM: Investigative approach to teaching elementary mathematics

CI 532 Professional development in mathematics education

CI 548 Capstone project (Action Research)

CI 551 Research on teaching: Issues and methods

CI 590 PTE Programs in teacher education

*Updated 12.10.16*

1. The Ed.D. differs from the Ph.D. in that there are fewer required research courses (but instead there is a research methodology qualifying exam), no early research project, and a modified residency requirement. Ed.D candidates must participate in an approved full-time combination of academic courses and professional experiences over four consecutive semesters, during which a total of at least 16 academic hours of course work must be taken on the UIUC campus (Independent study may not count as part of these 16 hours). See <http://education.illinois.edu/students/grad_handbook/edd> for more information. [↑](#footnote-ref-1)