

Ph.D. Program Planning Sheet
Math/Science Education Focus - Teaching and Teacher Education

Name of Student: _____ Admission Date: _____

TTE Advisor: _____

Major: Teaching and Teacher Education Minor: _____

Qualifying Exam - Taken either 2nd semester (full-time students) or 2nd year. Exam Date: _____

Plan of Study – Developed with advisor, must be filed no later than student's 3rd semester in residence. Date filed: _____

Comprehensive Exam*

(Students have 12 months to complete this sequence from In-House Exam to Orals, including the requirements for the minor comps.)

Date of In-House Exam: _____ (8 hours, committee poses 2 broad questions beyond student's dissertation interests, taken towards end of second to last semester of coursework)

Date of Scholarly Paper: _____ (25-30 pages, student & committee decide topic, lit review or theoretical essay, encouraged to cover dissertation topic, taken towards middle of last semester of coursework)

Date of Oral Examination: _____ (must be attended by all 4 members of the committee)

*The In-House Exam and Scholarly Paper satisfy the written portion of the comprehensive exam for the TTE Major. The written portion of the comprehensive exam for the Minor will be determined by the Minor Advisor (for a Mathematics Minor, this is traditionally a question from the Minor Advisor).

Required Courses

1. TTE Major Core (7 units)

- _____ TTE 696C First Year Doctoral Seminar (1 unit; Fall)
- _____ TTE 696B Research on Teaching (3; Fall, to be taken during the first two years)
- _____ TTE 696A Research on Teacher Education (3; Fall, to be taken after two years)

2. Research Methods (Minimum of 12 or 13 units)

- _____ EDP 541 Quantitative/Inferential Methods in Education (4; Fall and Summer) or equivalent (can be 3 credits, also recommended is HED 611)
- _____ LRC/HED 605 Qualitative Methods in Education (3; Fall and Spring)
- _____ Advanced Quantitative or Qualitative Course (3; semesters vary)
- _____ TTE 602 Dissertation Proposal Design (3; Spring)

Notes:

- (a) In addition to the above research courses, and in consultation with the advisor, the student may be required to take EDP 560 Disciplined Inquiry in Education. This will be the case for students who did not take any research methods courses for their master's degree or who need additional background before enrolling in EDP 541.
- (b) For students pursuing **quantitative** research for their dissertation, the advanced course will be TTE 641(Spring). In addition, and as part of the Major Supportive Courses, the advisor may require students pursuing the quantitative (or mixed) dissertation to enroll in additional courses. The advisor may require one of three paths (students may take equivalent courses to those listed (see additional information on regular advising paperwork).
- (c) For students pursuing **qualitative** research for their dissertation, the advanced course should be discussed with the advisor. The advisor may require additional qualitative courses (in which case they would be a part of Major Supportive Courses), and if so, they may be taken from any discipline on campus. Some of the courses offered in the College of Education are: LRC 576 Teacher Research (Spring); LRC 595E Ethnography (Fall); LRC 696D Case Study (Every other Spring); LRC 696D Discourse Analysis (Fall)
- (d) It is highly recommended that students take a Writing for Publication course, either from our department or elsewhere from campus.

3. Research Experience (6 units)

_____ TTE 793 (3)
_____ TTE 793 (3)

4. Major Supportive Courses (Minimum of 15 units)

_____ TTE 542 School Mathematics and Science: History, Curriculum, and Reform (3 units)
_____ TTE 541 Equity, Diversity, and Social Justice in Math/Science Education (3 units)
_____ TTE 519 Learning in Mathematics and Science (3 units)

Other possible courses (offered every 2-3 years):

- TTE 596C Teaching Science and Mathematics Methods to Preservice Teachers
- TTE 596C Indigenous Knowledge in Mathematics and Science
- TTE 580 Groupwork in Diverse Classrooms
- TTE 596C Discourse and Identity

5. Minor (Minimum of 9 units in the minor content area – may include content appropriate TTE courses as approved by advisor/committee. Math minor requires 12 units and paperwork see: <http://math.arizona.edu/gradprogram/handbook/phdminor.html>)

6. Dissertation - TTE 920 (18 units)

TOTAL: Minimum of 68 UNITS

Qualifying/Comprehensive exam committee (at least 4 members, at least 2 for the Major must be tenure-track TLS, at least 3 tenure track (or approved as tenure-eligible) overall).

Major Advisor _____ Major Member _____

Major Member _____ Minor Advisor _____

Other Member _____

Dissertation committee (at least 3 tenure-track or approved as tenure equivalent)

Dissertation Director _____ Member _____

Member _____