

# Doctor of Philosophy (Ph.D.) in Curriculum and Instruction (C&I)

with emphasis in Mathematics Education

For a student who has completed an approved master's degree at a U.S. institution, a minimum of 64 hours is required on the degree plan for the degree of Doctor of Philosophy. For a student who has completed a baccalaureate degree but not a master's degree, a minimum of 96 hours is required on the degree plan for the degree of Doctor of Philosophy. (Courses in "bold" print are required.)

Core requires 12 hours:

Course Number	Course Title	Credit Hours
<b>EDCI 601</b>	<b>Disciplinary Knowledge and Research in C&amp;I*</b>	<b>3</b>
Additionally, choose 3 of the following 5 courses:		
EDCI 646	Instruction Theory	3
EDCI 647	Curriculum Theory	3
EDCI 658	History of Education	3
EDCI 662	Philosophical Theories of Education	3
EDCI 606	Cognition, Culture and Literacy	
Total		12

\*EDCI 601 must be taken during the first semester.

For doctoral students admitted under the current catalog:

Students and their advisors will choose one of the following three research sequences that is most appropriate for their needs. Any substitutions to these sequences will need to be approved by the student's chair and dissertation/thesis committee.

### Contact:

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**Research Core**

Requires 15 hours

Students and their advisors will choose one of the following three research sequences that is most appropriate for their needs. Any substitutions to these sequences will need to be approved by the student's chair and dissertation/thesis committee.

Note: Adjustments may be made to the various research sequences due to course availability. Students should meet with their major advisors to make the necessary changes. To fulfill the research requirement, the remaining 6 hours should be selected from approved advanced courses (see ARM) and in conjunction with their advisor.

Learn more: <http://education.tamu.edu/advanced-research-methods-certificate>

Research Core Courses Course Number	Sequence A Course Title	Credit Hours
EDCI 605 <b>OR</b> EHRD 655	Qualitative Research Methods in C&I Qualitative Research	<b>3</b>
EPSY 640	Experimental Design in Education I	3
EPSY 641	Experimental Design in Education II	3
Total		9

Research Core Courses Course Number	Sequence B Course Title	Credit Hours
EDCI 605 <b>OR</b> EHRD 655	Qualitative Research Methods in C&I Qualitative Research	<b>3</b>
STAT 651	Statistics in Research I	3
STAT 652	Statistics in Research II	3
Total		9

Research Core Courses Course Number	Sequence C Course Title	Credit Hours
EDCI 686	Research Methods in EDCI I	<b>3</b>
EDCI 687	Research Methods in EDCI II	3
EDCI 688	Advanced Research Methods in EDCI	3
Total		9

**Mathematics Education Core**

Requires 24 hours

Students and their advisors will choose from among the following mathematics education courses that are most appropriate for their needs. Any substitutions will need to be approved by the student's chair and dissertation/thesis committee.

Occasionally, additional courses may be offered that could count toward the Mathematics Education Core, students should check with their advisor to ensure a particular course will count.

Research Core Courses Course Number	Sequence A Course Title	Credit Hours
EDCI 617	Early Childhood Mathematics	3
EDCI 619	Teaching and Learning Number and Quantity Concepts	3
EDCI 620	STEM Teaching & Learning	3
EDCI 621	Teaching and Learning Space, Dimension and Measurement	3
EDCI 622	Theories of Learning and Teaching Mathematics	3
EDCI 623	Teaching and Learning Pattern and Change Concepts	3
EDCI 627	Teaching and Learning Data Analysis and Uncertainty Concepts	3
EDCI 628	Analyzing and Reporting Field Based Research	3
Total		24

13 Doctoral research hours in EDCI 691 are required.