

Required Cores in the Program of Studies
Science Education Major within the Curriculum and Instruction Ph.D. Program

<p><u>Requirements for the Doctorate in Curriculum and Instruction</u> (Minimum 65 SCH)</p>	<p style="text-align: center;">Doctorate in Curriculum and Instruction with a Major in Science Education 78 SCH (54 + 24 Dissertation)</p>
<p>Interdepartmental Core (9 SCH)</p> <ul style="list-style-type: none"> ● Curriculum Theory (3) ● Learning Theory (3) ● Policy Studies (3) 	<p>Interdepartmental Core (9 SCH)</p> <ul style="list-style-type: none"> ● Curriculum Theory (3) - EDG 6221: Curriculum Theory (3) ● Learning Theory (3) - SCE 5147: Perspectives on Learning in Science Education or EDG 5216: Theories of Learning ● Policy Studies (3) - SSE 5937: Impact of Policy on Teaching and Teacher Education
<p>Seminars (min. of 2; 2 SCH)</p>	<p>Seminars (4 SCH)</p> <ul style="list-style-type: none"> ● SCE 5946r: Supervised Teaching I (1) – required ● SCE 5946r: Supervised Teaching II (1) – required ● EDG 6008: Academic and Professional Identity ● EDG 6369: Critiquing Educational Research
<p>Research Methods Core (15 SCH)</p>	<p>Research Methods Core (20 SCH from the following)</p> <ul style="list-style-type: none"> ● SCE 5910r: Supervised Research I (1) – required (research rotation) ● SCE 5910r: Supervised Research II (1) – required (research rotation) ● EDF 5400: Descriptive and Inferential Statistics (4) ● EDF 5401: General Linear Modeling Applications (4) ● EDF 5402: Advanced Topics in Analysis of Variance (3) ● EDF 5410: Nonparametric Analysis Applications (3) ● EDF 6937: Seminar in Advanced Research Problems - HLM (3) ● EDF 6475: Qualitative Methods in Educational Research (3) ● EDF 6479: Qualitative Data Analysis (3) ● SCE 6761: Classroom Based Research ● MAE 6939: Research in Mathematics Education
<p>Major (15 SCH)</p>	<p>Major (21 SCH)</p> <ul style="list-style-type: none"> ● SCE 5336: Instructional Strategies in Science Education (3) ● SCE 6761: Research, recent developments, and current issues (Modeling the Mind) (3) ● SCE 5895: Disciplinary Engagement in Science (3) ● EDF 6547: Philosophical foundations of educational research ● SCE 5545: Policy, equity, and instruction in science learning ● SCE 6395: Teacher Learning and Professional Development ● MAE 6939: Seminar in Mathematics Teacher Education
<p>Dissertation Research (24 SCH) Includes satisfactory completion of a comprehensive exam, dissertation, and oral defense of the dissertation.</p>	<p>Dissertation Research (24 SCH)</p> <ul style="list-style-type: none"> ● SCE 8964 Preliminary Doctoral Examination (0) ● SCE 6980 Doctoral Dissertation (24) ● SCE 8985 Dissertation Defense (0)