

**Ph.D Programs in Teaching & Teacher Education (TTE)**  
**Concentration: Environmental Learning and Sustainability Education**

The degree consists of a minimum of 50 units (plus 18 dissertation units). 26 of those units (52%) are common for all students.

**Common Curriculum (26 units) (52% of total units not including dissertation)**

TTE Major Core (7 units)

First Year Doctoral Seminar (TTE 696C) (1 unit)  
Research on Teaching (TTE 696B) (3 units)  
Research on Teacher Education (TTE 696A) (3 units)

Research Methods (Minimum of 13 units)

Quantitative/Inferential Methods in Education (EDP 541) (4 units)  
Qualitative Methods in Education (LRC 605 or HED 605) (3 units)  
Advanced Quantitative or Qualitative Course (selected in consultation with advisor) (3 units)  
Dissertation Proposal Design (TTE 602) (3 units)

Research Experience (6 units)

Internship: Classroom Research TTE 793 (6 units)

**Concentrations (24 units) (48% of total units not including dissertation)**

**Subplan “Environmental Learning”**

Major Supporting Coursework (minimum of 15 units)

Required: Environmental Learning (TTE 530, 3 units)  
Required: Education and Sustainability (TTE 560, 3 units)  
Optional: Comparative Education (TTE 596c, 3 units)  
Optional: Earth Education (TTE 596c, 3 units)  
Optional: Internship (TTE 593, 3 units)  
Optional: relevant courses selected in consultation with advisor

Minor (9 units)

A minor in Anthropology, Ecology, Environmental Science, Environmental Studies, Geography, Natural Resources, Sustainable Architecture and Design, and other related fields or a minor with Teaching and Teacher Education.

**Subplan “Science Education”**

Major Supporting Coursework (minimum of 15 units)

Required: Learning in Science and Mathematics (TTE 519, 3 units)  
Required: Equity, Diversity, and Social Justice in Math/Science Education (TTE 541, 3 units)  
Required: School Mathematics and Science: History, Curriculum, and Reform (TTE 596c, 3 units)  
Optional: Research on Preparing Elementary Teachers in Mathematics and Science (TTE 538, 3 units)  
Optional: Groupwork in Diverse Classrooms (TTE 592, 3 units)  
Optional: Indigenous Knowledge in Mathematics and Science (TTE 596c, 3 units)  
Optional: Discourse and Identity (TTE 596c, 3 units)  
Optional: relevant courses selected in consultation with advisor

Minor (9 units)

A minor in a science department or a minor within Teaching & Teacher Education.

### **Subplan “Mathematics Education”**

#### Major Supporting Coursework (minimum of 15 units)

Required: Learning in Science and Mathematics (TTE 519, 3 units)

Required: Equity, Diversity, and Social Justice in Math/Science Education (TTE 541, 3 units)

Required: School Mathematics and Science: History, Curriculum, and Reform (TTE 596c, 3 units)

Optional: Research on Preparing Elementary Teachers in Mathematics and Science (TTE 538, 3 units)

Optional: Groupwork in Diverse Classrooms (TTE 592, 3 units)

Optional: Indigenous Knowledge in Mathematics and Science (TTE 596c, 3 units)

Optional: Discourse and Identity (TTE 596c, 3 units)

Optional: relevant courses selected in consultation with advisor

#### Minor (9 units)

A minor in Mathematics or a minor within Teaching & Teacher Education.

### **Subplan “Teaching Mexican American Students”**

#### Major Supporting Coursework (minimum of 15 units)

Required: Teaching Mexican American Students (TTE 596c, 3 units)

Required: Equity in Schools and Society (TTE 537, 3 units)

Required: Education of Latina/os (TTE/MAS 575, 3 units)

Optional: Immigration and Education (LRC 641, 3 units)

Optional: Foundations of Second Language Acquisition (LRC 510, 3 units)

Optional: Public History in Mexican American Communities (MAS 595, 3 units)

Optional: The U.S.-Mexican Borderlands in Comparative Perspective (MAS 529, 3 units)

Optional: Assessment of Bilingual Exceptional Learners (SERP 535)

Optional: Teaching Bilingual Exceptional Learners (SERP 536)

Optional: relevant courses selected in consultation with advisor

#### Minor (9 units)

A minor in Language, Reading & Culture; Mexican American Studies; or other relevant department, or a minor within Teaching & Teacher Education.

### **Subplan “Early Childhood Education”**

#### Major Supporting Coursework (minimum of 15 units)

Optional: Developing Programs for Young Children (TTE 528, 3 units)

Optional: Theories of Development in Early Childhood (TTE 596c, 3 units)

Optional: Observation and Documentation as Tools for Assessing Children and Family Stories (LRC 595a, 3 units)

Optional: Early Literacy Curriculum & Instruction (LRC 532, 3 units)

Optional: Art of the Picture Book (LRC 582, 3 units)

Optional: Literature and Literacy for the Young Child (LRC 584, 3 units)

Optional: Language Acquisition and Development (LRC 652, 3 units)

Optional: Written Language Development (LRC 653, 3 units)

Optional: Early Childhood Perspectives on Language Socialization across Cultures (LRC 595a, 3 units)

Optional: relevant courses selected in consultation with advisor

#### Minor (9 units)

A minor in a relevant department, or a minor within Teaching & Teacher Education.