

STEM Higher Education Research, Minor

The field of STEM (science, technology, engineering, and mathematics) higher education research has emerged over the last several decades. The emergence of this area of research is in part due to a lower than optimal degree of success for students aiming to pursue a STEM degree and the increasing evidence that there are significant disparities in this success for minoritized student populations. The minor program enables STEM students to pursue coursework in the education and social sciences while leveraging their disciplinary knowledge to improve teaching and learning in STEM higher education settings.

Students who complete the minor requirements are capable of designing an education research study in a STEM higher education context, identifying the appropriate theory and methodologies to conduct this study, conducting the study, and communicating their findings to the field at large. Students also learn about social and behavioral research ethics requirements and complete relevant training and certification.

A. Select one from the following	
Introductory Education Courses	
EDUC 25	Introduction to Education: Disciplinary Perspectives
EDUC 30	21st Century Literacies
EDUC 40	Theories of Development and Learning Applied to Education
SOCIOL 63	Race and Ethnicity
SOCIOL 68A	Ethnic and Immigrant America
B. Select two from the following:	
Upper-Division Education	
EDUC 131	Educational Technology
EDUC 143	Controversies in College
EDUC 146	Education, Learning, and Culture
EDUC 147	Poverty, Education, and Social Change
EDUC 145	Theories and Pedagogies of Race in Education
EDUC 156	Introduction to Field Methods in Education
EDUC 157	Educational Research and Evaluation
EDUC 159	Experimental Research Methods
EDUC 179W	Advanced Writing for Education Sciences
SOCIOL 110	Research Methods
SOCIOL 157A	Sociology of Education
SOCIOL 167A	Racial and Ethnic Relations in the United States
C. Select one from the following:	
Methods	
EDUC 10	Educational Research Design
EDUC 15	Statistics for Education Research
D. Complete:	
ENGR 113/BIO SCI 105	Introduction to STEM Education Research
E. Select two upper-division STEM courses from the following programs: Biological Sciences, Information and Computer Sciences, Engineering, Physical Sciences	
F. Capstone sequence: Complete three quarters of mentored independent research (199 units) with a faculty advisor affiliated with the STEM Higher Education Research minor program	