

**Current Approved Elective STEM Courses (as of Spring 2024)  
for the MSE in Curriculum & Instruction: STEM Education**

*Note: Consult with your advisor for options and course availability during your periods of enrollment.*

AEP	TBD	AI in Education (in development to be offered fall, 2024)	3
MATH	881	Geometry and Measurement	3
MATH	882	Concepts of Algebra	3
MATH	883	Concepts of Calculus	3
MATH	885	Concepts of Probability and Statistics	3
CHEM	673G	Problems in Chemistry (Preparation for the Praxis)	3
CHEM	682G	Special Topics in Chemistry: Candy Making	3
CHEM	682G	Special Topics in Chemistry: The Chemistry of Cooking	3
CHEM	682G	Special Topics in Chemistry: Intro to Forensic Chemistry	3
CHEM	682G	Other special topics as developed	1-3
*CHEM	632G	Physical Chemistry: Chemical Thermodynamics	3
*CHEM	634G	Physical Chemistry: Quantum Mechanics and Chemical Kinetics	3
*CHEM	656G	Instrumental Analysis	3
*CHEM	644G	Organic Chemistry	3
*CHEM	666G	Inorganic Chemistry	3
*CHEM	646G	Theories of Organic Chemistry	3
*CHEM	662G	Biochemistry 1	3
CHEM	801	Introduction to Graduate Studies in Chemistry and Chem Educ.	1
CSCI	601G	Advanced Programming	3
CSCI	663G	Introduction to Cryptography	3
CSCI	682G	Application Layer Programming	3
CSCI	861	Cloud Computing	3
CSCI	865	Machine Learning	3
CSCI	866	Data Mining and Knowledge Discovery	3
CSCI	881	Internet of Things	3
CSCI	896	Digital Image Processing	3
PHYS	601G	Computational Physics Laboratory (offered online)	3
PHYS	608G	Special Topics I: Preparation for the Physics Praxis Exam	3
PHYS	620G	Mathematics for Physical Science	3
PHYS	621G	Mechanics	3
PHYS	632G	Electricity and Magnetism	3

PHYS	651G	Advanced Laboratory I	3
PHYS	652G	Optics	3
PHYS	654G	Advanced Laboratory II	3
PHYS	660G	Solid State Physics	3
PHYS	672G	Thermal Physics	3
PHYS	676G	Apprenticeship in Physical Science Teaching	3
PHYS	677G	Quantum Mechanics I	3
GSCI	600G	Kansas Geography	3
GSCI	602G	Exploring Earth's History	3
GSCI	603G	Urban Geography	3
GSCI	605G & 605 LG	Geomorphology + Lab	3
GSCI	644G	Climatology	3
GSCI	652G	Climate Change: Science and Impacts	3
GSCI	685G	Writing in the Science	3
BIOL	607G	Topics in Biology: Genes and Development	3
BIOL	607G	Topics in Biology: Science and Ethics of Biotechnology	3
BIOL	607G	Topics in Biology: Preparation for the Biology Praxis Exam	3

\*Prerequisites: CHEM 112 General Chemistry I and CHEM 114 General Chemistry II or course equivalents