

STEM Teaching Certificate

These courses in agricultural education, science, technology, engineering and mathematics will increase the K-14 teachers' understanding and application of STEM instruction. All of the listed certificate course credits can be applied to MSSE Programs of Study. The courses chosen for the STEM certificate are all electives in the MSSE Program. Students will successfully complete 12 credits, with at least one course from each of the STEM content areas AND one methods course in either STEM or Engineering. The methods course will also count as the content course in that STEM area.

Agricultural Education		
AGED 507	Program Planning and Evaluation	3
AGED 511	Philosophy of Teaching and Learning in Agricultural Education	3
Science		
MSSE 501	Inquiry Sci Eng Prac	2
MSSE 511	STEM Methods for Teachers	2
Any science course listed on the MSSE course catalog: https://www.montana.edu/msse/course-catalog/index.html		
Technology		
MSSE 502	Emerging Technology and the Science Classroom	2
CSCI 581	Computational Thinking Tchrs	2
CSCI 582	Joy Beauty Data for Teachers	2
Engineering		
EGEN 511	Engineering Methods for Teachers	3
EELE 508	Solar Cell Basics for Teachers	2
Mathematics		
M 517	Advanced Mathematical Modeling for Teaching	3
M 518	Statistics for Teaching	3
M 520	Access and Equity in Mathematics Teaching	3
M 521	Mathematics Learning Theory for Teaching	3
MSSE 508	Statistics Bootcamp for MSSE Capstone Projects	1

See the attached certificate course requirements.