

East Central College — Missouri S&T

Applied Math BS with Secondary Education Teacher Certification Transfer Guide

Effective as of Fall 2023

East Central College

Missouri S&T

Communication Skills (Take all courses)

ENG 101	English Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
ENG 102	English Composition II	3	ENGLISH 1160	Writing and Research	3
COM 110	Public Speaking	3	SPMS 1185	Principles of Speech	3
		Total Hours			9

Mathematics and Science (Take all courses)

MTH 183	College Algebra	3	MATH 1140*	College Algebra*	3
			*Required for teacher certification; not a Mathematics BS requirement.		
MTH 171	Trigonometry	2	MATH 1160*	Trigonometry*	2
			*Required for teacher certification; not a Mathematics BS requirement.		
MTH 190	Analytic Geometry & Calculus I	5	MATH 1214	Calculus I	4
MTH 210	Analytic Geometry & Calculus II	5	MATH 1215	Calculus II	4
MTH 220	Analytical Geometry & Calculus III	5	MATH 2222	Calculus III	4
PHY 211, 212	General Physics I and Lab	5	PHYSICS 1135	Engineering Physics I	4
PHY 221, 222	General Physics II and Lab	5	PHYSICS 2135	Engineering Physics II	4
		Total Hours			30
					25

Social Sciences (Take all courses)

CIV 202 or HST 101 or HST 102	European Civilization II or US History to 1865 or US History 1865-1945	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310	Modern Western Civilization or American History to 1877 or American History Since 1877	3
PSC 102	US Government I: National and State	3	POL SCI 1200	American Government	3
PSY 101	General Psychology	3	PSYCH 1101	General Psychology	3
ECO 102 or ECO 101	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
		Total Hours			12

Humanities (Take all courses)

ART 101 or MUS 101 or THE 101 or PHL 101	Art Appreciation or Music Appreciation or Theatre Appreciation or Introduction to Philosophy	3	ART 1180 or MUSIC 1150 or THEATRE 1190 or PHILOS 1105	Art Appreciation or Music Appreciation or Theatre via Video or Intro to Philosophy	3
ENG 210 or ENG 221 or ENG 124 or ENG 214 or ENG 215	Survey British Lit: Beginnings to 1784 or Survey American Lit: Colonial to 1865 or World Literature I or Women's Literature or African-American Literature (or other literature elective)	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242 or ENGLISH 2245 or	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I or Literature by Women or African American Literature (or other literature elective)	3
		Total Hours			6

Additional Degree Requirements

Select additional courses to total up to the maximum transfer credit hours shown below.

MTH 245	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
MTH 241	Linear Algebra	3	MATH 3108	Linear Algebra	3
CHEM 111 or BIO 111	General Chemistry I and Lab or General Biology I and Lab	5	CHEM 1310, 1319 or BIO SCI 1113, 1219	General Chemistry I and Lab or General Biology and Lab	5
EGR 251 or EGR 221, 222	Data Structures or C++ Program Engineers and Lab	3-4	CS 1500 or CS 1971,1981	Computational Problem Solving or Intro to Programming Methodology and Lab	3
MTH 242	Engineering Statistics	3	STAT 3115	Engineering Statistics	3

Additional Courses for Teacher Certification Option (Take all courses)

EDU 201 or EDU 214	Foundations of Education or Multicultural Education	3	EDUC 1040	Perspectives in Education	2
EDU 241	Educational Psychology	3	PSYCH 2300 (EDUC 2102)	Educational Psychology	3
PSY 250	Human Development	3	PSYCH 3310	Developmental Psychology	3
EDU 244	Education of the Exceptional Learner	3	PSYCH 4310	Psychology of the Exceptional Child	3
		Total Hours			12
					11

Professional Requirements for Teacher Education Program: Please view all program requirements at <https://teachereducation.mst.edu/secondaryeducation/>.

Maximum credit hours to be transferred to Missouri S&T degree requirements.

60

Missouri S&T residency requirements: The last 60 hours of any Missouri S&T degree must be completed at Missouri S&T.
Students must receive special permission from Missouri S&T to apply more than the maximum credit hours listed above toward the Missouri S&T degree.
Students are not required to complete all courses on this guide before transferring to Missouri S&T.