

East Central College — Missouri S&T

Applied Math BS with Secondary Education Teacher Certification

Transfer Guide Effective as of Fall 2026

Students are not required to complete all courses on this guide before transferring to Missouri S&T.

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 or COM 110	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
		Total Hours	6		
				Total Hours	6

Mathematics and Science

Take all courses.

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
CHEM 111 or BIO 111 or BIO 121 or GEO 101	General Chemistry I and Lab (5) or General Biology Lecture and Lab (5) or Principles of Biology I and Lab (5) or Intro to Physical Geology (3)	3	CHEM 1310, 1319* or BIO SCI 1113, 1219* or BIO SCI 1213*, 1219* or GEOLOGY 1110	General Chemistry I (4) and Lab* (1) or General Biology* (3) and Lab* (1) or Principles of Biology (3) and Lab*(3) or Physical and Environmental Geology (3) Satisfies the 3-hour science requirement. Credit hours apply to degree totals as indicated for each course. *BIO SCI 1213 will be substituted for 1113. CHEM 1319 and BIO SCI 1219 are not degree requirements, will transfer as general elective credit.	3
		Total Hours	23		
				Total Hours	19

Social Sciences

Take all courses.

HST 101 or HST 102	US History to 1865 or US History 1865-1945	3	HISTORY 1300 or HISTORY 1310	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
		Total Hours	9		
				Total Hours	9

Humanities

Select one course.

ART 101	Art Appreciation	3	ART 1180	Art Appreciation	3
MUS 101	Music Appreciation	3	MUSIC 1150	Music Appreciation	3
THE 101	Theatre Appreciation	3	THEATRE 1190	Theatre via Video	3
ENG 210 or ENG 211 or ENG 221 or ENG 222 or ENG 124	Survey British Lit: Beginnings to 1784 or Survey British Lit: Romantic to Present or Survey American Lit: Colonial to 1865 or Survey American Lit: 1865 to Present or World Literature I or other non-prerequisite literature	3	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231	British Literature I: The Beginnings to 1800 or British Literature II 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I or other non-prerequisite literature	3
		Total Hours	3		
				Total Hours	3

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
EGR 221,222 or EGR 251	C++ Program Engineers and Lab (4) or Data Structures (3)	3	CS 1500	Computational Problem Solving	3

Teacher Certification Requirements

Take all courses.

EDU 201 or EDU 214	Foundations of Education or Multicultural Education	3	EDUC 1074	Education in a Diverse Society	3
EDU 190 or EDU 212	CDA Capstone-Childcare Practicum or Teaching Professional/Field Experience	3	EDUC 1104	Teacher Field Experience I	1
EDU 241	Educational Psychology	3	EDUC 2102 or PSYCH 2300	Educational Psychology	3
PSY 250	Human Development	3	PSYCH 3310	Developmental Psychology	3
EDU 244	Education of the Exceptional Learner	3	EDUC 2310 or PSYCH 4310	Education of the Exceptional Child or Psychology of the Exceptional Child	3
		Total Hours	15		
				Total Hours	13

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.