

East Central College — Missouri S&T

Applied Math BS with Secondary Education Teacher Certification

Transfer Guide Effective as of Fall 2025

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 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) 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
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 (5) or General Biology and Lab (4) Satisfies the 5-hour science requirement. Credit hours apply to degree totals as indicated for each course.	5
EGR 221,222 or EGR 251	C++ Program Engineers and Lab (4) or Data Structures (3)	3	CS 1500	Computational Problem Solving	3
MTH 242	Engineering Statistics	3	STAT 3115	Engineering Statistics	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	2
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		12
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.					
This transfer guide is published by Missouri University of Science and Technology and is in effect as of Fall 2025. Further information or updates are available from Missouri S&T Transfer Admissions at transfer.mst.edu , transfer@mst.edu , or 800-522-0938.					