

St. Charles Community College — Missouri S&T

Applied Math BS with Secondary Education Teacher Certification Transfer Guide

Effective as of Fall 2020

St. Charles Community 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 106	Public Speaking	3	SPMS 1185	Principles of Speech	3
Total Hours			Total Hours		
9			9		

Mathematics and Science (Take all courses)

MAT 162 or	College Algebra	4	MATH 1140*	College Algebra*	3
			<small>*Required for teacher certification; not a Mathematics BS requirement.</small>		
MAT 150	Trigonometry	3	MATH 1160*	Trigonometry*	2
			<small>*Required for teacher certification; not a Mathematics BS requirement.</small>		
MAT 180	Calculus and Analytic Geometry I	5	MATH 1214	Calculus for Engineers I	4
MAT 230	Calculus and Analytic Geometry II	5	MATH 1215	Calculus for Engineers II	4
MAT 240	Calculus and Analytical Geometry III	5	MATH 2222	Calculus with Analytic Geometry III	4
PHY 250	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I	4
PHY 251	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	4
Total Hours			Total Hours		
32			25		

Social Sciences (Take all courses)

HIS 146 or	Western Civ: Modern European Heritage or		HISTORY 1200 or	Modern Western Civilization or	
HIS 101 or	US History to 1877 or	3	HISTORY 1300 or	American History to 1877 or	3
HIS 102	US History Since 1877		HISTORY 1310	American History Since 1877	
POL 101	American Government	3	POL SCI 1200	American Government	3
PSY 101	Intro to Psychology	3	PSYCH 1101	General Psychology	3
ECO 120 or	Principles of Microeconomics or	3	ECON 1100 or	Principles of Microeconomics or	3
ECO 110	Principles of Macroeconomics		ECON 1200	Principles of Macroeconomics	
Total Hours			Total Hours		
12			12		

Humanities (Take all courses)

ART 1001 or	Art Appreciation or		ART 1180 or	Art Appreciation or	
MUS 111 or	Music Appreciation or	3	MUSIC 1150 or	Music Appreciation or	3
THE 122 or	Intro of Theatre or		THEATRE 1190 or	Theatre via Video or	
PHL 101	Intro to Philosophy		PHILOS 1105	Intro to Philosophy	
LIT 250 or	English Literature Before 1800 or		ENGLISH 1211 or	British Literature I: The Beginnings to 1800 or	
LIT 210 or	American Literature From 1620-1865 or		ENGLISH 1221 or	American Literature: 1600 to 1865 or	
LIT 272 or	World Lit-Ancient World thru Renaissance or	3	ENGLISH 1231 or	World Literature I or	3
LIT 223	African American Literature (or other literature elective)		ENGLISH 2245 or	African American Literature (or other literature elective)	
Total Hours			Total Hours		
6			6		

Additional Degree Requirements (Select up to 10 hours)

MAT 250	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
MAT 242	Introductory Linear Algebra	3	MATH 3108	Linear Algebra	3
CHM 115 or	General Chemistry I (5) or		CHEM 1310, 1319 or	General Chemistry I and Lab or	
BIO 150 or	General Biology I (5) or	3-5	BIO SCI 1113, 1219	General Biology and Lab	5
BIO 105,106	Essentials of Biology (3) and Lab (1)				
CPT 182	Beginning Programming in C++	3	CS 1971, 1981	Intro to Programming Methodology and Lab	3
MAT 215	Probability Theory	4	STAT 3115	Engineering Statistics	3
Total Hours			Total Hours		
10			10		

Additional Courses for Teacher Certification Option (Take all courses)

EDU 212	Foundations of Education in a Diverse Society	3	EDUC 1040	Perspectives in Education	2
EDU 240	Educational Psychology	3	PSYCH 2300 (EDUC 2102)	Educational Psychology	3
PSY 110	Human Growth and Development	3	PSYCH 3310	Developmental Psychology	3
EDU 250	Education of Exceptional Learners	3	PSYCH 4310	Psychology of the Exceptional Child	3
Total Hours			Total Hours		
12			11		

***Teacher certification notes:** An ACT of 22 or a 220 on the MoGEA is required for professional standing in the department. Students must pass the MoCA, maintain a 2.75 cumulative GPA, and a 3.0 content GPA to qualify for student teaching. Students completing this program will earn a BS in Applied Mathematics.

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

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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.