Johnson County Community College — Missouri S&T
Applied Mathematics BS Transfer Guide
Effective as of Fall 2023

Johnson County Community College			Missouri S&T		
English and Communication Skills (Take all courses)					
ENGL 121	Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
ENGL 122 or ENGL 123	Composition II or Technical Writing I	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
COMS 121	Public Speaking	3	SPMS 1185	Principles of Speech	3
	Total Hours	6		Total Hours	6
Humanities **(Select 9 hours to include at least one literature.)**					
ENGL 236 or ENGL 246 or ENGL 251 or ENGL 217	British Literature to 1800 or American Literature I or World Literature to 1620 or Literature by Women (or other literature elective)	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I or Literature by Women (or other literature elective)	3
PSYC 130	Intro to Psychology	3	PSYCH 1101	General Psychology or other psychology	3
PHIL 121	Intro to Philosophy (or other philosophy)	3	PHILOS 1105	Self and World: Intro to Philosophy or other philosophy	3
MUS 121 or MUS 126	Intro to Music Listening or Intro to World Music	3	MUS 1150	Music Understanding and Appreciation or other music	3
THEA 120	Intro to Theatre	3	THEATRE 1190	Theatre via Video or other theater	3
	Any foreign language	3		Any foreign language	3
	Any fine art, English, music, philosophy or speech.	3		Any fine art, English, music, philosophy or speech.	3
	Any history, political sicence, or psychology.	3		Any history, political sicence, or psychology.	3
	Total Hours	9		Total Hours	9
Social Sciences (Take all courses)					
HIST 126 or HIST 140 or HIST 141 or POLS 124	Western Civ: Scientific Revolution to Modern Age or US History to 1877 or US History since 1877 or American National Government (At least one of these courses is required to satisfy state requirement)	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or POL SCI 1200	Modern Western Civilization or American History to 1877 or American History Since 1877 or American Government (At least one of these courses is required to satisfy state requirement)	3
ECON 231 or ECON 230	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100* or ECON 1200*	Principles of Microeconomics* or Principles of Macroeconomics* *Students pursuing the Actuarial Science emphasis take BOTH ECON 1100 and 1200 (6 hours econ for a total of 9 hours social sciences).	3
	Total Hours	6		Total Hours	6
Mathematics and Science (Take all courses)					
MATH 241 and MATH 242	Calculus I and Calculus II	10	MATH 1214 and MATH 1215	Calculus I and Calculus II	8
MATH 243	Calculus III	5	MATH 2222	Calculus III	4
MATH 254	Differential Equations	4	MATH 3304	Elementary Differential Equations	3
MATH 246	Elementary Linear Algebra	3	MATH 3108	Linear Algebra	3
PHYS 220	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I	4
PHYS 221	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	4
CS 235 or CS 250	Object-Oriented Programming Using C++ or Basic Data Structures using C++	4	CS 1500	Computational Problem Solving	3
CHEM 124, 125 or BIOL 121	General Chemistry I and Lab (5) or Intro to Biology for Non-Majors (4)	4	CHEM 1310, 1319 or BIO SCI 1113, 1219	General Chemistry I and Lab or General Biology and Lab	4
	Total Hours	40		Total Hours	33
Additional Degree Requirements **Select additional courses to total up to the maximum transfer credit hours shown below.**					
	Technical electives in biology, chemistry, computer science, economics, engineering, geology, mechanics, or physics approved by advisor.	3		Technical electives in biology, chemistry, computer science, economics, engineering, geology, mechanics, or physics approved by advisor.	3
	Maximum Free Electives	14		Maximum Free Electives	14

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.