

# Johnson County Community College — Missouri S&T

## Applied Mathematics BS

Transfer Guide Effective as of Fall 2024

### 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	Composition II or		ENGLISH 1160 or	Writing and Research or	
ENGL 123	Technical Writing I	3	ENGLISH 3560	Technical Writing	3
COMS 121	Public Speaking	3	SPMS 1185	Principles of Speech	3
Total Hours			Total Hours		
9			9		

#### Humanities

Select 9 hours to include at least one literature.

ENGL 236 or	British Literature to 1800 or		ENGLISH 1211 or	British Literature I: The Beginnings to 1800 or	
ENGL 246 or	American Literature I or		ENGLISH 1221 or	American Literature: 1600 to 1865 or	
ENGL 251 or	World Literature to 1620 or	3	ENGLISH 1231 or	World Literature I or	3
ENGL 217	Literature by Women or other literature		ENGLISH 2242	Literature by Women or other literature	
<small>At least one literature course is required.</small>					
PSYC 130	Intro to Psychology	3	PSYCH 1101	General Psychology	3
PHIL 121	Intro to Philosophy	3	PHILOS 1105	Self and World: Intro to Philosophy	3
MUS 121 or	Intro to Music Listening or		MUS 1150	Music Understanding and Appreciation	
MUS 126	Intro to World Music	3			3
THEA 120	Intro to Theatre	3	THEATRE 1190	Theatre via Video	3
Foreign Language	Any foreign language	3	Foreign Language	Any foreign language	3
Humanities	Any fine art, English, music, theatre, philosophy or speech.	3	Humanities	Any fine art, English, music, theatre, philosophy or speech.	3
Social Science	Any history, political science, or psychology.	3	Social Science	Any history, political science, or psychology.	3
Total Hours			Total Hours		
9			9		

#### Social Sciences

Take all courses.

HIST 126 or	Western Civ: Scientific Revolution to Modern Age or		HISTORY 1200 or	Modern Western Civilization or	
HIST 140 or	US History to 1877 or		HISTORY 1300 or	American History to 1877 or	
HIST 141 or	US History since 1877 or	3	HISTORY 1310 or	American History Since 1877 or	3
POLS 124	American National Government		POL SCI 1200	American Government	
<small>At least one of these courses is required to satisfy state requirement.</small>					
ECON 231 or	Principles of Microeconomics or		ECON 1100* or	Principles of Microeconomics* or	
ECON 230	Principles of Macroeconomics	3	ECON 1200*	Principles of Macroeconomics*	
<small>*Students pursuing the Actuarial Science emphasis take BOTH ECON 1100 and 1200 (6 hours econ for a total of 9 hours social sciences).</small>					
Total Hours			Total Hours		
6			6		

#### Mathematics, Statistics, and Computer Science

Take all courses.

MATH 241 and	Calculus I and	10	MATH 1214 and	Calculus I and	8
MATH 242	Calculus II		MATH 1215	Calculus II	
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
CS 235 or	Object-Oriented Programming Using C++ or		CS 1500	Computational Problem Solving	
CS 250	Basic Data Structures using C++	4			3
Total Hours			Total Hours		
26			21		

#### Science

Select PHYSICS 1135 and 2 additional courses from the options below. A total of 13 hours will apply to this requirement.

PHYS 220	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I <small>required</small>	4
PHYS 221	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	4
CHEM 124, 125	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 131, 132	General Chemistry II and Lab	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
<small>*CHEM 1510 is not an S&amp;T degree requirement. Will transfer as general credit.</small>					
BIOL 121	Introductory Biology for Non-Majors	4	BIO SCI 1113, 1219	General Biology and Lab	4
Total Hours			Total Hours		
13			13		

#### Additional Degree Requirements

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

Technical Electives	Technical electives in biology, chemistry, computer science, economics, engineering, geology, mechanics, or physics approved by advisor.	3	Technical Electives	Technical electives in biology, chemistry, computer science, economics, engineering, geology, mechanics, or physics approved by advisor.	3
Electives	Maximum Free Electives	14	Electives	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.