

# Johnson County Community College — Missouri S&T

## Applied Mathematics BS

Transfer Guide Effective as of Fall 2025

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

### Johnson County Community College

### Missouri S&T

#### English and Communication Skills

Take all courses.

ENGL 121 or ENGL 119	Composition I (3) or College Composition I with Review (5)	3	ENGLISH 1120	Exposition and Argumentation	3
ENGL 122 or ENGL 123 or COMS 121	Composition II or Technical Writing I or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech	3
Total Hours		6	Total Hours		6

#### Mathematics, Statistics, and Computer Science

Take all courses.

MATH 241 and MATH 243	Calculus I and Calculus III	10	MATH 1214 and MATH 2222	Calculus I and Calculus III	8
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 CS 250	Object-Oriented Programming Using C++ or Basic Data Structures using C++	4	CS 1500	Computational Problem Solving	3
Total Hours		26	Total Hours		21

#### Natural Sciences

Select PHYSICS 1135 and 1 additional course from the options below. A total of 7 hours will apply to this requirement.

PHYS 220	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I required	4
PHYS 221	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	4
CHEM 120	Chemistry in Society	4	CHEM 1301	Introductory Chemistry	3
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) <small>*CHEM 1510 is not a degree requirement, transfers as general elective credit.</small>	3
BIOL 121	Introductory Biology for Non-Majors	4	BIO SCI 1113, 1219	General Biology and Lab	4
BIOL 205	General Genetics	3	BIO SCI 2223	Genetics	3
GEOS 130	General Geology	5	GEOLOGY 1110	Physical and Environmental Geology or higher geology	3
Total Hours		13	Total Hours		7

#### Humanities, Arts, and Social Sciences General Education Requirements

From the options listed in each group below, select 15 hours to include  
6 hours Humanities and Fine Arts from at least two specific disciplines and  
6 hours Behavioral and Social Sciences from at least two specific disciplines.

\*At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.

#### Humanities and Fine Arts

Select 6 hours from at least two specific disciplines.

ENGL 236 or ENGL 237 or ENGL 246 or ENGL 247 or ENGL 251 or HIST 140* or HIST 141* or MUS 121 or MUS 126 or THEA 120	British Literature to 1800 or British Literature after 1800 or American Literature I or American Literature II or World Literature to 1620 or US History to 1877* or US History since 1877* or Intro to Music Listening or Intro to World Music or Intro to Theatre <small>*Satisfies the State of Missouri government requirement.</small>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or MUSIC 1150 or MUSIC 1150 or THEATRE 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Music Understanding and Appreciation or Music Understanding and Appreciation or Theatre for Social Change <small>*Satisfies the State of Missouri government requirement.</small>	6
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#### Behavioral and Social Sciences

Select 6 hours to include ECON 1100 or 1200 and from at least two specific disciplines.

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	3
HIST 125 or HIST 151 or HIST 126* or GEOS 145 or PHIL 121 or PHIL 124 or POLS 124* or PSYC 130 or Foreign Language	Western Civ: Ancient World to the Renaissance or World History: Traditional or Western Civ: Scientific Revolution to Modern Age* or World Regional Geography or Intro to Philosophy or Logic and Critical Thinking or American National Government* or Intro to Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3	HISTORY 1100 or HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Early Western Civilization or Modern Western Civilization or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small>	3

#### Humanities, Arts, and Social Sciences

Select 3 hours.

HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
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#### Additional Degree Requirements

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

Technical Electives	Technical electives in biology, business, chemistry, computer science, economics, education, engineering, finance, geology, geophysics, information science and technology, marketing, mechanics, physics, or technical communication approved by advisor.	Technical Electives	Technical electives in biology, business, chemistry, computer science, economics, education, engineering, finance, geology, geophysics, information science and technology, marketing, mechanics, physics, or technical communication approved by advisor.
Electives	Free Electives	Electives	Free Electives

#### 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.