

# Johnson County Community College — Missouri S&T

## Physics 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

#### 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	Composition II or Technical Writing I	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	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
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) *CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.	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
		Total Hours	35		
				Total Hours	28

#### 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 and at least one literature course.

ENGL 236 or ENGL 237 or ENGL 246 or ENGL 247 or ENGL 251	British Literature to 1800 or British Literature after 1800 or American Literature I or American Literature II or World Literature to 1620	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 American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature	3
HIST 140* or HIST 141* or MUS 121 or MUS 126 or THEA 120	US History to 1877* or US History since 1877* or Intro to Music Listening or Intro to World Music or Intro to Theatre *Satisfies the State of Missouri government requirement.	3	HISTORY 1300* or HISTORY 1310* or MUSIC 1150 or MUSIC 1150 or THEATRE 1150	American History to 1877 or American History Since 1877 or Music Understanding and Appreciation or Music Understanding and Appreciation or Theatre for Social Change *Satisfies the State of Missouri government requirement.	3

#### Behavioral and Social Sciences

Select 6 hours from at least two specific disciplines.

HIST 125 or HIST 151 or HIST 126* or GEOS 145 or PHIL 121 or PHIL 124 or POLS 124* or PSYC 130 or ECON 231 or ECON 230 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or PHIL 1115 or POL SCI 1200* or PSYC 1101 or ECON 1100 or ECON 1200 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
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#### 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
		Total Hours	15		
				Total Hours	15

#### Additional Degree Requirements

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

MATH 254	Differential Equations	4	MATH 3304	Elementary Differential Equations	3
MATH 246	Elementary Linear Algebra	3	MATH 3108	Linear Algebra Recommended but not required; satisfies a math/stat elective requirement.	3
CS 235 or CS 250	Object-Oriented Programming Using C++ or Basic Data Structures using C++	4	CS 1500	Computational Problem Solving	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6

#### 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.