

St Charles Community College — Missouri S&T

Applied Mathematics BS Transfer Guide Effective as of Fall 2026

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

St Charles Community College

Missouri S&T

English and Communication Skills

Take all courses.

ENG 101	English Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
ENG 102 or ENG 115 or COM 106	English Composition II or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed communication requirement.	3
Total Hours		6	Total Hours		6

Mathematics, Statistics, and Computer Science

Take all courses.

MAT 180	Calculus and Analytic Geometry I	5	MATH 1214	Calculus I	4		
MAT 230	Calculus and Analytic Geometry II	5	MATH 1215	Calculus II	4		
MAT 240	Calculus and Analytic Geometry III	5	MATH 2222	Calculus III	4		
Mat 250	Differential Equations	3	MATH 3304	Elementary Differential Equations	3		
MAT 242	Introductory Linear Algebra	3	MATH 3108	Linear Algebra	3		
CPT 185or	Programming in C# (3) or	3	COMP SCI 1500	Computational Problem Solving	3		
CPT 189	Java Programming (3)						
CPT 182	Beginning Programming in C++	3	COMP SCI 1570	Intro to C++ Programming	4		
		Total Hours	27			Total Hours	25

Natural Sciences

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

PHY 250	Engineering Physics I required	5	PHYSICS 1135	Engineering Physics I required	4	
PHY 251	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	4	
CHM 107	Chemistry, Society, and the Environment	3	CHEM 1301	Introductory Chemistry	3	
CHM 115	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHM 116	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
BIO 105, 106 or BIO 150	Essentials of Biology and Lab (4) or General Biology: Cells to Organisms (5)	4	BIO SCI 1113, 1219 or BIO SCI 1213, 1219	General Biology and Lab or Principles of Biology and Lab	4	
PHY 125	Intro to Physical Geology	3	GEOLOGY 1110	Physical and Environmental Geology or higher geology	3	
Total Hours			7	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.

LIT 250 or LIT 260 or LIT 210 or LIT 220 or LIT 272 or HIS 101* or HIS 102* or ART 1001 or MUS 111 or THE 122 or Literature	English Literature Before 1800 or English Literature After 1800 or American Literature From Beginnings-1865 or American Literature From 1865-Present or World Literature-Ancient World thru Renaissance or US History to 1877* or US History Since 1877* or Art Appreciation or Music Appreciation or Intro to the Theatre or Any literature with prerequisite of no more than English Composition I *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	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 Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
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Behavioral and Social Sciences

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

ECO 120 or ECO 110	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIS 145 or HIS 146* or GEO 110 or PHL 101 or PHL 102 or POL 101* or PSY 101 or Foreign Language	Western Civilizations Ancient and Medieval or Western Civilizations Modern European* or Geography for Educators or Intro to Philosophy or Intro to Logic or American Government* or Intro to Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101or Foreign Language	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 *Satisfies the State of Missouri government requirement.	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
Total HASS Hours		15	Total HASS Hours		15

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.
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