

# East Central College — Missouri S&T

## Applied Mathematics BS Transfer Guide

Effective as of Fall 2023

### East Central 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 104	English Composition II or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
COM 110	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.)

ENG 210 or ENG 221 or ENG 124 or ENG 214 or ENG 215	Survey British Lit: Beginnings to 1784 or Survey American Lit: Colonial to 1865 or World Literature I or Women's Literature or African-American Literature (or other literature elective)	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242 or ENGLISH 2245 or	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or World Literature I or Literature by Women or African American Literature (or other literature elective)	3
PSY 101	General Psychology	3	PSYCH 1101	General Psychology or other psychology	3
PHL 101	Introduction to Philosophy	3	PHILOS 1105	Self and World: Intro to Philosophy or other philosophy	3
ART 101	Art Appreciation	3	ART 118	Art Appreciation or other art	3
MUS 101	Music Appreciation	3	MUS 1150	Music Understanding and Appreciation or other music	3
THE 101	Theatre Appreciation	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 science, or psychology.	3		Any history, political science, or psychology.	3
		Total Hours			Total Hours
		9			9

#### Social Sciences (Take all courses)

HST 101 or HST 102 or CIV 202 or PSC 102	US History to 1877 or US History Since 1877 or European Civilization II or US Government I: National and State (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
ECO 102 or ECO 101	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			Total Hours
		6			6

#### Mathematics and Science (Take all courses)

MTH 190	Analytic Geometry & Calculus I	5	MATH 1214	Calculus I	4
MTH 210	Analytic Geometry & Calculus II	5	MATH 1215	Calculus II	4
MTH 220	Analytical Geometry & Calculus III	5	MATH 2222	Calculus III	4
MTH 245	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
MTH 241	Linear Algebra	3	MATH 3108	Linear Algebra	3
MTH 242	Engineering Statistics	3	STAT 3115	Engineering Statistics	3
PHY 211, 212	General Physics I and Lab	5	PHYSICS 1135	Engineering Physics I	4
PHY 221, 222	General Physics II and Lab	5	PHYSICS 2135	Engineering Physics II	4
EGR 221,222 or EGR 251	C++ Program Engineers and Lab (4) or Data Structures (3)	3	CS 1500	Computational Problem Solving	3
CHM 111 or BIO 111	General Chemistry I and Lab or General Biology I and Lab	5	CHEM 1310, 1319 or BIO SCI 1113, 1219	General Chemistry I and Lab or General Biology and Lab	4
		Total Hours			Total Hours
		42			36

#### 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.