

East Central College — Missouri S&T

Physics BS with Secondary Education Teacher Certification Transfer Guide

Effective as of Fall 2020

East Central College

Missouri S&T

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		

Mathematics and Science (Take all courses)

MTH 190	Analytic Geometry & Calculus I	5	MATH 1214	Calculus for Engineers I	4
MTH 210	Analytic Geometry & Calculus II	5	MATH 1215	Calculus for Engineers II	4
MTH 220	Analytical Geometry & Calculus III	5	MATH 2222	Calculus with Analytic Geometry III	4
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
CHM 111	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 112	General Chemistry II and Lab	5	CHEM 1320, 1510*	General Chemistry II (3) and Quantitative Analysis (2)* <small>*Note: CHEM 1510 is not an S&T degree requirement; course will transfer as elective credit.</small>	3
Total Hours			Total Hours		
35			28		

Social Sciences (Take all courses)

HST 101 or HST 102 or CIV 202	US History to 1865 or US History 1865-1945 or European Civilization II	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200	American History to 1877 or American History Since 1877 or Modern Western Civilization	3
PSC 102	US Government: National and State	3	POL SCI 1200	American Government	3
PSY 101	General Psychology	3	PSYCH 1101	General Psychology	3
Total Hours			Total Hours		
9			9		

Humanities (Take all courses)

ART 101 or MUS 101 or THE 101	Art Appreciation or Music Appreciation or Theatre Appreciation	3	ART 1180 or MUSIC 1150 or THEATRE 1190	Art Appreciation or Music Appreciation or Theatre Appreciation	3
ENG 210 or ENG 221 or EMG 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 <small>(or other literature)</small>	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 <small>(or other literature elective)</small>	3
Total Hours			Total Hours		
6			6		

Additional Degree Requirements (Select up to 10 credit hours)

MTH 245	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
BIO 111	General Biology I and Lab	5	BIO SCI 1113	General Biology	3
PHY 102 or GEO 101	Intro to Astronomy or Intro to Physical Geology Lec	3	PHYSICS 1505 or GEOLOGY 1110	Introductory Astronomy or Physical and Environmental Geology	3
Total Hours			Total Hours		
11			9		

Additional Courses for Teacher Certification Option (Take all courses)

EDU 201 or EDU 214	Foundations of Education or Multicultural Education	3	EDUC 1040	Perspectives in Education	2
EDU 241	Educational Psychology	3	PSYCH 2300 (EDUC 2102)	Educational Psychology	3
PSY 250	Human Development	3	PSYCH 3310	Developmental Psychology	3
EDU 244	Education of the Exceptional Learner	3	PSYCH 4310	Psychology of the Exceptional Child	3
Total Hours			Total Hours		
12			11		

***Teacher certification notes:** An ACT of 22 or a 220 on the MoGEA is required for professional standing in the department. Students must pass the MoCA, maintain a 2.75 cumulative GPA, and a 3.0 content GPA to qualify for student teaching. Students completing this program will earn a BS in Physics.

Maximum credit hours to be transferred to Missouri S&T degree requirements.

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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.