

Culver-Stockton College — Missouri S&T

General Engineering Transfer Guide

Effective as of Fall 2020

Complete Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice.

Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
MAT 120	Applied Calculus	4	MATH 1214	Calculus for Engineers I <small>Grade of C or better is required.</small>	4
MAT 210	Calculus II	4	MATH 1215	Calculus for Engineers II <small>Grade of C or better is required.</small>	4
MAT 220	Calculus III	4	MATH 2222	Calculus with Analytic Geometry III <small>Grade of C or better is required.</small>	4
MAT 320	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
CHE 251	General Chemistry	4	CHEM 1310, 1319	General Chemistry I and Lab	5
ENG 101	Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
ECO 202 or ECO 201	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
Total Hours					25
					Total Hours
					26

Group 2 - Major Requirements: Take All Courses for Major of Choice

Engineering students take all Group 1 - Core Requirements (above) and Group 2 - Major Requirements for chosen major from list below. See course requirements on following pages.

- Aerospace Engineering
- Architectural Engineering
- Ceramic Engineering
- Chemical Engineering
- Chemical Engineering/Biochemistry Emphasis
- Civil Engineering
- Computer Engineering
- Electrical Engineering

- Engineering Management
- Environmental Engineering
- Geological Engineering
- Mechanical Engineering
- Metallurgical Engineering
- Mining Engineering
- Nuclear Engineering
- Petroleum Engineering

Engineering Major Requirements are detailed on the following pages.

Free Electives: Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

Humanities/Social Science (HSS) Electives: HSS electives may include any history, economics, political science, sociology, psychology, philosophy, fine art, literature, or foreign language. Missouri S&T approved HSS courses are listed at ugs.mst.edu. Your campus may have additional acceptable options. Consult with your advisor or email transfer@mst.edu with questions.

Aerospace Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 107 or HIS 108or	History of the US to 1865 or History of the US Since 1865 or	3	HISTORY 1300 or HISTORY 1310or	American History to 1877 or American History since 1877 or	3
POS 205 ENG 202 or COM 115	American Government and Politics Composition II or Fundamentals of Speech	3	POL SCI 1200 ENGLISH 1160 or SPMS 1185	American Government Writing and Research or Principles of Speech	3
MAT 325	Linear Algebra	3	MATH 3108	Linear Algebra I (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
	Literature Elective	3		Literature Elective	3
	Ethics Elective	3		Ethics Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	15		Group 2 Major Requirements	15
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	40		Total Hours*	41

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.

Architectural Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 107 or HIS 108	History of the US to 1865 or History of the US Since 1865 <small>Culver-Stockton does not have an equivalent to S&T HISTORY 1200.</small>	3	HISTORY 1300 or HISTORY 1310	American History to 1877 or American History since 1877) <small>*HISTORY 1200 is preferred; 1300 or 1310 will also be accepted..</small>	3
ENG 202 or COM 115 or HSS Elective	Composition II or Fundamentals of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
NATSC 204	Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	9		Group 2 Major Requirements	9
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	34		Total Hours*	35

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.

Ceramic Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 107 or HIS 108or POS 205	History of the US to 1865 or History of the US Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CHE 301 or CHE 401	Organic Chemistry I or Physical Chemistry I	4	CHEM 2210 or CHEM 3410	Organic Chemistry I (4) or Chemical Thermodynamics I (3) <small>(Not a specific requirement. Will satisfy the advanced chemistry elective requirement.)</small>	3
CHE 252	General Chemistry II	4	CHEM 1320	General Chemistry II	3
ENG 202 or COM 115 or HSS Elective	Composition II or Fundamentals of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	17		Group 2 Major Requirements	15
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	42		Total Hours*	41

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.

Chemical Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or HIS 108or POS 205	History of the US to 1865 or History of the US Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CHE 252	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHE 301	Organic Chemistry I	4	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHE 301	Organic Chemistry II	4	CHEM 2220	Organic Chemistry II <small>(Will satisfy science elective requirement. Select up to 9 hours from these options.)</small>	9
MIS 215	Computer Programming in Python	3	CS 1500	Computational Problem Solving	3
COM 115	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	31
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	52		Total Hours*	57

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Chemical Engineering degree.

Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or HIS 108or	History of the US to 1865 or History of the US Since 1865 or	3	HISTORY 1300 or HISTORY 1310or	American History to 1877 or American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
CHE 252	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHE 301	Organic Chemistry I	4	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHE 301	Organic Chemistry II	4	CHEM 2220	Organic Chemistry II (Will satisfy science elective requirement. Select up to 9 hours from these options.)	9
MIS 215	Computer Programming in Python	3	CS 1500	Computational Problem Solving	3
COM 115	Fundamentals of Speech	3	SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	31
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	52		Total Hours*	57

*S&T advisor permission is required to transfer more than 71 credits toward the S&T Chemical/Biochemical Engineering degree.

Civil Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202 or COM 115	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIS 107 or HIS 108or	History of the US to 1865 or History of the US Since 1865 or	3	HISTORY 1300 or HISTORY 1310or	American History to 1877 or American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
NATSC 204	Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	12		Group 2 Major Requirements	12
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	37		Total Hours*	38

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.

Computer Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
COM 115	Fundamentals of Speech	3	SPMS 1185	Public Speaking	3
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or	History of the US to 1865 or		HISTORY 1300 or	American History to 1877 or	
HIS 108or	History of the US Since 1865 or	3	HISTORY 1310or	American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
MIS 215	Computer Programming in Python	3	CS 1500	Computational Problem Solving	3
CHE 301	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I	3
MAT 325	Linear Algebra	3	MATH 3108	Linear Algebra (Will satisfy a required math elective.)	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	0		Maximum Free Electives	3
	Group 2 Major Requirements	22		Group 2 Major Requirements	24
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	47		Total Hours*	50

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.

Electrical Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
COM 115	Fundamentals of Speech	3	SPMS 1185	Public Speaking	3
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or	History of the US to 1865 or		HISTORY 1300 or	American History to 1877 or	
HIS 108or	History of the US Since 1865 or	3	HISTORY 1310or	American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
MIS 215	Computer Programming in Python	3	CS 1500	Computational Problem Solving	3
CHE 301	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I	3
MAT 325	Linear Algebra	3	MATH 3108	Linear Algebra	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Maximum Free Electives	3
	Group 2 Major Requirements	25		Group 2 Major Requirements	24
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	50		Total Hours*	50

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.

Engineering Management Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
PSY 102	General Psychology	3	PSYCH 1101	General Psychology	3
HIS 107 or	History of the US to 1865 or		HISTORY 1300 or	American History to 1877 or	
HIS 108or	History of the US Since 1865 or	3	HISTORY 1310or	American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
ENG 202 or	Composition II or		ENGLISH 1160 or	Writing and Research or	
COM 115	Fundamentals of Speech	3	SPMS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Maximum Free Electives	3
	Group 2 Major Requirements	15		Group 2 Major Requirements	15
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	40		Total Hours*	41

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Engineering Management degree.

Environmental Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202 or	Composition II or		ENGLISH 1160 or	Writing and Research or	
COM 115	Fundamentals of Speech	3	SPMS 1185	Principles of Speech	3
HIS 107 or	History of the US to 1865 or		HISTORY 1300 or	American History to 1877 or	
HIS 108	History of the US Since 1865	3	HISTORY 1310	American History since 1877	3
NATSC 204	Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHE 252	General Chemistry II	4	CHEM 1320	General Chemistry II	3
BIO 110	Biology: Molecules and Cells	3	BIO SCI 1113	General Biology	4
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	19
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	44		Total Hours*	45

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.

Geological Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202 or COM 115	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIS 107 or HIS 108or POS 205	History of the US to 1865 or History of the US Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
NATSC 204	Geology	3	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
BIO 110 or CHE 252 or CHE 301	Biology: Molecules and Cells (3) or General Chemistry II (4) or Organic Chemistry (4)	3	BIO SCI 1113 or CHEM 1320 or CHEM 2210	General Biology or General Chemistry II or Organic Chemistry I <small>or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	18		Group 2 Major Requirements	18
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	43		Total Hours*	44

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Geological Engineering degree.

Mechanical Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HIS 107 or HIS 108or POS 205	History of the US to 1865 or History of the US Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
ENG 202 or COM 115	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
MAT 325	Linear Algebra	3	MATH 3108	Linear Algebra I <small>(Will satisfy the Advanced Math/Comp Sci elective requirement.)</small>	3
	Literature Elective	3		Literature Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	15		Group 2 Major Requirements	15
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	40		Total Hours*	41

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.

Metallurgical Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202 or COM 115	Composition II or Fundamentals of Speech	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIS 107 or HIS 108or POS 205	History of the US to 1865 or History of the US Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CHE 252	General Chemistry Ii	4	CHEM 1320	General Chemistry II	3
CHE 301 or CHE 401	Organic Chemistry I or Physical Chemistry I	4	CHEM 2210 or CHEM 3410	Organic Chemistry I (4) or Chemical Thermodynamics I (3) <i>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</i>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	5		Maximum Free Electives	5
	Group 2 Major Requirements	25		Group 2 Major Requirements	23
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	50		Total Hours*	49

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.

Mining Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or HIS 108or POS 205	History of the US to 1865 or History of the US Since 1865 or American Government and Politics	3	HISTORY 1300 or HISTORY 1310or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
NATSC 204	Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	15		Group 2 Major Requirements	15
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	40		Total Hours*	41

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.

Nuclear Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or	History of the US to 1865 or		HISTORY 1300 or	American History to 1877 or	
HIS 108or	History of the US Since 1865 or	3	HISTORY 1310or	American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
MAT 325	Linear Algebra	3	MATH 3108	Linear Algebra	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	6		Maximum Free Electives	6
	Group 2 Major Requirements	21		Group 2 Major Requirements	21
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	46		Total Hours*	47

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Nuclear Engineering degree.

Petroleum Engineering Group 2 Major Requirements

<u>Culver-Stockton College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 202	Composition II	3	ENGLISH 1160	Writing and Research	3
HIS 107 or	History of the US to 1865 or		HISTORY 1300 or	American History to 1877 or	
HIS 108or	History of the US Since 1865 or	3	HISTORY 1310or	American History since 1877 or	3
POS 205	American Government and Politics		POL SCI 1200	American Government	
NATSC 204	Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	15		Group 2 Major Requirements	15
	Group 1 Core Requirements	25		Group 1 Core Requirements	26
	Total Hours	40		Total Hours*	41

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Petroleum Engineering degree.