

Moberly Area Community College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2024

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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
MTH 201	Analytic Geometry and Calculus I	5	MATH 1214	Calculus I	Grade of C or better is required. 4
MTH 202	Analytic Geometry and Calculus II	5	MATH 1215	Calculus II	Grade of C or better is required. 4
MTH 203	Analytic Geometry and Calculus III	5	MATH 2222	Calculus III	Grade of C or better is required. 4
MTH 250	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHY 201	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I	Grade of C or better is required. 4
PHY 202	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II	Grade of C or better is required. 4
PHY 121	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
EGN 101	Intro to Engineering	1	FR ENG 1100	Study and Careers in Engineering and Computing	1
LAL 101	Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
ECN 102 or ECN 101	Microeconomics or Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
Total Hours		40			Total Hours 35

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
Biomedical Engineering/Biomufacturing or Biomaterials
Ceramic Engineering
Chemical Engineering and 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 art, English and technical communication, etymology, foreign language, music, philosophy, speech and media studies, or theatre. Your campus may have additional acceptable options. Consult with your advisor or email transfer@mst.edu with questions. See Missouri S&T online catalog at <https://catalog.mst.edu/undergraduate/degreeprogramsandcourses/> for more information.

Aerospace Engineering Group 2 Major Requirements

<u>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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
LAL 102 or SPK 101	Composition II or Public Speaking I	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech
ITC 220	Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
LAL 150 or LAL 120 or LAL 210 or LAL 255 or LAL 125	English Literature Survey to 1750 or American Literature Survey to 1870 or A Survey of World Literature I or Women's Literature or African-American Literature or other literature	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242 or ENGLISH 2245	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
PHI 152	Intro to Ethics or other engineering, business, bio, social ethics approved by advisor	3	PHILOS 1130	How Should I Live? An Introduction to Ethics or other engineering, business, bio, social ethics approved by advisor
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives
	Group 2 Major Requirements	18		Group 2 Major Requirements
	Group 1 Core Requirements	40		Group 1 Core Requirements
	Total Hours	58		Total Hours*
				53

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
HST 102 (or HST 105 or HST 106)	Western Civilization II or American History to 1865 or American History from 1865	3	HISTORY 1200* (or HISTORY 1300 or HISTORY 1310)	Modern Western Civilization* (or American History to 1877 or American History since 1877) <small>*HISTORY 1200 is preferred; 1300 or 1310 will also be accepted.</small>
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics
PHY 163	Geology MOTR GEOL 100L	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology MOTR GEOL 100L
Humanities or Social Science or Communication	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language or one communication course from this list: LAL 102, SPK 101.	3	Humanities or Social Science or Communication	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language or one communication course from this list: ENGLISH 1160, 1600, 3560 or SPMS 1185.
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives
	Group 2 Major Requirements	12		Group 2 Major Requirements
	Group 1 Core Requirements	40		Group 1 Core Requirements
	Total Hours	52		Total Hours*
				47

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

Biomedical Engineering-Biomanufacturing Group 2 Major Requirements

<u>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
SPK 101	Public Speaking	3	SP&MS 1185	Principles of Speech	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
PHY 122	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
ITC 125 or ITC 243 or ITC 244 or ITC 247 or ITC 220*	Object-Oriented Programming I or Object-Oriented Programming II: Java or Object-Oriented Programming II: C# or Python Programming or Programming II*	3	CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++ <small>*Will be substituted for CS 1500.</small>	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	14		Group 2 Major Requirements	15
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	54		Total Hours*	50

*S&T advisor permission is required to transfer more than 68 credit hours toward the degree.

Biomedical Engineering-Biomaterials Group 2 Major Requirements

<u>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
SPK 101	Public Speaking	3	SP&MS 1185	Principles of Speech	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
PHY 122	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
BIO 206	Microbiology	4	BIO SCI 1113*, 1219*	General General Biology* and Lab* <small>*Applies to degree as Track Elective (Non-engineering).</small>	4
ITC 125 or ITC 243 or ITC 244 or ITC 247 or ITC 220*	Object-Oriented Programming I or Object-Oriented Programming II: Java or Object-Oriented Programming II: C# or Python Programming or Programming II*	3	CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++ <small>*Will be substituted for CS 1500.</small>	3
EGR 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	21		Group 2 Major Requirements	19
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	61		Total Hours*	54

*S&T advisor permission is required to transfer more than 65 credits toward the S&T Biomedical Engineering degree.

Ceramic Engineering Group 2 Major Requirements

<u>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 122	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
LAL 102 or SPK 101 or HSS Elective	Composition II or Public Speaking I 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 Principles of Speech or Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	20		Group 2 Major Requirements	18
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	60		Total Hours*	53

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

Chemical Engineering or Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

<u>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
IND 120	Technical Report Writing	3	SP&MS 1185	Principles of Speech	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
PHY 122	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
BIO 206	Microbiology	4	BIO SCI 3313, 3319	Microbiology and Lab <small>Will partially satisfy a 9-hour science elective requirement.</small>	5
ITC 125 or ITC 243 or ITC 244 or ITC 247 or ITC 220*	Object-Oriented Programming I or Object-Oriented Programming II: Java or Object-Oriented Programming II: C# or Python Programming or Programming II*	3	CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++ <small>*Will be substituted for CS 1500.</small>	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	21		Group 2 Major Requirements	20
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	61		Total Hours*	55

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

Civil Engineering Group 2 Major Requirements

<u>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
LAL 102 or SPK 101	Composition II or Public Speaking I	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
PHY 163	Geology MOTR GEOL 100L	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology MOTR GEOL 100L	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	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	40		Group 1 Core Requirements	35
	Total Hours	55		Total Hours*	50

*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

Moberly Area Community College		Semester	Missouri S&T		
SPK 101	Public Speaking I	3	SPMS 1185	Principles of Speech	3
LAL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
ITC 125 or ITC 243 or ITC 244 or ITC 247 or ITC 220*	Object-Oriented Programming I or Object-Oriented Programming II: Java or Object-Oriented Programming II: C# or Python Programming or Programming II*	3	CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++ <small>*Will be substituted for CS 1500.</small>	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics <small>Satisfies a required engineering/science elective.</small>	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	21		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	61		Total Hours*	56

*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

Moberly Area Community College		Semester	Missouri S&T		
SPK 101	Public Speaking I	3	SPMS 1185	Principles of Speech	3
LAL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History from 1865 or Intro to American Government	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	3
ITC 125 or ITC 243 or ITC 244 or ITC 247 or ITC 220*	Object-Oriented Programming I or Object-Oriented Programming II: Java or Object-Oriented Programming II: C# or Python Programming or Programming II*	3	CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++ <small>*Will be substituted for CS 1500.</small>	3
CIV ENG 2200 and Missouri S&T Dynamics	Engineering Mechanics-Statics (3) and MECH ENG 2350 Dynamics to be taken at S&T <small>BOTH of the courses above or ONE of the courses below.</small>	3	CIV ENG 2200 and MECH ENG 2350	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) <small>BOTH of the courses above or ONE of the following courses will satisfy a required engineering science elective.</small>	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	21		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	61		Total Hours*	56

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
PSY 101	General Psychology	3	PSYCH 1101	General Psychology	3
HST 102 or HST 105 or HST 106 or	Western Civilization II or American History to 1865 or American History from 1865 or	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310 or	Modern Western Civilization or American History to 1877 or American History since 1877 or	3
PSC 105	Intro to American Government		POL SCI 1200	American Government	
SPK 101	Public Speaking I	3	SPMS 1185	Principles of Speech	3
LAL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
ITC 220	Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	3	Electives	Maximum Free Electives	0
	Group 2 Major Requirements	24		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	64		Total Hours*	61

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
LAL 102 or SPK 101	Composition II or Public Speaking I	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HST 102 or HST 105 or HST 106	Western Civilization II or American History to 1865 or American History from 1865	3	HISTORY 1200 or HISTORY 1300 or HISTORY 1310	Modern Western Civilization or American History to 1877 or American History since 1877	3
PHY 163	Geology MOTR GEOL 100L	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology MOTR GEOL 100L	3
PHY 122	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
BIO 101	Biology	4	BIO SCI 1113	General Biology	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	24		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	64		Total Hours*	56

*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>Moberly Area Community College</u>	<u>Semester</u>		<u>Missouri S&T</u>	
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History fromn 1865 or Intro to American Government	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	3
ITC 125 or ITC 243 or ITC 244 or ITC 247 or ITC 220*	Object-Oriented Programming I or Object-Oriented Programming II: Java or Object-Oriented Programming II: C# or Python Programming or Programming II*	3	CS 1500 or CS 1971, 1981	Computational Problem Solving or Programming Methodology and Lab * (C++)	3
PHY 163	Geology MOTR GEOL 100L	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology MOTR GEOL 100L	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	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	40		Group 1 Core Requirements	35
	Total Hours	58		Total Hours*	53

*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>Moberly Area Community College</u>	<u>Semester</u>		<u>Missouri S&T</u>	
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History fromn 1865 or Intro to American Government	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	3
LAL 102 or SPK 101	Composition II or Public Speaking I	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
ITC 220	Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
LAL 150 or LAL 120 or LAL 210 or LAL 255 or LAL 125	English Literature Survey to 1750 or American Literature Survey to 1870 or A Survey of World Literature I or Women's Literature or African-American Literature or other literature	3	ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1231 or ENGLISH 2242 or ENGLISH 2245	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	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	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	40		Group 1 Core Requirements	35
	Total Hours	58		Total Hours*	53

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
LAL 102 or SPK 101	Composition II or Public Speaking I	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History fromn 1865 or Intro to American Government	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	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 122	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) <small>*CHEM 1510 is not an S&T degree requirement. Will transfer as general credit.</small>	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Electives	Maximum Free Electives	5	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	25		Group 2 Major Requirements	21
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	65		Total Hours*	56

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
LAL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History fromn 1865 or Intro to American Government	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	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 163	Geology MOTR GEOL 100L	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology MOTR GEOL 100L	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	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	40		Group 1 Core Requirements	35
	Total Hours	58		Total Hours*	53

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
LAL 102 or SPK 101	Composition II or Public Speaking I	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History fromn 1865 or Intro to American Government	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	3
ITC 220	Programming II	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
MTH 215	Intro to Probability and Statistics	3	STAT 3111	Statistical Tools for Decision Making	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	27		Group 2 Major Requirements	27
	Group 1 Core Requirements	40		Group 1 Core Requirements	35
	Total Hours	67		Total Hours*	62

*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>Moberly Area Community College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
LAL 102	Composition II	3	ENGLISH 1160	Writing and Research	3
HST 102 or HST 105 or HST 106 or PSC 105	Western Civilization II or American History to 1865 or American History fromn 1865 or Intro to American Government	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	3
PHY 163	Geology MOTR GEOL 100L	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology MOTR GEOL 100L	3
EGN 201	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3
Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	3	Humanities or Social Science	Any history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language.	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	40		Group 1 Core Requirements	35
	Total Hours	58		Total Hours*	53

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