

North Central Missouri College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2025

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

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

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.

North Central Missouri College			Semester	Missouri S&T		
MT 150 and MT 250	Geometry and Calculus I and Geometry and Calculus II	10		MATH 1214 and MATH 1215	Calculus for Engineers I and Calculus for Engineers II Grade of C or better is required.	8
MT 260	Geometry and Calculus III	5		MATH 2222	Calculus III Grade of C or better is required.	4
PS 210	General Physics I	5		PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PS 212	General Physics II	5		PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
EN 101	English I	3		ENGLISH 1120	Exposition and Argumentation	3
		Total Hours	28			Total Hours
						23

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/Biomanufacturing 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.

This transfer guide is published by Missouri University of Science and Technology and is in effect as of Fall 2025.
Further information or updates are available from Missouri S&T Transfer Admissions at transfer@mst.edu, transfer@mst.edu, or 800-522-0938.

Aerospace Engineering Group 2 Major Requirements

North Central Missouri College			Semester	Missouri S&T	
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
IT 243	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PH 101	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	3
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
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
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0
Group 2 Major Requirements		29	Group 2 Major Requirements		29
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		57	Total Hours*		52
*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

North Central Missouri College		Semester	Missouri S&T			
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include HISTORY 1200.						
HI 102*	Western Civilization Since 1700* *Satisfies the State of Missouri government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3	
PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		20	Group 2 Major Requirements		20	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		48			Total Hours*	43
*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

North Central Missouri College		Semester	Missouri S&T			
SP 175	Speech Communications	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 112	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	
BI 100	General Biology	5	BIO SCI 1113, 1219	General Biology and Lab Applies to degree as Track Elective.	4	
IT 243	C++ Programming	3	CS 1971, 1981*	Intro to Programming Method and Lab (C++)* *Will be substituted for CS 1500.	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. *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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 3 hours.						
HI 101 or HI 102* or GE 106 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		30	Group 2 Major Requirements		27	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		58			Total Hours*	50
*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.						

Biomedical Engineering-Biomaterials Group 2 Major Requirements

North Central Missouri College		Semester	Missouri S&T			
SP 175	Speech Communications	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 112	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	
BI 100	General Biology	5	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4	
IT 243	C++ Programming	3	CS 1971, 1981*	Intro to Programming Method and Lab (C++)* *Will be substituted for CS 1500.	3	
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. *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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 3 hours.						
HI 101 or HI 102* or GE 106 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		30	Group 2 Major Requirements		27	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		58			Total Hours*	50
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.						

Ceramic Engineering Group 2 Major Requirements

North Central Missouri College		Semester	Missouri S&T			
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 112	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	
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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines.						
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	
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	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		28	Group 2 Major Requirements		26	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		56			Total Hours*	49
*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

North Central Missouri College		Semester	Missouri S&T		
SP 175	Speech Communications	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CH 112	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
BI 243	Microbiology	4	BIO SCI 3313, 3319	Microbiology and Lab (5) Will partially satisfy the 9-hour science elective requirement.	8
IT 243	C++ Programming	3	CS 1971, 1981*	Intro to Programming Method and Lab (C++)* *Will be substituted for CS 1500.	3
Humanities, Arts, and Social Sciences General Education Requirements					
From the options listed in each group below, select 12 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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		32	Group 2 Major Requirements		34
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		60	Total Hours*		57
*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

North Central Missouri College		Semester	Missouri S&T		
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
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
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		23	Group 2 Major Requirements		23
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		51	Total Hours*		46
*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

North Central Missouri College		Semester	Missouri S&T		
SP 175	Speech Communications	3	SPMS 1185	Principles of Speech	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IT 243	C++ Programming	3	CS 1971, 1981*	Intro to Programming Method and Lab (C++)*	3
*Will be substituted for CS 1500.					
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation	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	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 Understanding and Appreciation	6
*Satisfies the State of Missouri government requirement.					
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language	6
*Satisfies the State of Missouri government requirement.					
Humanities, Arts, and Social Sciences					
Select 3 hours.					
EN 102	English II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	29		Group 2 Major Requirements	29
	Group 1 Core Requirements	28		Group 1 Core Requirements	23
	Total Hours	57		Total Hours*	52
*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

North Central Missouri College		Semester	Missouri S&T		
SP 175	Speech Communications	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IT 243	C++ Programming	3	CS 1971, 1981*	Intro to Programming Method and Lab (C++)* *Will be substituted for CS 1500.	3
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, Arts, and Social Sciences Select 3 hours.					
EN 102	English II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	32		Group 2 Major Requirements	32
	Group 1 Core Requirements	28		Group 1 Core Requirements	23
	Total Hours	60		Total Hours*	55
*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

North Central Missouri College			Semester	Missouri S&T		
SP 175	Speech Communications	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
IT 243	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3	
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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines to include PSYCH 1101.						
PH 102	General Psychology	3	PSYCH 1101	General Psychology Required	3	
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or Microeconomics or Macroeconomics 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 POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
Humanities, Arts, and Social Sciences						
Select 3 hours.						
EN 102	English II	3	ENGLISH 1160	Writing and Research	3	
No free electives applied to the degree.		0	Electives	Maximum Free Electives	0	
Group 2 Major Requirements		26	Group 2 Major Requirements		26	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		54			Total Hours*	61
*S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.						

Environmental Engineering Group 2 Major Requirements

North Central Missouri College			Semester	Missouri S&T	
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CH 112	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
BI 100	General Biology	5	BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include HISTORY 1200					
HI 102*	Western Civilization Since 1700* *Satisfies the State of Missouri government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		30	Group 2 Major Requirements		26
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		58			Total Hours* 49
*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

North Central Missouri College			Semester	Missouri S&T	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IT 243	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
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
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		23	Group 2 Major Requirements		23
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		51	Total Hours*		46
*S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.					

Mechanical Engineering Group 2 Major Requirements

North Central Missouri College		Semester	Missouri S&T		
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
IT 243	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
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
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		26	Group 2 Major Requirements		26
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		54	Total Hours*		49
*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

North Central Missouri College		Semester	Missouri S&T			
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 112	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	
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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines.						
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	
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	
Maximum Free Electives		3	Maximum Free Electives		3	
Group 2 Major Requirements		31	Group 2 Major Requirements		29	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		59			Total Hours*	52
*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

North Central Missouri College		Semester	Missouri S&T		
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen.Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
Humanities, Arts, and Social Sciences General Education Requirements					
From the options listed in each group below, select 12 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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		20	Group 2 Major Requirements		20
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		48			Total Hours* 43
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.					

*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

North Central Missouri College		Semester	Missouri S&T			
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
IT 243	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3	
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.						
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines.						
EC 252 or EC 253	Microeconomics or Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General 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 POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy 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	
Maximum Free Electives		0	Maximum Free Electives		0	
Group 2 Major Requirements		26	Group 2 Major Requirements		26	
Group 1 Core Requirements		28	Group 1 Core Requirements		23	
Total Hours		54			Total Hours*	49
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.						

Petroleum Engineering Group 2 Major Requirements

North Central Missouri College			Semester	Missouri S&T	
EN 102 or SP 175	English II or Speech Communications	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 110	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
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.					
EN 230 or EN 240 or EN 261 or EN 262 or EN 251 or HI 103* or HI 104* or AR 104 or MU 109	English Literature I or English Literature II or American Literature Before 1865 or Intro to American Literature After 1865 or World Literature: Beginning to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *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	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 Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HI 101 or HI 102* or GE 106 or PH 102 or PL 216* or PY 121 or EC 252 or EC 253 or Foreign Language	Western Civilization to 1700 or Western Civilization Since 1700* or Intro to World Geography or Intro to Philosophy or National Government* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
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
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		23	Group 2 Major Requirements		23
Group 1 Core Requirements		28	Group 1 Core Requirements		23
Total Hours		51	Total Hours*		46
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.					