

Central Methodist University — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2026

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.

<u>Central Methodist University</u>			<u>Semester</u>	<u>Missouri S&T</u>		
MA 118	Calculus and Analytical Geometry I	5	MATH 1214	Calculus I	Grade of C or better is required.	4
MA 209	Calculus and Analytical Geometry II	5	MATH 1215	Calculus II	Grade of C or better is required.	4
MA 308	Calculus and Analytical Geometry III	5	MATH 2222	Calculus III	Grade of C or better is required.	4
MA 315	Differential Equations	3	MATH 3304	Elementary Differential Equations		3
PH 205, 205L	Calculus Physics I and Lab	5	PHYSICS 1135	Engineering Physics I	Grade of C or better is required.	4
PH 206, 206L	Calculus Physics II and Lab	5	PHYSICS 2135	Engineering Physics II	Grade of C or better is required.	4
EN 110	English Composition I	3	ENGLISH 1120	Exposition and Argumentation		3
		Total Hours	31			Total Hours
						26

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

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

Aerospace Engineering
Architectural Engineering
Biomedical Engineering - Biomanufacturing
Biomedical Engineering - 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
Semiconductor 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 2026.
 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

Central Methodist University		Semester	Missouri S&T		
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
MA 318	Matrices and Linear Algebra	3	MATH 3108	Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.	3
PL 306	Ethics and the Professions 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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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		28	Group 2 Major Requirements		29
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		59	Total Hours*		55
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.					

*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

Central Methodist University		Semester	Missouri S&T		
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
GL 105	Exploring Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 3 hours Humanities and Fine Arts 3 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 to include ART 3203.					
EN 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	3	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or MUSIC 1150 or THEATRE 1190 or Literature	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 Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	3
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines, to include HISTORY 1200.					
HI 102*	World History II* *Satisfies the State of Missouri Government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	Intro to Western Philosophy or Intro to American National, State, Local Govt* 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
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		22	Group 2 Major Requirements		23
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		53			Total Hours* 49
*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

Central Methodist University		Semester	Missouri S&T		
CT 101	Public Speaking	3	SP&MS 1185	Principles of Speech	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CH 114, 114L	General Chemistry (3) with Qualitative Analysis and Lab (1)	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CH 341, 341L	Organic Chemistry and Lab	4	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CH 342, 342L or BI 101, 101L	Organic Chemistry II and Lab or General Biology I and Lab	4	CHEM 2220, 2229 or BIO SCI 1113, 1219	Organic Chemistry II and Lab or General Biology and Lab Applies to degree as Track Elective.	4
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	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 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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 3 hours.					
HI 101 or HI 102* or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to American National, State, Local Govt* 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 POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* 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
Humanities, Arts, and Social Sciences					
ENGLISH 3560 required.					
EN 306	Technical Writing	3	ENGLISH 3560	Technical Writing	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		34	Group 2 Major Requirements		34
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		65			Total Hours*
*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.					

Biomedical Engineering-Biomaterials Group 2 Major Requirements

Central Methodist University		Semester	Missouri S&T			
CT 101	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 114, 114L	General Chemistry with Qualitative Analysis (3) and Lab (1)	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CH 341, 341L	Organic Chemistry and Lab	4	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4	
CH 342, 342L	Organic Chemistry II and Lab	4	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4	
BI 101, 101L	General Biology I and Lab	4	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4	
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	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 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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 3 hours.						
HI 101 or HI 102* or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to American National, State, Local Govt* 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 POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* 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	
Humanities, Arts, and Social Sciences ENGLISH 3560 required.						
EN 306	Technical Writing	3	ENGLISH 3560	Technical Writing	3	
No free electives applied to the degree.		0	Maximum Free Electives		0	
Group 2 Major Requirements		38	Group 2 Major Requirements		38	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		69			Total Hours*	64
*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

<u>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>	
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	5
CH 114, 114L	General Chemistry with Qualitative Analysis and Lab	4	CHEM 1320, 1510*	3
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	3
PH 307	Modern Physics	3	PHYS 2305	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.				
HI 101 or HI 102* or PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	3
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives	0
Group 2 Major Requirements		32	Group 2 Major Requirements	32
Group 1 Core Requirements		31	Group 1 Core Requirements	26
Total Hours		63	Total Hours*	58

*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

Central Methodist University			Semester	Missouri S&T		
CT 101	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 114, 114L	General Chemistry with Qualitative Analysis (3) and Lab (1)	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CH 341, 341L	Organic Chemistry and Lab	4	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) *CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits See note below .	4	
CH 342, 342L	Organic Chemistry II and Lab	4	CHEM 2220, 2229*	Organic Chemistry II (3) and Lab* Applies to the degree as required science elective credits. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab (above). *CHEM 2229 is not a degree requirement; transfers as general elective credit.	8	
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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 ENGLISH 3560 required.						
EN 306	Technical Writing	3	ENGLISH 3560	Technical Writing	3	
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0	
Group 2 Major Requirements		37	Group 2 Major Requirements		41	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		68			Total Hours*	67
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.						

*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>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>	
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 111, 111L	General Chemistry and Lab	4	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
GL 105	Exploring Geology	3	Physical and Environmental Geology	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	Early Western Civilization or Modern Western Civilization* 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	3
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives	0
Group 2 Major Requirements		25	Group 2 Major Requirements	26
Group 1 Core Requirements		31	Group 1 Core Requirements	26
Total Hours		56	Total Hours*	70
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.				

Computer Engineering Group 2 Major Requirements

<u>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
CT 101	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	3
PH 307 or CH 341, 341L	Modern Physics (3) or Organic Chemistry and Lab (4)	3	PHYSICS 2305 or CHEM 2210, 2219*	Intro to Modern Physics (3) or Organic Chemistry I (3) and Lab* (1) PHYSICS 2305 or CHEM 2210 satisfies a required engineering/science elective. *CHEM 2219 is not a degree requirement; transfers as general elective credit.	3
MA 318	Matrices and Linear Algebra	3	MATH 3108	Linear Algebra Satisfies a required math elective.	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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 110 or EN 306	Expository Writing or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	34		Group 2 Major Requirements	35
	Group 1 Core Requirements	31		Group 1 Core Requirements	26
	Total Hours	65		Total Hours*	61
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.					

*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

Central Methodist University			Semester	Missouri S&T	
CT 101	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	3
PH 307 or CH 341, 341L	Modern Physics (3) or Organic Chemistry and Lab (4)	3	PHYSICS 2305 or CHEM 2210, 2219*	Intro to Modern Physics (3) or Organic Chemistry I (3) and Lab* (1) PHYSICS 2305 or CHEM 2210 satisfies a required engineering/science elective. *CHEM 2219 is not a degree requirement; transfers as general elective credit.	3
MA 318	Matrices and Linear Algebra	3	MATH 3108	Linear Algebra Satisfies a required math elective.	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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 110 or EN 306	Expository Writing or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	37		Group 2 Major Requirements	38
	Group 1 Core Requirements	31		Group 1 Core Requirements	26
	Total Hours	68		Total Hours*	64
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.					

*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>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
CT 101	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. <i>*Satisfies the State of Missouri government requirement.</i>	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. <i>*Satisfies the State of Missouri government requirement.</i>	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include PSYCH 1101.						
PY 101	General Psychology	3	PSYCH 1101	General Psychology Required	3	
HI 101 or HI 102* or PL 106 or PS 101* or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	3	HISTORY 1100 or HISTORY 1200* or PHILOS 1105 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or Self and World: Intro to Philosophy or American Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	3	
Humanities, Arts, and Social Sciences Select 3 hours.						
EN 110 or EN 306	Expository Writing or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3	
<i>No free electives applied to the degree.</i>		0	Electives	Maximum Free Electives	0	
Group 2 Major Requirements		22	Group 2 Major Requirements		23	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		53			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

Central Methodist University		Semester	Missouri S&T		
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
GL 105	Exploring Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CH 114, 114L	General Chemistry with Qualitative Analysis (3) and Lab (1)	4	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 101, 101L	General Biology I and Lab	4	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, or 1310 to satisfy the State of Missouri government requirement and a degree-specific gen ed requirement.					
Humanities and Fine Arts					
Select 6 hours from at least two specific disciplines.					
At least one course in either the HFA or the BSS (below) section must be selected from HISTORY 1200, 1300, or 1310.					
EN 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines..					
At least one course in either the HFA (above) or the BSS section must be selected from HISTORY 1200, 1300, or 1310.					
HI 102* or PL 106 or PY 101 or EC 202 or EC 201 or Foreign Language	World History II* or Intro to Western Philosophy or General Psychology or Microeconomics or Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement and a degree-specific gen ed requirement.	6	HISTORY 1200* or PHILOS 1105 or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Modern Western Civilization* or Self and World: Intro to Philosophy or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement and a degree-specific gen ed requirement.	6
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		30	Group 2 Major Requirements		29
Group 1 Core Requirements		31	Group 1 Core Requirements		26
Total Hours		61			Total Hours* 55
*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>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
EN 306	Technical Writing	3	ENGLISH 3560	Technical Writing Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5	
GL 105	Exploring Geology	3	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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		25	Group 2 Major Requirements		26	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		56			Total Hours*	64
*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

<u>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5	
MA 318	Matrices and Linear Algebra	3	MATH 3108	Linear Algebra I Satisfies the Advanced Math/Statistics elective requirement.	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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		25	Group 2 Major Requirements		26	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		56			Total Hours*	52
*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

Central Methodist University		Semester	Missouri S&T			
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 114, 114L	General Chemistry with Qualitative Analysis (3) and Lab (1)	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CH 341, 341L or PH 307	Organic Chemistry with Lab (4) or Modern Physics (3)	3	CHEM 2210, 2219* or PHYSICS 2305	Organic Chemistry I (3) or Modern Physics I (3) Not specifically required for the degree but satisfies out-of-department technical elective requirement	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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.		3	Maximum Free Electives		0	
Group 2 Major Requirements		35	Group 2 Major Requirements		32	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		66			Total Hours*	68
*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

Central Methodist University		Semester	Missouri S&T			
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
GL 105	Exploring Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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		22	Group 2 Major Requirements		23	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		53			Total Hours*	49
*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

Central Methodist University		Semester	Missouri S&T			
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
MA 318	Matrices and Linear Algebra	3	MATH 3108	Linear Algebra	3	
PH 307	Modern Physics	3	PHYSICS 2305	Intro to Modern Physics	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines to include either ECON 1100 or 1200.						
EC 202 or EC 201	Microeconomics or Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
HI 101 or HI 102* or PL 106 or PS 101* or PY 101 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* 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		28	Group 2 Major Requirements		29	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		59			Total Hours*	55
*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

<u>Central Methodist University</u>		<u>Semester</u>	<u>Missouri S&T</u>	
EN 110 or EN 306	Expository Writing or Technical Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing 3
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310*, 1319	General Chemistry I and Lab 5 *CHEM 1310 will be substituted for CHEM 1305.
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving 3
GL 105	Exploring Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology 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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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.
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		28	Group 2 Major Requirements	29
Group 1 Core Requirements		31	Group 1 Core Requirements	26
Total Hours		59	Total Hours*	55
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.				

Semiconductor Engineering-Device Engineering Emphasis Group 2 Major Requirements

Central Methodist University		Semester	Missouri S&T			
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 114, 114L	General Chemistry with Qualitative Analysis (3) and Lab (1)	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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		32	Group 2 Major Requirements		32	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		63			Total Hours*	58
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.						

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

Semiconductor Engineering-Process Engineering Emphasis Group 2 Major Requirements

Central Methodist University		Semester	Missouri S&T			
EN 110 or EN 306 or CT 101	Expository Writing or Technical Writing or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CH 111, 111L	General Chemistry and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5	
CH 114, 114L	General Chemistry with Qualitative Analysis (3) and Lab (1)	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CS 378	Data Structures & Algorithms	3	COMP SCI 1500	Computational Problem Solving	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 340 or EN 342 or EN 323 or EN 324 or HI 117* or HI 118* or ART 111 or MU 318 or Literature	British Literature I or British Literature II or American Literature I or American Literature II or Development of the United States I* or Development of the United States II* or Art Appreciation or Music Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *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 PL 106 or PS 101* or PY 101 or EC 202 or EC 201 or Foreign Language	World History I or World History II* or Intro to Western Philosophy or Intro to American National, State, Local Govt* 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 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 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		32	Group 2 Major Requirements		32	
Group 1 Core Requirements		31	Group 1 Core Requirements		26	
Total Hours		63			Total Hours*	58
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.						