Truman State University — 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.

	Truman State University		<u>Semester</u>		Missouri S&T	
MATH 198	Analytic Geometry and Calculus I	5	N	MATH 1214	Calculus I Grade of C or better is required.	4
MATH 263	Analytic Geometry and Calculus II	5	N	MATH 1215	Calculus II Grade of C or better is required.	4
MATH 264	Analytic Geometry and Calculus III	3	N	MATH 2222	Calculus III Grade of C or better is required.	4
MATH 365	Ordinary Differential Equations	3	N	ИАТН 3304	Elementary Differential Equations	3
PHYS 185, 190 AND PHYS 186, 191	College Physics I and Calculus for Physics I AND College Physics II and Calculus for Physics II The combination of TSU PHYS 185, 186, 190, and 191 is equivalent to the combination of SAT PHYSICS 1135 and 2135. All TSU courses must be completed to receive equivalent credit.	10			Engineering Physics I AND Engineering Physics II Grade of C or better is required. The combination of TSU PHYS 185, 186, 190, and 191 is equivalent to the combination of S&T PHYSICS 1135 and 2135. All TSU courses must be completed to receive equivalent oredit.	8
ENG 190	Writing as Critical Thinking	3	E	ENGLISH 1120	Exposition and Argumentation	3
	Total Hours	29			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 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 Engine	eerinç	g Grou	ıp 2 Major R	Requirements	
	Truman State University		Semeste	<u>r</u>	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHYS 387	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
MATH 357 or STAT 290	Linear Algebra or Statistics	3		MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics Will satisfy the Advanced Math/Comp Sci elective requirement.	3
PHRE 188 or	Ethics	3		PHILOS 1130	How Should I Live? An Introduction to Ethics	3
	or other engineering, business, bio, social ethics approved by advisor Humanities, Arts.	and Social	Sciences G	eneral Education Requi	or other engineering, business, bio, social ethics approved by advisor	
	6 hours Humanit	ies and Fine al and Social 1200, 1300	Arts from at I Sciences from , 1310, or PO	•	s and iplines.	
	Select		anities and F m at least tw	o specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
			ral and Soci			
LUOT 4044		6 hours fro	m at least tw	o specific disciplines.	5 1 W 1 0: " "	
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 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 Logic and Reasoning: An Introduction 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
	Н	lumanities	, Arts, and S Select 3 hou	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, at music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	rt, 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. Group 2 Major Requirements Group 1 Core Requirements Total I	0 34 29 Hours 63			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	0 35 26 61

	Architectural Eng	gineer	ing Gro	oup 2 Major l	Requirements	
	Truman State University		Semeste	<u>r</u>	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	:	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I		1	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHY 387	Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I	:	3	STAT 3115* or STAT 3117*	Engineering Statistics* or Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
NASC 140	Physical Geology		1	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	From the o 6 hours Hur	ptions listed manities and F avioral and So ORY 1200, 13	n each group b ine Arts from at cial Sciences fro 00, 1310, or PO	•	clude s and olines.	
	Se		manities and f from at least tw	Fine Arts o specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.		3	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	Calact C haven		rioral and Soci		71/ 4200	
HIST 1012*	World Civilizations since ca. 1300 CE* *Satisfies the State of Missouri government requirement.		iwo specilic dis 3	ciplines to include HISTOI HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	Intro to Philosophy or Logic or American National 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	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction 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.)		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements		9 9		Group 2 Major Requirements Group 1 Core Requirements	29 26
	·	otal Hours 5			Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.	55 55

					j-Biomanufac equirements	cturing	
	Truman State University			Semeste	<u> </u>	Missouri S&T	
COMM 170	Public Speaking		3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I		4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 131	Chemical Principles II		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
CHEM 329, 330	Organic Chemistry I (3) and Lab (1)		4		CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHEM 331, 332 or BIOL 100 or BIOL 300	Organic Chemistry II (3) and Lab (1) or Biology with Lab (4) or Genetics with Lab (4)		4		CHEM 2220, 2229 or BIO SCI 1113, 1219 or BIO SCI 2223	Organic Chemistry II and Lab or General Biology and Lab or General Genetics Applies to degree as Track Elective.	4
BIOL 214	Anatomy and Physiology I and Lab		4		BIO SCI 3333, 3359	Anatomy and Physiology I and Lab	4
CS 170 or CS 180* or CS 181*	Intro to Computer Science (4) or Foundations of Computer Science I (3) or Foundations of Computer Science II (3)		3		CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++) *Will be substituted for CS 1500.	3
		nities and 3 hour	l Fine s Beh	Arts from at I avioral and S	elow, select 9 hours to include east two specific disciplines and ocial Sciences. L SCI 1200 to satisfy the Sta	nd	
				nities and F			
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	ct 6 hour	s froi	n at least tw	o specific disciplines. HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation **statisfies the State of Missouri government requirement.	6
		Beh		al and Soci			
HIST 1011 or HIST 1012* or GEOG 211 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or American National 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	Select 3 hou	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 Group 1 Core Requirements Tota	al Hours	35 29 64			Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	35 26 61

					ing-Biomate equirements		
	Truman State University			Semester		Missouri S&T	
COMM 170	Public Speaking		3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I		4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 131	Chemical Principles II		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
CHEM 329, 330	Organic Chemistry I (3) and Lab (1)		4		CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 331, 332	Organic Chemistry II (3) and Lab (1)		4		CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIOL 100	Biology with Lab		4		BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
BIOL 214	Anatomy and Physiology I and Lab		4		BIO SCI 3333, 3359	Human Anatomy and Physiology I and Lab	4
CS 170 or CS 180* or CS 181*	Intro to Computer Science (4) or Foundations of Computer Science I (3) or Foundations of Computer Science II (3)		3		CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++) *Will be substituted for CS 1500.	3
PHYS 387	Statics		3		CIV ENG 2200	Engineering Mechanics-Statics	3
HIST 1104* or		TORY 1200, 1: Hi	300, uma	<mark>1310, or POI</mark> nities and F			
HIST 1104" OF HIST 1105" OF ART 203 OF MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thougi *Satisfies the State of Missouri government requirement.	ht	6		HISTORY 1310* or ART 1180 or MUSIC 1150	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
		Beha		al and Socia			
HIST 1011 or HIST 1012* or GEOG 211 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or American National 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	Select 3 hou	IS. 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. Group 2 Major Requirements Group 1 Core Requirements		0 42 29 71			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* "S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.	0 42 26 68

	Ceramic Engin	eering	Group	2 Major Re	quirements	
	Truman State University		Semeste	1	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
PHYS 387	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
CHEM 130	Chemical Principles I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 131	Chemical Principles II	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
CHEM 329	Organic Chemistry I	3		CHEM 2210	Organic Chemistry I (3) and Lab* (1) Satisfies the advanced chemistry elective requirement. 'The lab is not a degree requirement, transfers as general elective credit.	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I	3		STAT 3115 or STAT 3117	Engineering Statistics or Intro to Probability and Statistics or any statistics course 3000-level or higher. Satisfies statistics elective requirement.	3
PHYS 250	Modern Physics I	3		PHYS 2305	Intro to Modern Physics	3
	From the op 6 hours Huma	itions listed in anities and Fine rioral and Socia	each group be Arts from at I I Sciences fror	eneral Education Requinted with the second seast two specific disciplines at least two specific disciplines at least two specific disciplines at least two satisfy the Second seatisfy the	lude and Jines.	
	Sale		anities and F	ine Arts o specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6	m at loadt w	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	Sele		ral and Soci	al Sciences o specific disciplines.		
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSVCH 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 Logic and Reasoning: An Introduction 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 S Select 3 hou	ocial Sciences rs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	y, art, 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 Group 1 Core Requirements	38 29			Group 2 Major Requirements Group 1 Core Requirements	38 26
		tal Hours 67			Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	

					neering or		
	Chemical Enginee				nıcal Engine equirements	· · ·	
	Truman State University	Jup E	IVIC	Semester	<u> </u>	Missouri S&T	
COMM 170	Public Speaking		3	<u>Octificater</u>	SP&MS 1185	Principles of Speech	3
CHEM 130	Chemical Principles I		4		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CHEM 131	Chemical Principles II		4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2)	3
CHEM 329, 330	Organic Chemistry I (3) and Lab (1)		4		CHEM 2210, 2219*	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry and Lab* "CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits See note below.	4
CHEM 331 or BIOL 204 or BIOL 304	Organic Chemistry II (3) or Introductory Microbiology (4) or General Microbiology (4)		8		CHEM 2220 or BIO SCI 3313, 3319 or CHEM 4610, 4619	Organic Chemistry II (3) or Analytical Chemistry (4) or Microbiology and Lab (5) or General Biochemistry and Lab (5) Applies to the degree as required science elective credits. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab.	8
CS 170 or CS 180* or CS 181*	Intro to Computer Science (4) or Foundations of Computer Science I (3) or Foundations of Computer Science II (3)		3		CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* C++) *Will be substituted for CS 1500.	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I		3		STAT 3115* or STAT 3117*	Engineering Statistics* or Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
	*At least one course must be selected from HIST	<mark>ГОRY 1200,</mark> 1 Н	1300, Iuma	1310, or POI nities and F	•		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Though *Satisfies the State of Missouri government requirement.		6	ii at least two	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
				al and Socia			
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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.	elect 6 hour:	6	n at least two	o specific disciplines. HISTORY 1100 or HISTORY 2100° or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200° or PSYCH 1101 or ECON 1100 or ECON 1100 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction 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. Group 2 Major Requirements		0 41			Maximum Free Electives Group 2 Major Requirements	0 41
	Group 1 Core Requirements	Total Hours	29			Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.	26 67

	Civil Engineeri	ng G		<u> </u>		
	Truman State University		<u>Semester</u>		Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
NASC 140	Physical Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
PHYS 387	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I	3		STAT 3115* or STAT 3117*	Engineering Statistics* or Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
	From the option 6 hours Humanit	ns listed in e ies and Fine al and Social 1200, 1300,	each group be Arts from at le Sciences from 1310, or POL		nclude es and eiplines.	
	Select		anities and Fi	specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missourl government requirement.	6
	Soloat		ral and Socia			
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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		o specific disciplines. HISTORY 1100 or HISTORY 2200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 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 Philiosophy or Logic and Reasoning: An Introduction 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
	H		Arts, and So Select 3 hour	ocial Sciences s.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, at music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	rt, 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 Group 1 Core Requirements Total I	32 29 Hours 61			Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.	32 26 58

	Computer Engin	eering	Grou	p 2 Major Re	equirements	
	Truman State University		Semester		Missouri S&T	
COMM 170	Public Speaking	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CS 170 or CS 180* or CS 181*	Intro to Computer Science (4) or Foundations of Computer Science I (3) or Foundations of Computer Science II (3)	3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* *Will be substituted for COMP SCI 1500.	3
PHYS 387 or PHYS 250 or CHEM 329 or BIOL 300	Statics or Modern Physics I or Organic Chemistry I or Genetics	3		CIV ENG 2200 or PHYSICS 2311 or CHEM 2210 or BIO SCI 2223	Engineering Mechanics-Statics (3) or Modern Physics I (3) Organic Chemistry I (4) or General Genetics (3) Satisfies a required engineering/science elective.	3
MATH 357	Linear Algebra	3		MATH 3108	Linear Algebra Satisfies a required math elective.	3
STAT 570 or STAT 290	Mathematical Probability and Statistics I or Statistics or	3		STAT 3117 or STAT 3115*	Intro to Probability and Statistics or Engineering Statistics* *Will be substituted for STAT 3117.	3
	*At least one course must be selected from HISTOI	RY 1200, 1300, Huma	<mark>, 1310, or POL</mark> anities and Fi	•		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	Sele		ral and Socia m at least two	I Sciences specific disciplines.		
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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	m at least (WC	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 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 Logic and Reasoning: An Introduction 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 So Select 3 hour	ocial Sciences		
ENG 210	Writing Across the Disciplines	3		ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Tot	3 37 29 al Hours 66		Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* SAT advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.	3 38 26 64

	Electrical Engine	eering	Group	o 2 Major Rec	juirements	
	Truman State University		Semester		Missouri S&T	
COMM 170	Public Speaking	3		SPMS 1185	Principles of Speech	3
CHEM 130	Chemical Principles I	4		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CS 170 or CS 180* or CS 181*	Intro to Computer Science (4) or Foundations of Computer Science I (3) or Foundations of Computer Science II (3)	3		CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* "Will be substituted for CS 1500.	3
PHYS 387 and S&T MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR PHYS 250 or CHEM 329 or BIOL 300	Statics and Engineering Mechanics-Dynamics at S&T Both courses above combined or any one of the following courses will satisfy a re- engineering science elective. OR Modern Physics I or Organic Chemistry I or Genetics	equired 3		CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR PHYSICS 2311 or CHEM 2210 or BIO SCI 2223	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) Both courses above combined or any one of the following courses satisfies a required engineering science elective. OR Modern Physics I (3) or Organic Chemistry I (3) or General Genetics (3)	3
MATH 357	Linear Algebra	3		MATH 3108	Linear Algebra	3
STAT 570 or STAT 290	Mathematical Probability and Statistics I or Statistics or	3		STAT 3117 or STAT 3115*	Intro to Probability and Statistics or Engineering Statistics* *Will be substituted for STAT 3117.	3
	6 hours Human 6 hours Behavio *At least one course must be selected from HISTOR	nities and Fine oral and Social OY 1200, 1300, Huma	Arts from at le Sciences from 1310, or POL Inities and F		d es.	
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6	ii at least two	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
			al and Socia			
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government.	6		specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 115 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 Logic and Reasoning: An Introduction 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
			Arts, and So Select 3 hour	ocial Sciences s.		
ENG 210	Writing Across the Disciplines	3		ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Tota	6 40 29 Il Hours 69		Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.	6 41 26 67

	Engineering Man	agem	er	nt Group 2 Major F	Requirements	
	Truman State University			Semester	Missouri S&T	
COMM 170	Public Speaking		3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I		4	CHEM 1310, 1319	General Chemistry I and Lab	5
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)		3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHYS 387	Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I		3	STAT 3115 or STAT 3117	Engineering Statistics or Intro to Probability and Statistics "Will be substituted for the STAT 3115/3117 requirement.	3
	From the op 6 hours Hum	otions listed anities and vioral and So	in ear Fine a	Sciences General Education Require ach group below, select 15 hours to includants from at least two specific disciplines Sciences from at least two specific disciplination 1310, or POL SCI 1200 to satisfy the St	ude and ines.	
	Sel			nities and Fine Arts n at least two specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.		6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	Select 6 hours			al and Social Sciences o specific disciplines to include PSYCH	1101	
PSYC 166	General Psychology	iioiii at ieas	3	PSYCH 1101	General Psychology Required	3
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National Government* or Principles of Microeconomics or Principles of 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 PHILOS 1115 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 Logic and Reasoning: An Introduction 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
		Humanit		Arts, and Social Sciences Select 3 hours.		
ENG 210	Writing Across the Disciplines		3	ENGLISH 1160	Writing and Research	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements To		0 31 29 60	Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.	0 32 26 61

	Environmental En	ginee	ring Gr	oup 2 Major	Requirements	
	Truman State University		Semeste	<u>r</u>	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking		3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
NASC 140	Physical Geology		4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 130	Chemical Principles I		4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 131	Chemical Principles II		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
BIOL 100	Biology		4	BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
PHYS 387	Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I		3	STAT 3115* or STAT 3117*	Engineering Statistics* or Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
	6 hours Hum	anities and I vioral and Sc PRY 1200, 1	Fine Arts from at locial Sciences from	•	and lines.	
	Sel			o specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.		6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
			vioral and Soci			
		rom at least	two specific dis	ciplines to include HISTOF		
HIST 1012*	World Civilizations since ca. 1300 CE* *Satisfies the State of Missouri government requirement.		3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	Intro to Philosophy or Logic or American National 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	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction 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 Group 1 Core Requirements To	:	37 29 66		Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.	35 26 61

	Geological Engir	neering	g Grou	p 2 Major R	Requirements	
OUEM 400	Truman State University		Semester		Missouri S&T	-
CHEM 130 CS 170 or CS 180 or CS 181	Chemical Principles I Intro to Computer Science (4) or Foundations of Computer Science I (3) or Foundations of Computer Science II (3)	3		CHEM 1310, 1319 CS 1500 or CS 1971, 1981	General Chemistry I and Lab Computational Problem Solving or Intro to Programming Methodology and Lab	3
NASC 140	Physical Geology	4		GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
PHYS 387	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I *STAT 290 is preferred. STAT 570 will be accepted.	3		STAT 3115* or STAT 3117*	Engineering Statistics* (preferred) or Intro to Probability and Statistics* *STAT 3115 is preferred. STAT 3117 will be accepted.	3
	From the opt 6 hours Huma	ions listed in e nities and Fine oral and Social	each group be Arts from at le Sciences from	eneral Education Requelow, select 15 hours to in east two specific discipline to at least two specific disc L SCI 1200 to satisfy the	nclude es and ciplines.	
	Cala		inities and Fi	ine Arts specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	Sala		ral and Socia			
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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		o specific disciplines. HISTORY 1100 or HISTORY 2200° or HISTORY 2110 or PHILOS 1105 or PHILOS 115 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 Logic and Reasoning: An Introduction 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
			Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	art, 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. Group 2 Major Requirements Group 1 Core Requirements Tot	0 32 29 al Hours 61			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* "S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.	0 32 26 58

	Mechanical Eng	ineering (Group 2 Major F	Requirements	
	Truman State University	Se	emester	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I	4	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHYS 387 MATH 357 or STAT 290	Statics Linear Algebra or Statistics	3	CIV ENG 2200 MATH 3108 or STAT 3115	Engineering Mechanics-Statics Linear Algebra I or Engineering Statistics Satisfies the Advanced Math/Statistics elective requirement.	3
	From the o 6 hours Hun	ptions listed in each nanities and Fine Arts vioral and Social Scie	ences General Education Requ group below, select 15 hours to in from at least two specific discipline ences from at least two specific disc 0, or POL SCI 1200 to satisfy the	iclude is and iplines.	
	Ç.		es and Fine Arts least two specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfes the State of Missouri government requirement.	6
			nd Social Sciences		
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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	least two specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 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 Logic and Reasoning: An Introduction 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
			s, and Social Sciences ect 3 hours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	ry, art, 3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, an music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	rt, 3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 31 29 otal Hours 60		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total H *S&T advisor permission is required to transfer more than 68 credits toward the S& Mechanical Engineering degree.	

	Metallurgical En	gineeri	ng Gro	oup 2 Major F	Requirements	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I	3		STAT 3115 or STAT 3117*	Engineering Statistics or Intro to Probability and Statistics* *Will be substituted for the STAT 3113/3115 requirement.	3
PHYS 387 CHEM 130 CHEM 131	Statics Chemical Principles I Chemical Principles II	3 4 4		CIV ENG 2200 CHEM 1310, 1319 CHEM 1320, 1510*	Engineering Mechanics-Statics General Chemistry I and Lab General Chemistry II (3) and Qualitative Analysis (2) "CHEM 1510 is not a degree requirement, transfers as general elective credit.	3 5 3
CHEM 329 or PHYS 250	Organic Chemistry I or Modern Physics I	3		CHEM 2210 or PHYSICS 2311	Organic Chemistry I (4) or Modern Physics I (3) Not specifically required for the degree but satisfies out-of-department technical elective requirement	3
	From the 6 hours Hu	options listed in manities and Fi avioral and Soc	n each group b ne Arts from at ial Sciences fro	General Education Require below, select 15 hours to include two specific disciplines are at least two specific disciplines but at least two specific discipling the Sci 1200 to satisfy the Sci	ude and lines.	
	9		manities and l	Fine Arts vo specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	s		ioral and Soc	ial Sciences vo specific disciplines.		
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 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 Logic and Reasoning: An Introduction 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
		Humanitie	es, Arts, and S Select 3 hou	Social Sciences urs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication philosophy, political science, psychology, economics, etymology, or foreign language.	, ,		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 Group 2 Major Requirements Group 1 Core Requirements	3 3i 2! Fotal Hours 6	8 9		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.	3 38 26 64

	Mining Engine	ering	Group	2 Major Red	quirements	
	Truman State University		Semester	•	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I	3		STAT 3115 or STAT 3117*	Engineering Statistics or Intro to Probability and Statistics* *Will be substituted for the STAT 3113/3115 requirement.	3
CHEM 130	Chemical Principles I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
PHYS 387	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
NASC 140	Physical Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	6 hours Hum	nanities and Fir vioral and Soci DRY 1200, 130	ne Arts from at le al Sciences from 0, 1310, or POL	•	s and iplines.	
	Se		nanities and F om at least two	ine Arts o specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
	Se		oral and Socia	al Sciences o specific disciplines.		
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 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 Logic and Reasoning: An Introduction 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 Group 1 Core Requirements	29 29 29 otal Hours			Group 2 Major Requirements Group 1 Core Requirements Total Hours*	29 26 55
					*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.	

	Nuclear Engin	eering Gr	oup 2 Major Re	quirements	
	Truman State University	Ser	nester_	Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 357	Linear Algebra	3	MATH 3108	Linear Algebra	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290 or STAT 570	Statistics or Mathematical Probability and Statistics I	3	STAT 3115 or STAT 3117	Engineering Statistics or Intro to Probability and Statistics	3
PHYS 250	Modern Physics I	3	PHYSICS 2311	Modern Physics	3
	From the c 6 hours Hui	ptions listed in each on manities and Fine Arts favioral and Social Scien	nces General Education Requiroup below, select 15 hours to in from at least two specific discipline ces from at least two specific discipline or POL SCI 1200 to satisfy the	nclude es and ciplines.	
	711 10401 0110 004100 111401 00 00100104 110111 110		and Fine Arts	oute of missouri government requirements	
	Se		east two specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfes the State of Missouri government requirement.	6
		Behavioral an	d Social Sciences	9	
	Se	elect 6 hours from at I	east two specific disciplines.		
ECON 201 or ECON 200	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American 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 PHILOS 1115 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 Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
			, and Social Sciences et 3 hours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.		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 Group 1 Core Requirements T	37 29 otal Hours 66		Group 2 Major Requirements Group 1 Core Requirements Total Hour *S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.	38 26 s* 64

	Petroleum Engi	neerin	g Grou	p 2 Major R	equirements	
	Truman State University		Semeste		Missouri S&T	
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	Chemical Principles I	4	ļ.	CHEM 1310, 1319	General Chemistry I and Lab	5
CS 170	Intro to Computer Science	4	ļ.	COMP SCI 1500	Computational Problem Solving	3
NASC 140	Physical Geology	4	l .	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
PHYS 387	Statics	3	3	CIV ENG 2200	Engineering Mechanics-Statics	3
	From the o 6 hours Hun	ptions listed in nanities and Fivioral and Soco	n each group be ine Arts from at I sial Sciences fron 00, 1310, or PO	•	iclude es and iplines.	
	Ç.		manities and F	ine Arts specific disciplines.		
HIST 1104* or HIST 1105* or ART 203 or MUSI 204	United States History I, 1607-1877* or United States History II, 1877-present* or Intro to the Visual Arts or Perspectives in Music: Art Music in Western Thought *Satisfies the State of Missouri government requirement.	6		HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	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
			ioral and Soci			
		lect 6 hours f	rom at least tw	o specific disciplines.		
HIST 1011 or HIST 1012* or GEOG 211 or PHRE 186 or PHRE 187 or POL 161* or PSYC 166 or ECON 201 or ECON 200 or Foreign Language	World Civilizations before ca. 1300 CE or World Civilizations since ca. 1300 CE* or Global Geography or Intro to Philosophy or Logic or American National 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.	ē		HISTORY 1100 or HISTORY 1200° or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 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 Logic and Reasoning: An Introduction 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
		Humanitie	es, Arts, and S Select 3 hou	ocial Sciences rs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	ry, art,	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.	C			Maximum Free Electives	0
	Group 2 Major Requirements	3			Group 2 Major Requirements	32
	Group 1 Core Requirements	2: otal Hours 6:			Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.	26 58