Missouri Southern 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.

	Missouri Southern State University	9	Semester .	Missouri S&T	
MATH 0150	Calculus with Analytic Geometry I	5	MATH 1214	Calculus I Grade of C or better is required.	4
MATH 0250	Calculus with Analytic Geometry II	5	MATH 1215	Calculus II Grade of C or better is required.	4
MATH 0260	Calculus with Analytic Geometry III	5	MATH 2222	Calculus III Grade of C or better is required.	4
MATH 0322	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHYS 0275 and PHYS 0295	General Physics I and General Physics II Grade of C or better is required in both courses. The combination of MSSU PHYS 0275 and 0295 is equivalent to the combination of Missouri S&T PHYSICS 1135 and 2135. Both courses are required to receive full transfer credit.	10	PHYSICS 113 PHYSICS 213	0 1 10 1 11 1 11 11 11 11 11 11 11 11 11	8
ENG 0101	College Composition I	3	ENGLISH 112	Exposition and Argumentation	3
	Total Hours	31		Total Hours	s 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 Engi	ingarir	na Grou	n 2 Maior R	Paguiraments	
	Acrospace Lingi		ig Grou		requirements	
	Missouri Southern State University		Semester	•	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	;	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
CHEM 0151	General Chemistry I	;	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CIS 0110	Programming I	;	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 0351	Linear Algebra	;	3	MATH 3108	Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.	3
PHIL 01212	Ethics or other engineering, business, bio, social ethics approved by advisor	;	3	PHILOS 1130	How Should I Live? An Introduction to Ethics or other engineering, business, bio, social ethics approved by advisor	3
	From the o 6 hours Hur	ptions listed in manities and F avioral and So	in each group be ine Arts from at le cial Sciences fron	eneral Education Requelow, select 15 hours to in east two specific discipline in at least two specific disc SCI 1200 to satisfy the	clude s and iplines.	
			manities and F			
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	(3	o specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1223 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1800 to 1865 or American Literature: 1865 to Present or World Literature: 1865 to Present or American History to 1877* or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
	0-		vioral and Socia			
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		from at least two	o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or BSYCH 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
		Humaniti	es, Arts, and Se Select 3 hour			
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo 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. Group 2 Major Requirements Group 1 Core Requirements T				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 32 26 58

	Architectural Eng	ineerin	g Group 2 Major	Requirements	
	Missouri Southern State University		<u>Semester</u>	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151	General Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
			CIV ENG 2200	Engineering Mechanics-Statics	3
GEOL 0120 or GEOL 0211	Intro to Geology (3) or Fundamentals of Earth and Space Science (4)	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	6 hours Huma	anities and Fine A ioral and Social S	ach group below, select 12 hours to ir Arts from at least two specific discipline Sciences from at least two specific disc 1310, or POL SCI 1200 to satisfy the	es and ciplines.	
	0.1		nities and Fine Arts		
		ect 6 hours from	at least two specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature: 1865 to Present or World Literature: 1865 to Present or American History to 1877* or American History to 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
			al and Social Sciences		
		om at least two	specific disciplines to include HISTC		
HIST 0140*	Western Civilization since 1500* *Satisfies the State of Missouri Government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) 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	23 31 al Hours 54		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 Architectural Engineering degree.	26 26

				g-Biomanufa equirements		
	Missouri Southern State University		Semeste	e <u>r</u>	Missouri S&T	
COM 0100	Oral Communications	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 0152	General Chemistry II	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 0301	Organic Chemistry I	5		CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHEM 0302 or BIO 0101 or BIO 0231	Organic Chemistry II (5) or General Biology (4) or General and Medical Microbiology (5)	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
BIO 0121	Human Anatomy and Physiology I	4		BIO SCI 3333, 3339	Anatomy and Physiology I and Lab	4
CIS 0210 or CIS 0350 or CIS 0110*	Programming II or Data Structures or Programming I*	3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving (3) or Intro to Programming Methodology and Lab*(C++) (3) *Will be substituted for COMP SCI 1500.	3
	From the	options listed in e lumanities and Fine 3 hours Beh	each group l Arts from at navioral and	General Education Require below, select 12 hours to include the select 12 hours to include the select two specific disciplines social Sciences. DL SCI 1200 to satisfy the Signature 1200	lude and	
		Huma	nities and	Fine Arts		
		Select 6 hours from	m at least tv	wo specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1492-1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History to 1877* or Art Appreciation or Music Understanding and Appreciation **Satisfies the State of Missouri government requirement.	6
				cial Sciences		
HIST 0130 or HIST 0140° or GEOG 0110 or PSC 0120° or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	Select 3 ho	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 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 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
			Arts, and S	Social Sciences required.		
ENG 0313	Technical Writing	3		ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 41 31 Total Hours 72			Maximum Free Electives 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.	0 38 26 * 64

	Biome	dical En	gineeı	ring-Biomate	rials	
			\sim	equirements		
	Missouri Southern State University		Semeste	er	Missouri S&T	
COM 0100	Oral Communications	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 0152	General Chemistry II	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHEM 0301	Organic Chemistry I	5		CHEM 2210, 2219*	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 0302	Organic Chemistry II	5		CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIO 0101	General Biology	4		BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
BIO 0121	Human Anatomy and Physiology I	4		BIO SCI 3333, 3339	Human Anatomy and Physiology I and Lab	4
CIS 0210 or CIS 0350 or CIS 0110*	Programming II or Data Structures or Programming I*	3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving (3) or Intro to Programming Methodology and Lab*(C++) (3) "Will be substituted for COMP SCI 1500.	3
	Humanities	, Arts, and Socia	l Sciences C	Seneral Education Require	ements	
		Humanities and Fin 3 hours Be	e Arts from at chavioral and	pelow, select 12 hours to include two specific disciplines Social Sciences. DL SCI 1200 to satisfy the St	and	
		Hum	anities and	Fine Arts		
		Select 6 hours fr	om at least tv	vo specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110° or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1223 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation **Satisfies the State of Missouri government requirement.	6
		Behavi		ial Sciences		
			Select 3 ho	=: = :		
HIST 0130 or HIST 0140* or GEOG 0110 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
				Social Sciences		
ENG 0313	Technical Writing	EN 3	GLISH 3560	required. ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	46			Group 2 Major Requirements	42
	Group 1 Core Requirements	31 Total Hours 77			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.	26 68

	Ceramic Engi	neering	Group	2 Major Red	quirements	
	Missouri Southern State University		Semester		Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 0152	General Chemistry II	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 0301	Organic Chemistry I	5		CHEM 2210, 2219*	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
	From the 6 hours H	options listed in umanities and Fine havioral and Socia	each group be e Arts from at le I Sciences from	neral Education Requir low, select 15 hours to include two specific disciplines at least two specific disciplines. SCI 1200 to satisfy the Si	ude and lines.	
		Hum	anities and Fi	ne Arts		
		Select 6 hours fro	m at least two	specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or ART 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
			ral and Socia			
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		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
		Humanities	, Arts, and So Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.	n, 3	2 Sloot o Flour	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	33 31 Total Hours 64			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 Ceramic Engineering degree.	29 26 55

	Chemical Enginee			neering or nical Engine	ering Emphasis	
	and the second of the second o			equirements		
	Missouri Southern State University		Semester	_	Missouri S&T	
COM 0100	Oral Communications	3		SP&MS 1185	Principles of Speech	3
					Applies to degree as Gen Ed Communication requirement.	
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab General Chemistry II (3) and Qualitative Analysis* (2)	5
CHEM 0152	General Chemistry II	5		CHEM 1320, 1510*	*CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 0301	Organic Chemistry I	5		CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science electric credits See note below.	4
CHEM 0302 or BIO 0231	Organic Chemistry II or General and Medical Microbiology	8		CHEM 2220 or BIO SCI 3313, 3319	Organic Chemistry II (3) or Microbiology 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
CIS 0210 or CIS 0350 or CIS 0110*	Programming II or Data Structures or Programming I*	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
010 0110	5 5	Arts, and Social	Sciences G	eneral Education Requi		
	From the 6 hours H 6 hours Be	e options listed in ea dumanities and Fine ehavioral and Social	ach group be Arts from at le Sciences fron	elow, select 15 hours to inc east two specific disciplines n at least two specific discip	elude and olines.	
	*At least one course must be selected from HIS			•	State of Missouri government requirement.	
			nities and F	ine Arts o specific disciplines.		
ENG 0271 or ENG 0272 or	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or	Select o flours from	ii at ieast two	ENGLISH 1211 or ENGLISH 1212 or	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present	
ENG 0281 or ENG 0282 or	American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or			ENGLISH 1221 or ENGLISH 1222 or	American Literature: 1600 to 1865 or American Literature: 1865 to Present or	
ENG 0261 HIST 0110* or	World Literature: Ancient - 16th Century or United States History 1492-1877* or	6		ENGLISH 1231 or HISTORY 1300* or	World Literature I: Beginnings to the Renaissance or American History to 1877* or	6
HIST 0120* or	United States History 1877 to Present* or			HISTORY 1310* or	American History Since 1877* or	
ART 0110 or MUS 0110	Art Appreciation or Music Appreciation			ART 1180 or MUSIC 1150	Art Appreciation or Music Understanding and Appreciation	
MO2 0110	*Satisfies the State of Missouri government requirement.			MUSIC 1150	*Satisfies the State of Missouri government requirement.	
			al and Socia	al Sciences o specific disciplines.		
HIST 0130 or	Western Civilization to 1500 or	Coloct o flours from	ii at loadt twe	HISTORY 1100 or	Early Western Civilization or	
HIST 0140* or	Western Civilization since 1500* or			HISTORY 1200* or	Modern Western Civilization* or	
GEOG 0110 or	World Regional Geography or			HISTORY 2110 or	World Regional Geography or	
PHIL 0201 or	Intro to Philosophy or			PHILOS 1105 or	Self and World: Intro to Philosophy or	
PHIL 0140 or PSC 0120* or	Critical Thinking or American Government* or	6		PHILOS 1115 or POL SCI 1200* or	Logic and Reasoning: An Introduction or American Government*or	6
PSYC 0100 or	General Psychology or	O		PSYCH 1101 or	General Psychology or	U
ECON 0202 or	Principles of Economics (Micro) or			ECON 1100 or	Principles of Microeconomics or	
ECON 0201 or	Principles of Economics (Macro) or			ECON 1200 or	Principles of Macroeconomics or	
Foreign Language	Elementary or Intermediate Foreign Language			Foreign Language	Elementary or Intermediate Foreign Language	
	*Satisfies the State of Missouri government requirement.			ocial Sciences	*Satisfies the State of Missouri government requirement.	
ENG 0313	Technical Writing	ENGI 3	LISH 3560 re	equirea. ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	44			Group 2 Major Requirements	41
	Group 1 Core Requirements	31			Group 1 Core Requirements	26
		Total Hours 75			Total Hours*	
					*S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.	

	Civil Enginee	ring Grou	ıp 2 Major Requ	uirements	
	Missouri Southern State University	Ser	nester	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
GEOL 0120 or GEOL 0211	Intro to Geology (3) or Fundamentals of Earth and Space Science (4)	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
GLOL 0211		and Social Scier	nces General Education Regui	rements	
	From the opti 6 hours Huma 6 hours Behavic	ons listed in each g nities and Fine Arts f oral and Social Scien	roup below, select 15 hours to inc rom at least two specific disciplines ces from at least two specific discip	clude s and plines.	
	*At least one course must be selected from HISTOR		•	State of Missouri government requirement.	
	Sale		s and Fine Arts east two specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1223 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation 'Satisfies the State of Missouri government requirement.	6
			d Social Sciences		
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Sele Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	east 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
			and Social 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,	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 Tota	26 31 al Hours 57		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.	26 26 * 52

	Computer Eng	ineering	Grou	p 2 Major Re	equirements	
	Missouri Southern State University		Semester		Missouri S&T	
COM 0100	Oral Communications	3	<u>Gomicotoi</u>	SPMS 1185	Principles of Speech	3
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 0210 or CIS 0350 or CIS 0110*	Programming II or Data Structures or Programming I*	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
CHEM 0301	Organic Chemistry I	5		CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) Satisfies a required engineering/science elective. *The lab is not a degree requirement, transfers as general elective credit.	3
MATH 0351 or MATH 0300	Linear Algebra or Fundamentals of Mathematical Thought	3		MATH 3108 or MATH 3109	Linear Algebra or Foundations of Mathematics Satisfies a required math elective.	3
	From the 6 hours H	options listed in elumanities and Fine havioral and Social TORY 1200, 1300	each group be Arts from at le Sciences fron	•	ude and lines.	
				specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
			ral and Socia			
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.	Select 6 hours fro	m at least two	o 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
		Humanities	, Arts, and Select 3 hour	ocial Sciences		
ENG 0102 or ENG 0313	College Composition II or Technical Writing	3	Coloor o Houl	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	3 37 31 Total Hours 68		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 Computer Engineering degree.	3 35 26 61

	Electrical Eng	ineering	Group 2 Major Ro	equirements	
	Missouri Southern State University		Semester	Missouri S&T	
COM 0100	Oral Communications	3	SPMS 1185	Principles of Speech	3
CHEM 0151	General Chemistry I	5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 0210 or CIS 0350 or CIS 0110*	Programming II or Data Structures or Programming I*	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
CHEM 0301	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) Saltsfies a required engineering/science elective. The lab is not a degree requirement, transfers as general elective credit.	3
MATH 0351	Linear Algebra	3	MATH 3108	Linear Algebra	3
	From th 6 hours l	, e options listed in ea Humanities and Fine A ehavioral and Social S	ciences General Education Requi tich group below, select 15 hours to in Arts from at least two specific discipline sciences from at least two specific disci 1310, or POL SCI 1200 to satisfy the	clude s and iplines.	
			ities and Fine Arts		
ENO 0074	Data literatura Madianal 10th Contrar	Select 6 hours from	at least two specific disciplines.	Delite I it was horse I. The Descriptions to 4000 an	
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature: 1865 to Present or World Literature: Beginnings to the Renaissance or 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
			l and Social Sciences		
		Select 6 hours from	at least two specific disciplines.		
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) 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
			Arts, and Social Sciences Select 3 hours.		
ENG 0102 or ENG 0313	College Composition II 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 Group 1 Core Requirements	40 31 Total Hours 71		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.	38 26 * 64

	Engineering Ma	nagen	nen	t Group 2 Majo	r Requirements	
	Missouri Southern State University		5	Semester .	Missouri S&T	
COMM 0100	Oral Communications		3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 0151	General Chemistry I		5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 0110	Programming I		3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
	From the 6 hours h	e options listed Humanities and ehavioral and S STORY 1200,	d in ead Fine A Social S 1300, 1		include lines and lisciplines.	
				ities and Fine Arts		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation or Statisfies the State of Missouri government requirement.		6	at least two specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
				and Social Sciences		
		urs from at lea		specific disciplines to include PS		
PSYC 0100	General Psychology		3	PSYCH 1101	General Psychology Required	3
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or Principles of Economics (Micro) or Principles of Economics (Macro) 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
		Human		rts, and Social Sciences elect 3 hours.		
ENG 0102 or ENG 0313	College Composition II or Technical Writing		3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	Total Hours	0 26 31 57	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 26 26 61

	Environmental E	ngine	eri	ng Group 2 Major	Requirements	
	Missouri Southern State University			Semester	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication		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
GEOL 0120 or GEOL 0211	Intro to Geology (3) or Fundamentals of Earth and Space Science (4)		3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 0151	General Chemistry I		5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 0152	General Chemistry II		5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
BIO 0101	General 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
	Humanities, A	Arts, and So	cial	Sciences General Education Require	ements	
	6 hours Hu	ımanities and	Fine	ach group below, select 12 hours to inclu Arts from at least two specific disciplines Sciences from at least two specific discipl	and	
	*At least one course must be selected from HIS	TORY 1200, 1	1300,	1310, or POL SCI 1200 to satisfy the St	ate of Missouri government requirement.	
	c			nities and Fine Arts n at least two specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: Beginning - 19th Century or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation "Satisfies the State of Missouri government requirement.	occur o moun	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
				al and Social Sciences		
		from at leas	st two	specific disciplines to include HISTOR		
HIST 0140*	Western Civilization since 1500* *Satisfies the State of Missouri Government requirement.		3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) 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. Group 2 Major Requirements Group 1 Core Requirements	Total Hours	0 32 31 63		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 Environmental Engineering degree.	0 29 26 55

	On alonia at Earl		. O O.M.	i. D i.		
	Geological Engi	neering	Group 2 Ma	ajor Require	ements	
	Missouri Southern State University		Semester		Missouri S&T	
ENG 0313	Technical Writing	3	ENGLISH 35		al Writing	3
CHEM 0151	General Chemistry I	5	CHEM 1310		legree as Gen Ed Communication requirement. Chemistry I and Lab	5
CIS 0210 or CIS 0350 or CIS 0110*	Programming II or Data Structures or Programming I*	3	CS 1500 or CS 1971, 19	Computa	ational Problem Solving or Programming Methodology and Lab	3
GEOL 0120 or GEOL 0211	Intro to Geology (3) or Fundamentals of Earth and Space Science (4)	3	GEO ENG 1 (GEOLOGY		and Environmental Geology	3
	From the op 6 hours Huma	tions listed in e anities and Fine ioral and Social	Sciences General Educated from the search group below, select 15 Arts from at least two specific Sciences from at least two select 1310, or POL SCI 1200 to	hours to include fic disciplines and specific disciplines.	couri government requirement	
	At load one could make be selected from the following		nities and Fine Arts	outiony the otate of miles	our government requirement.	
	Sele		n at least two specific disc	ciplines.		
ENG 0271 or ENG 0272 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0120* or ART 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6	ENGLISH 12 ENGLISH 12 ENGLISH 12 ENGLISH 12 ENGLISH 12 ENGLISH 12 HISTORY 13 ART 1180 or MUSIC 1150	212 or British L 121 or America 122 or America 1231 or World Li 1300* or America 110* or America Art Appr Music U	iterature I: The Beginnings to 1800 or iterature II: 1800 to Present n Literature: 1600 to 1865 or n Literature: 1600 to 1865 or n Literature: 1865 to Present or terature I: Beginnings to the Renaissance or an History to 1877* or an History Since 1877* or reciation or nderstanding and Appreciation he State of Missouri government requirement.	6
			ral and Social Sciences			
		ect 6 hours fro	m at least two specific disc	•		
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1: HISTORY 1: HISTORY 2: PHILOS 110 PHILOS 111 POL SCI 12: PSYCH 110 ECON 1100 ECON 1200 Foreign Lang	200* or Modern 110 or World R 5 or Self and 5 or Logic an 00* or America 1 or General or Principle or Principle guage Element *Satisfies t	estern Civilization or Western Civilization* or egional Geography or I World: Intro to Philosophy or Id Reasoning: An Introduction or an Government*or Psychology or so of Microeconomics or est of Macroeconomics or eary or Intermediate Foreign Language the State of Missouri government requirement.	6
			Arts, and Social Science Select 3 hours.	es		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.		HASS Electi	ve music, the philosop	ies, Arts, Social Sciences Elective: Any history, art, heater, English and technical communication, hy, political science, psychology, economics, gy, or foreign language.	3
	No free electives applied to the degree.	0		Maximur	m Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements Tot	29 31 tal Hours 60		Group 1	Major Requirements Core Requirements Total Hours or permission is required to transfer more than 65 credits toward the S&T ingineering degree.	29 26 * 55

	Mechanical Engi	neerin	g Grou	ıp 2 Major F	Requirements	
	Missouri Southern State University		Semester	r	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151	General Chemistry I	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CIS 0110	Programming I	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 0351	Linear Algebra	3		MATH 3108	Linear Algebra I Satisfies the Advanced Math/Statistics elective requirement.	3
	From the op 6 hours Huma	tions listed in canities and Fine ioral and Socia	each group be Arts from at le I Sciences from	eneral Education Requelow, select 15 hours to in east two specific discipline in at least two specific disc L SCI 1200 to satisfy the	clude s and iplines.	
			anities and F			
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	Sele British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	ect 6 hours fro	m at least two	o specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1230 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
	Sal		ral and Socia	al Sciences o specific disciplines.		
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) 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 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
		Humanities	, Arts, and S Select 3 hou	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.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements Tol	29 31 al Hours 60			Group 2 Major Requirements Group 1 Core Requirements Total Hours* *\$&T advisor permission is required to transfer more than 68 credits toward the \$&T Mechanical Engineering degree.	29 26 55

	Metallurgical Enç	gineering	g Gro	up 2 Major	Requirements	
	Missouri Southern State University		Semester		Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 0152	General Chemistry II	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 0301	Organic Chemistry I	5		CHEM 2210	Organic Chemistry I Not specifically required for the degree but satisfies out-of-department technical elective requirement	3
	From the c 6 hours Hui	ptions listed in ea manities and Fine A avioral and Social S	ach group be Arts from at le Sciences from	eneral Education Requelow, select 15 hours to interest two specific disciplines at least two specific disc. SCI 1200 to satisfy the	nclude es and eiplines.	
			nities and Fi	•	33	
	Se	elect 6 hours from	n at least two	specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110* or ART 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1492-1877* or Art Appreciation or Music Appreciation Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
			al and Socia			
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	elect 6 hours from	n at least two	o 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 Macroeconics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			Arts, and So Select 3 hour	ocial Sciences s.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	ory, 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
	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements T	3 36 31 otal Hours 67			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 32 26 58

	Mining Engine	ering	Group	2 Major Red	quirements	
	Missouri Southern State University		Semester	•	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	(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
CHEM 0151	General Chemistry I		5	CHEM 1310, 1319	General Chemistry I and Lab	5
GEOL 0120 or GEOL 0211	Intro to Geology (3) or Fundamentals of Earth and Space Science (4)		3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
				eneral Education Requi		
	6 hours Hur	nanities and F vioral and Soc	ine Arts from at le	elow, select 12 hours to inceast two specific disciplines at least two specific disciplines SCI 1200 to satisfy the	s and iplines.	
	At least one source must be solected from the		manities and F	•	oute of missouri government requirement.	
	Se			specific disciplines.		
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	(i	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature: 1865 to Present or World Literature: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation 38 atteffes the State of Missouri government requirement.	6
			ioral and Socia			
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Plementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	ect 6 hours		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 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.	(Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements T	2 3 otal Hours 5	1		Group 2 Major Requirements Group 1 Core Requirements *SAT advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.	23 26 49

	Nuclear Engin	eering Gro	up 2 Major Re	quirements	
	Missouri Southern State University	Sem	ester	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151 CIS 0110 MATH 0351 or	General Chemistry I Programming I Linear Algebra or	5 3	CHEM 1310, 1319 CS 1971, 1981 MATH 3108 or	General Chemistry I and Lab Intro to Programming Method and Lab (C++) Linear Algebra or	5 3
MATH 0300	Fundamentals of Mathematical Thought	3	MATH 3109	Foundations of Mathematics	3
	From the o 6 hours Hur	ptions listed in each gro nanities and Fine Arts fro vioral and Social Science	ces General Education Requipment below, select 15 hours to in a least two specific discipline se from at least two specific discours POL SCI 1200 to satisfy the	iclude is and iplines.	
	71.100.00.00.00.00.00.00.00.00.00.00.00.0		and Fine Arts	outo of micrount government requirement.	
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1492-1877* or Art Appreciation or Music Appreciation "Satisfies the State of Missouri government requirement.	elect 6 hours from at lea	ast two specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.	6
			Social Sciences		
ECON 0202 or ECON 0201	Principles of Economics (Micro) or Principles of Economics (Macro)	elect 6 hours from at lea	est two specific disciplines. ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American 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 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 Group 2 Major Requirements Group 1 Core Requirements T	0 29 31 otal Hours 60		Maximum Free Electives 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.	0 29 26 rs* 55

	Petroleum Engi	neering	Grou	p 2 Major R	equirements	
	Missouri Southern State University		Semester	•	Missouri S&T	
ENG 0102 or ENG 0313 or COMM 0100	College Composition II or Technical Writing or Oral Communication	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
CHEM 0151	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CIS 0210 or CIS 0350	Programming II or Data Structures	3		COMP SCI 1500	Computational Problem Solving	3
GEOL 0120 or GEOL 0211	Intro to Geology (3) or Fundamentals of Earth and Space Science (4)	3		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	From the op 6 hours Hum	otions listed in e anities and Fine vioral and Social	each group be Arts from at le Sciences from	eneral Education Requi elow, select 15 hours to in- east two specific disciplines at least two specific disci . SCI 1200 to satisfy the	clude s and plines.	
			nities and Fi			
ENG 0271 or ENG 0272 or ENG 0281 or ENG 0282 or ENG 0261 HIST 0110* or HIST 0110 or MUS 0110	Sel British Literature: Medieval - 18th Century or British Literature: 18th Century - Present or American Literature: Beginning - 19th Century or American Literature: 19th Century - Present or World Literature: Ancient - 16th Century or United States History 1492-1877* or United States History 1877 to Present* or Art Appreciation or Music Appreciation "Satisfies the State of Missouri government requirement.	6		o specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1223 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1800 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation "Satisfies the State of Missouri government requirement.	6
	Sel		ral and Socia	al Sciences o specific disciplines.		
HIST 0130 or HIST 0140* or GEOG 0110 or PHIL 0201 or PHIL 0140 or PSC 0120* or PSYC 0100 or ECON 0202 or ECON 0201 or Foreign Language	Western Civilization to 1500 or Western Civilization since 1500* or World Regional Geography or Intro to Philosophy or Critical Thinking or American Government* or General Psychology or Principles of Economics (Micro) or Principles of Economics (Macro) 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
			Arts, and So Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.		2 Sloot o Hour	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 To	0 29 31 tal Hours 60			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 Petroleum Engineering degree.	0 29 26 55