St. Louis Community College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2025

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

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

Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

	St. Louis Community College	Sen	<u>nester</u>	Missouri S&T		
MTH 210	Analytic Geometry and Calculus I	5	MATH 1214	Calculus I Grade of C or better is required.		4
MTH 220	Analytic Geometry and Calculus II	5	MATH 1215	Calculus II Grade of C or better is required.		4
MTH 230	Analytic Geometry and Calculus III	5	MATH 2222	Calculus III Grade of C or better is required.		4
MTH 240	Differential Equations	3	MATH 3304	Elementary Differential Equations		3
PHY 122	Engineering Physics I	5	PHYSICS 1135	Engineering Physics I Grade of C or better is required.		4
PHY 223	Engineering Physics II	5	PHYSICS 2135	Engineering Physics II Grade of C or better is required.		4
ENG 101	College Composition I	3	ENGLISH 1120	Exposition and Argumentation		3
		Total Hours 31			Total Hours	26

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

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

Aerospace Engineering
Architectural Engineering
Biomedical Engineering/Biomanufacturing 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.

	Aerospace Engi	neerin	g Grou	p 2 Major R	Requirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3		MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	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
CHM 105	General Chemistry I	5		CHEM 1310*, 1319	Applies to begree as Gen Ed Communication requirement. General Chemistry I and Lab "CHEM 1310 will be substituted for CHEM 1305.	5
ESC 101 or IS 167	Scientific Computer Programming (3) or C++ Programming I (4)	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
ESC 200	Engineering Circuits I	3		EE 2800	Electrical Circuits	3
ESC 203	Engineering Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Otatics Engineering Dynamics	3		AERO ENG 2360	Dynamics	3
ESC 207		3		MECH ENG 2519		3
	Engineering Thermodynamics	3			Thermodynamics	
ESC 205	Mechanics of Materials			CIV ENG 2210	Mechanics of Materials	3
ME 249	Materials and Metallurgy	3		MET ENG 2110	Metallurgy for Engineers	3
MTH 215	Linear Algebra	3		MATH 3108	Linear Algebra I or Satisfies the Advanced Math/Computer Science elective requirement.	3
PHL 104 or PHL 112	Ethics or Business Ethics or other engineering, business, blo, social ethics approved by advisor	3		PHILOS 1130 or PHILOS 3235	How Should I Live? An Introduction to Ethics or Business Ethics or other engineering, business, bio, social ethics approved by advisor	3
	6 hours Behav *At least one course must be selected from HISTO	RY 1200, 130		•		
	Sel	ect 6 hours fr	om at least two	specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6		ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfes the State of Missouri government requirement.	6
	Sel		oral and Socia	al Sciences o specific disciplines.		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	and the state of t	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or PHIL 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	s, Arts, and So 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	23,000 0 11001	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	53 31			Group 2 Major Requirements Group 1 Core Requirements	53 26
	То	tal Hours 84			Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	79

	Architectural Eng	ineeri	ng Gro	up 2 Major	Requirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3		MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	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
CHM 105	General Chemistry I	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	
ESC 203	Engineering Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 207	Engineering Thermodynamics	3		MECH ENG 2527	Thermal Analysis	3
ESC 205	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1		CIV ENG 2211	Materials Testing	1
CE 240	Plane Surveying	3		CIV ENG 2401	Fundamentals of Surveying	3
GEO 111	Physical Geology	5		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENG 211 or ENG 204 or ENG 205 or	*At least one course must be selected from HISTO Sel British Literature II or American Literature II or American Literature II or	Hum	nanities and F		State of Missouri government requirement. British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or	
ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	3		ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	3
	Soloot 6 hours fr		oral and Socia	al Sciences ciplines to include HISTO	DV 1200	
	Western Civilization 1500 to Present*		vo specific disc	•	Modern Western Civilization*	
HST 128*	*Satisfies the State of Missouri Government requirement.	3		HISTORY 1200*	*Satisfies the State of Missouri Government requirement.	3
PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3		PHIL 1105 or PHIL 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	41			Group 2 Major Requirements	33
	Group 1 Core Requirements	31			Group 1 Core Requirements	26
		tal Hours 72			Total Hours *S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.	

			ring-Biomanufa		
	G	roup 2 Majo	r Requirements		
	St. Louis Community College	<u>Ser</u>	<u>nester</u>	Missouri S&T	
COM 107	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 105	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 106	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHM 206, 210	Organic Chemistry I and Lab	5	CHEM 2210, 2219	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry I and Lab	4
CHM 207 or	Organic Chemistry II and Lab or		CHEM 2220, 2229 or	Organic Chemistry II and Lab or	
BIO 111 or BIO 225	Introductory Biology I or Genetics	5	BIO SCI 1113, 1219 or BIO SCI 2223	General Biology and Lab or General Genetics Applies to degree as Track Elective.	4
BIO 218	Microbiology for Biotechnology	4	BIO SCI 3333, 3359	Anatomy and Physiology I and Lab	4
IS 187 or IS 280 or IS 167* or ESC 101*	Java Programming I (4) or Python (3) C C++ Programming I* (4) or Scientific Computer Programming (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
ESC 207	Engineering Thermodynamics	3	MECH ENG 2519*	Thermodynamics* "The combination of MECH ENG 2519 AND CHEM ENG 4000 (an independent study, online S&T course) will be substituted for CHEM ENG 2110 by the biomedical engineering department. Students must complete both courses to receive credit.	3
			nces General Education Requir		
	6 hours	Humanities and Fine Arts f Behavioral and Social Scien	group below, select 12 hours to include from at least two specific disciplines ces from at least two specific disciplines are ROL SCI 1200 to action the SCI	and lines.	
	At least one course must be selected from h		s and Fine Arts	tate of Missouri government requirement.	
			east two specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature I or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre "Satisfies the State of Missouri government requirement.	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
			d Social Sciences		
HST 115 or HST 128* or GEG 101 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	Select 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
			, and Social Sciences 3560 required.		
ENG 103	Report Writing	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 45 31 Total Hours 76		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 41 26 67

	Biome	dical Engine	ering-Biomate	erials	
			Requirements		
	St. Louis Community College		ester	Missouri S&T	
COM 107	Public Speaking	3	SP&MS 1185	Principles of Speech	3
CHM 107	General Chemistry I	5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CHM 106	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
CHM 206, 210	Organic Chemistry I and Lab	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHM 207, 211	Organic Chemistry II and Lab	5	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIO 111	Introductory Biology	5	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
BIO 218	Microbiology for Biotechnology	4	BIO SCI 3333, 3359	Human Anatomy and Physiology I and Lab	4
IS 187 or IS 280 or IS 167* or ESC 101*	Java Programming I (4) or Python (3) or C++ Programming I* (4) or Scientific Computer Programming (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
ESC 203	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 200	Engineering Circuits I	3	EE 2100*, 2101	Circuits 1* (3) and Circuit Analysis Lab (1) A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100. Applies to the degree as a Track Elective (Engineering).	4
	*At least one course must be selected from HI	STORY 1200, 1300, 1310, o Humanities	es from at least two specific discipor POL SCI 1200 to satisfy the Sand Fine Arts ast two specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Sattsfies the State of Missouri government requirement.	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change "Satisfies the State of Missouri government requirement.	6
			Social Sciences 3 hours.		
HST 115 or HST 128* or GEG 101 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to American Politics* or General Psychology I 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 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
		ENGLISH 3	and Social Sciences 560 required.		
ENG 103	Report Writing	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 53 31		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	0 49 26
		Total Hours 84		Total Hours *S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.	* 75

	Ceramic Engi	neering	Group	2 Major Re	quirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100 ENG 102 or COM 107 or ENG 103	Engineering Computer Application and Design College Composition II or Public Speaking or Report Writing	3		MECH ENG 1720 ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Intro to Engineering Design Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ESC 203 ESC 205 CHM 105	Engineering Statics Mechanics of Materials General Chemistry I	3 3 5		CIV ENG 2200 CIV ENG 2210 CHEM 1310, 1319	Engineering Mechanics-Statics Mechanics of Materials General Chemistry I and Lab General Chemistry II (3) and Qualitative Analysis (2)	3 3 5
CHM 106	General Chemistry II	5		CHEM 1320, 1510*	"CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry 1 (3)	3
CHEM 206	Organic Chemistry I	3	0-1	CHEM 2210	Will satisfy the advanced chemistry elective requirement.	3
	From the 6 hours H	options listed in umanities and Fine havioral and Socia	each group be Arts from at le I Sciences from	eneral Education Requi low, select 15 hours to inc east two specific disciplines at least two specific disciplines at least two specific disciples.	clude s and plines.	
			anities and Fi	ne Arts specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature II or US History to 1865* or US History 1865 to Present* or Art Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	in at least (we	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missourj government requirement.	6
			ral and Socia			
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	Select 6 hours fro	m at least two	specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or PHIL 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 s.		
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, a		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	0 40 31 Total Hours 71			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 Ceramic Engineering degree.	0 38 26 64

	Chemical Enginee		Engineering or	ooring Emphasis	
			or Requirements	· · · · · · · · · · · · · · · · · · ·	
	St. Louis Community College		emester	Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	MECH ENG 1720	Intro to Engineering Design	3
COM 107	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 107	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 106	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2)	3
CHM 206, 210	Organic Chemistry I and Lab	5	CHEM 2210, 2219*	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry I 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
CHM 207 or BIO 218	Organic Chemistry II and Lab (5) or Microbiology for Biotechnology (4)	9	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
IS 187 or IS 280 or IS 167* or ESC 101*	Java Programming I (4) or Python (3) or C++ Programming I* (4) or Scientific Computer Programming (3)*	3	CS 1500 or CS 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* CS 1971,1981 will be substituted by the department for CS 1500.	3
ESC 207	Engineering Thermodynamics	3	MECH ENG 2519*	Thermodynamics* "The combination of MECH ENG 2519 AND CHEM ENG 4000 (an independent study, online S&T course) will be substituted for CHEM ENG 2110 by the chemical engineering department. Students must complete both courses to receive credit.	3
	6 hours Hu 6 hours Beh *At least one course must be selected from HIST	manities and Fine Arts avioral and Social Sci ORY 1200, 1300, 131 Humaniti	ies and Fine Arts	s and plines.	
ENG 211 or	British Literature II or	elect 6 hours from a	t least two specific disciplines. ENGLISH 1212 or	British Literature II: 1800 to Present	
ENG 204 or ENG 205 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	American Literature I or American Literature I or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	American Literature: 1600 to Flesent 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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
			and Social Sciences		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	t least two specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or PHIL 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
			ts, and Social Sciences		
ENG 103	Report Writing	ENGLIS 3	H 3560 required. ENGLISH 3560	Technical Writing	3
LING IUG	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 51 31 Fotal Hours 82	ENGLISH 3000	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	0 47 26 73
				Chemical Engineering degree.	

	Civil Enginee	ering G	Froup 2	Major Req	uirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	_	MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	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
CHM 105	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
GEO 111	Physical Geology	3		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ESC 203	Engineering Mechanics I (Statics)	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Mechanics II	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 205	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1		CIV ENG 2211	Materials Testing	1
CE 240	Plane Surveying	3		CIV ENG 2401	Fundamentals of Surveying	3
				eneral Education Requ		
		vioral and Soc ORY 1200, 130	ial Sciences from 0, 1310, or POI		iplines.	
			nanities and F			
		lect 6 hours f	rom at least two	specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6		ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
		Behavi	oral and Socia	I Sciences		
		lect 6 hours f	rom at least two	specific disciplines.		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I 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 PHIL 1105 or PHIL 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	s, Arts, and S Select 3 hou	ocial Sciences ·s.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor 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. Group 2 Major Requirements Group 1 Core Requirements To	0 42 3° otal Hours 73	2		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *\$8T advisor permission is required to transfer more than 69 credits toward the \$8T Civil Engineering degree.	0 41 26 67

	Computer En	gineering	Group 2 Major	Requirements	
	St. Louis Community College		Semester	Missouri S&T	
COM 107	Public Speaking	3	SPMS 1185	Principles of Speech	3
CHM 105	General Chemistry I	5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
MTH 212	Discrete Mathematics	3	COMP SCI 1200	Discrete Math for Computer Science	3
IS 167	C++ Programming I or	3	CS 1500	Computational Problem Solving	3
ESC 203 or ESC 204 or ESC 207 or CHM 206 or BIO 225	Engineering Statics (3) or Engineering Dynamics (3) or Engineering Thermodynamics (3) or Organic Chemistry I (3) or Genetics (3)	3	CIV ENG 2200 or MECH ENG 2350 or MECH ENG 2519 or CHEM 2210 or BIO SCI 2223		3
ESC 200	Engineering Circuits I	3	EE 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	4
MTH 215	Linear Algebra	3	MATH 3108	Linear Algebra Satisfies a required math elective.	3
	6 hours 6 hours E	Humanities and Fine ehavioral and Social STORY 1200, 1300,	ach group below, select 15 hours that from at least two specific discips Sciences from at least two specific 1310, or POL SCI 1200 to satisfy inities and Fine Arts	olines and	
		Select 6 hours from	m at least two specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
			ral and Social Sciences m at least two specific disciplines.		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to American Politics* or General Psychology I 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 PHIL 1105 or PHIL 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 102 or ENG 103	College Composition II or Report Writing	3	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	41		Group 2 Major Requirements	42
	Group 1 Core Requirements	Total Hours 72		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.	26 s* 68

	Electrical Enginee	ering	Group	o 2 Major Req	uirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3		MECH ENG 1720	Intro to Engineering Design	3
COM 107	Public Speaking	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 105	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
IS 167	C++ Programming I or	3		CS 1500	Computational Problem Solving	3
ESC 203 and ESC 204 (BOTH of the courses above or ONE of the courses below.) OR ESC 207 or CHM 206 or BIO 225	Engineering Statics (3) and Engineering Dynamics (3) (60th courses above combined or any one of the following courses will satisfy a require engineering science elective.) OR Engineering Thermodynamics (3) or Organic Chemistry I (3) or Genetics (3)	ed 3		CIV ENG 2200 and MECH ENG 2350 (BOTH of the courses above or ONE of the courses below.) OR MECH ENG 2519 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 will satisfy a required engineering science elective. OR Thermodynamics (3) or Organic Chemistry I (3) or General Genetics (3)	3
ESC 200	Engineering Circuits I	3		EE 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	4
MTH 215	Linear Algebra	3		MATH 3108	Linear Algebra	3
	6 hours Humanities	s and Fine and Social 200, 1300,	Arts from at le Sciences from	•	d es.	
	Select 6			specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre	6		ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change **Satisfies the State of Missouri government requirement.	6
			al and Socia			
		hours from	n at least two	specific disciplines.		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I 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 PHIL 1105 or PHIL 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
	Hu		Arts, and So Select 3 hour	ocial Sciences		
ENG 102 or ENG 103	College Composition II or Report Writing	3	COLOUR O HOUR	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	44 31 ours 75			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.	45 26 71

	Engineering Ma	anageme	ent Grou	ıp 2 Major	Requirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3		MECH ENG 1720	Intro to Engineering Design	3
	0 0 1 11				Principles of Speech	
COM 107	Public Speaking	3		SPMS 1185	Applies to degree as Gen Ed Communication requirement.	3
CHM 105	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
ESC 101 or	Scientific Computer Programming (3) or	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
IS 167	C++ Programming I (4)			•	* * * * * * * * * * * * * * * * * * * *	
MGT 204	Business Organization and Management	3		ENG MGT 2110	Managing Engineering and Technology	3
ESC 200	Engineering Circuits I	3		EE 2800	Electrical Circuits	3
ESC 203	Engineering Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 202	Thermal Analysis	3		MECH ENG 2527	Thermal Analysis	3
ESC 205	Mechanics of Materials	3		CIV ENG 2210 neral Education Regi	Mechanics of Materials	3
	6 hours	Humanities and Fin Behavioral and Social ISTORY 1200, 1300	ne Arts from at lea al Sciences from 0, 1310, or POL	•	es and ciplines.	
			nanities and Fin om at least two	ne Arts specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature I or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6		ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change "satisfies the State of Missouri government requirement.	6
		Behavio	oral and Social	Sciences		
	Select 6 h	ours from at least t	wo specific disc	iplines to include PSY	CH 1101.	
PSY 200	General Psychology I	3		PSYCH 1101	General Psychology Required	3
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* 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 PHIL 1105 or PHIL 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
		Humanities	s, Arts, and So Select 3 hours			
ENG 102 or ENG 103	College Composition II or Report Writing	3		ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
	No free electives applied to the degree.	0		Electives	Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	50 31 Total Hours 81		LICOUYUS	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.	46 26

	Environmental En	gineeri	ing Gro	up 2 Major	Requirements	
	St. Louis Community College		Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	l l	MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3	ĺ	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
GEO 111	Physical Geology	3		GEOLOGY 1110 GEO ENG 1150)	Physical and Environmental Geology	3
CHM 105	General Chemistry I	5	(CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 106	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 140	Principles of Biology I	3	ı	BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
ESC 203	Engineering Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics	3	1	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 205	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1	(CIV ENG 2211	Materials Testing	1
	6 hours Huma	anities and Fine ioral and Socia RY 1200, 1300	Arts from at lead Sciences from a 1310, or POL 5	•	s and plines.	
			anities and Fin			
		ect 6 hours fro		specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *satisfies the State of Missouri government requirement.	6	 	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missourj government requirement.	6
			ral and Social			
		om at least tw	o specific discip	lines to include HISTO		
HST 128*	Western Civilization 1500 to Present* *Satisfies the State of Missouri Government requirement.	3	ı	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	 	PHIL 1105 or PHIL 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	44			Group 2 Major Requirements	41
	Group 1 Core Requirements To	31 tal Hours 75			Group 1 Core Requirements Total Hou *S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.	26 rs* 67

	Geological Eng	ineerir	ng	Group	2 Major Re	quirements	
	St. Louis Community College			Semester		Missouri S&T	
ESC 100	Engineering Computer Application and Design	3			ECH ENG 1720	Intro to Engineering Design	3
	Report Writing	3	3	FN	IGLISH 3560	Technical Writing	3
ENG 103 CHM 105	General Chemistry I		5		IEM 1310. 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
IS 187 or	Java Programming I (4) or)	Ch	I⊑W 1310, 1319	General Chemistry Fand Lab	3
IS 280 or	Python (3) or	3	,	CS	1500 or	Computational Problem Solving or	3
IS 167 or	C++ Programming I (4) or)	CS	1971, 1981	Intro to Programming Methodology and Lab	3
ESC 101	Scientific Computer Programming (3)			0.5	-0 FNO 4450		
GEO 111	Physical Geology	3	3		O ENG 1150 EOLOGY 1110)	Physical and Environmental Geology	3
ESC 203	Engineering Statics	3	3	CIV	/ ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics	3	3	ME	ECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 205	Mechanics of Materials	3	3	CIV	/ ENG 2210	Mechanics of Materials	3
	Humanities, A	rts, and Soci	ial S	Sciences Gener	al Education Require	ments	
	6 hours Hu	manities and Fi	ine A	Arts from at least Sciences from at I	, select 15 hours to include two specific disciplines a east two specific disciplines.	nd nes.	
	At least one course must be selected from mis i			nities and Fine	•	te of Missouri government requirement.	
	Si				ecific disciplines.		
ENG 211 or ENG 204 or	British Literature II or American Literature I or	cicci o riours i	10111	EN	IGLISH 1212 or IGLISH 1221 or	British Literature II: 1800 to Present American Literature: 1600 to 1865 or	
ENG 205 or	American Literature II or				IGLISH 1222 or	American Literature: 1865 to Present or	
ENG 231 or	World Literature or				IGLISH 1231 or	World Literature I: Beginnings to the Renaissance or	
HST 101* or	US History to 1865* or	6	3		STORY 1300* or	American History to 1877* or	6
HST 102* or ART 100 or	US History 1865 to Present* or Art Appreciation or				STORY 1310* or RT 1180 or	American History Since 1877* or Art Appreciation or	
MUS 114 or	Music Appreciation or				JSIC 1150 or	Music Understanding and Appreciation or	
THT 101	Intro to Theatre *Satisfies the State of Missouri government requirement.				EATRE 1150	Theatre for Social Change *Satisfies the State of Missouri government requirement.	
	S			al and Social So	ciences ecific disciplines.		
HST 115 or	Ancient and Medieval History to 1500 or	cicci o riodis i	10111		STORY 1100 or	Early Western Civilization or	
HST 128* or	Western Civilization 1500 to Present* or				STORY 1200* or	Modern Western Civilization* or	
GEG 101 or	Regional Geography or				STORY 2110 or	World Regional Geography or	
PHL 101 or PHL 102 or	Intro to Philosophy or Intro to Logic or				IIL 1105 or IIL 1115 or	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or	
PSC 101* or	Intro to American Politics* or	6	6		OL SCI 1200* or	American Government*or	6
PSY 200 or	General Psychology I or				YCH 1101 or	General Psychology or	
ECO 152 or	Principles of Microeconomics or				ON 1100 or	Principles of Microeconomics or	
ECO 151 or	Principles of Macroeconomics or				ON 1200 or	Principles of Macroeconomics or	
Foreign Language	Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.			FO	reign Language	Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	
		Humanitie		Arts, and Socia Select 3 hours.	l Sciences		
	Humanities, Arts, Social Sciences Elective: Any histo					Humanities, Arts, Social Sciences Elective: Any history, art,	
HASS Elective	music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	3	HA	SS Elective	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	4	1			Group 2 Major Requirements	40
	Group 1 Core Requirements	3				Group 1 Core Requirements	26
		otal Hours 7	2			Total Hours* *S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.	66

	Mechanical Eng	ineerii	ng Grou	ıp 2 Major I	Requirements	
	St. Louis Community College		Semeste	<u> </u>	Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	<u> </u>	MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Apples to degree as Gen Ed Communication requirement.	3
CHM 105	General Chemistry I	5	i	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ESC 101 or IS 167	Scientific Computer Programming (3) or C++ Programming I (4)	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
ESC 200	Engineering Circuits I	3		EE 2800	Electrical Circuits	3
ESC 203	Engineering Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics	3		MECH ENG 2360	Dynamics	3
ESC 207	Engineering Thermodynamics	3		MECH ENG 2519	Thermodynamics	3
ESC 205	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ESC 206	Strength of Materials Lab	1		CIV ENG 2211	Materials Testing	1
MTH 215	Linear Algebra	3		MATH 3108	Linear Algebra I or Satisfies the Advanced Math/Computer Science elective requirement.	3
ME 249	Materials and Metallurgy	3		MET ENG 2110	Metallurgy for Engineers	3
	From the o 6 hours Hun	ptions listed in nanities and Fi vioral and Soc	n each group b ne Arts from at l ial Sciences fro	eneral Education Requelow, select 15 hours to in east two specific discipline m at least two specific disc L SCI 1200 to satisfy the	nclude es and ciplines.	
		Hui	manities and F	ine Arts		
	Se	lect 6 hours f	rom at least tw	o specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	e		ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
	0-		ioral and Soci			
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	lect 6 hours f		o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or PHIL 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		
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,		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	0 5 3 otal Hours 8	1 1		Maximum Free Electives 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.	0 51 26 77

	Metallurgical Eng	jineering	Group 2 Major	Requirements	
	St. Louis Community College	S	emester	Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	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
ESC 203	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ME 249	Materials and Metallurgy	3	MET ENG 2110	Metallurgy for Engineers	3
CHM 105	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 106	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
CHM 206 or ESC 200	Organic Chemistry I or Engineering Circuits	3	CHEM 2210 or EE 2800	Organic Chemistry I (4) or Electrical Circuits (3) or Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.	3
	From the o 6 hours Hur	ptions listed in each nanities and Fine Art vioral and Social Sci	iences General Education Required group below, select 15 hours to in select 15 hours to insert two specific discipline ences from at least two specific discipline and the select form at least two specific disciplines.	nclude es and ciplines.	
	At least one course must be selected from his h		ies and Fine Arts	State of Missouri government requirement.	
	Se		it least two specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature I or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
			and Social Sciences It least two specific disciplines.		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I 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 PHIL 1105 or PHIL 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
			ts, and Social Sciences lect 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, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements Group 1 Core Requirements T	46 31 otal Hours 77		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.	44 26 70

	Mining Engin	eering G	roup 2 Major Red	quirements	
	St. Louis Community College	5	Semester	Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	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
CHM 105	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
ESC 203	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 207	Engineering Thermodynamics	3	MECH ENG 2527	Thermal Analysis	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
GEO 111	Physical Geology	3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	6 hours Beh. *At least one course must be selected from HIST	avioral and Social So ORY 1200, 1300, 13 Humani	ties and Fine Arts	plines.	
ENIO 044		elect 6 hours from a	at least two specific disciplines.	D. W. J. J. W. 4000 J. D	
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature I or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre "satisfies the State of Missouri government requirement.	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1230 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change *Satisfies the State of Missouri government requirement.	6
			and Social Sciences		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.	elect 6 hours from a	at least two specific disciplines. HISTORY 1100 or HISTORY 2200* or HISTORY 2110 or PHIL 1105 or PHIL 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	38 31 otal Hours 69		Group 2 Major Requirements Group 1 Core Requirements Total Hour *S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.	37 26

	Nuclear Engine	ering	Group 2 Major Re	equirements	
	St. Louis Community College		Semester	Missouri S&T	
ESC 100	Engineering Computer Application and Design	3	MECH ENG 1720	Intro to Engineering Design	3
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing	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
CHM 105	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
ESC 101 or IS 167	Scientific Computer Programming (3) or C++ Programming I (4)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
MTH 215	Linear Algebra	3	MATH 3108	Linear Algebra	3
ESC 203	Engineering Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 205	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
ESC 200	Engineering Circuits I	3	EE 2800	Electrical Circuits	3
ESC 207	Engineering Thermodynamics	3	MECH ENG 2519	Thermodynamics	3
ME 249	Materials and Metallurgy	3	MET ENG 2110	Metallurgy for Engineers	3
	6 hours Human	nities and Fine oral and Socia XY 1200, 1300	each group below, select 15 hours to in Arts from at least two specific discipline I Sciences from at least two specific disc , 1310, or POL SCI 1200 to satisfy the anities and Fine Arts	es and ciplines.	
	Sele		om at least two specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 102* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature I or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change "Satisfies the State of Missouri government requirement.	6
			ral and Social Sciences		
		ct 6 hours fro	om at least two specific disciplines.	- · · · · · · · · · · · · · · · · · · ·	
ECO 152 or ECO 151	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or PHIL 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
		Humanities	, Arts, and Social Sciences Select 3 hours.		
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
	Maximum Free Electives	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	50 31 al Hours 81		Group 2 Major Requirements Group 1 Core Requirements Total Hours'	47 26
	I OLE	iiiluuis Ol		*S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.	13

	Petroleum Enç	gineerir	ng Gro	up 2 Major F	Requirements	
	St. Louis Community College		Semest	er	Missouri S&T	
ENG 102 or COM 107 or ENG 103	College Composition II or Public Speaking or Report Writing		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
CHM 105	General Chemistry I		5	CHEM 1310, 1319	General Chemistry I and Lab	5
IS 187 or IS 280	Java Programming I (4) or Python (3)		3	COMP SCI 1500	Computational Problem Solving	3
GEO 111	Physical Geology		3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ESC 203	Engineering Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ESC 204	Engineering Dynamics		3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ESC 205	Mechanics of Materials		3	CIV ENG 2210	Mechanics of Materials	3
ESC 207	Engineering Thermodynamics		3	MECH ENG 2527	Thermal Analysis	3
	From the 6 hours H	e options listed lumanities and F havioral and So	in each group ine Arts from a cial Sciences fr	General Education Requipelow, select 15 hours to it least two specific discipling at least two specific discount at least two specific discounts at least two	nclude es and ciplines.	
		Hu	manities and	Fine Arts		
		Select 6 hours	from at least t	wo specific disciplines.		
ENG 211 or ENG 204 or ENG 205 or ENG 231 or HST 101* or HST 102* or ART 100 or MUS 114 or THT 101	British Literature II or American Literature II or American Literature II or World Literature or US History to 1865* or US History 1865 to Present* or Art Appreciation or Music Appreciation or Intro to Theatre *Satisfies the State of Missouri government requirement.	,	6	ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1150	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 or Theatre for Social Change "satisfies the State of Missouri government requirement.	6
			ioral and Soc			
		Select 6 hours	from at least t	wo specific disciplines.		
HST 115 or HST 128* or GEG 101 or PHL 101 or PHL 102 or PSC 101* or PSY 200 or ECO 152 or ECO 151 or Foreign Language	Ancient and Medieval History to 1500 or Western Civilization 1500 to Present* or Regional Geography or Intro to Philosophy or Intro to Logic or Intro to American Politics* or General Psychology I 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 PHIL 1105 or PHIL 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
		Humaniti	es, Arts, and Select 3 ho	Social Sciences ours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communication philosophy, political science, psychology, economic etymology, or foreign language.	n,	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		31 72		Group 2 Major Requirements Group 1 Core Requirements Total Hours* *\$&T advisor permission is required to transfer more than 69 credits toward the \$&T Petroleum Engineering degree.	40 26 66