Houston City 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.

	Houston City College	Semest	<u>er</u>	Missouri S&T	
MATH 2413 and	Calculus I (4) and	0	MATH 1214 and	Calculus I and	0
MATH 2414	Calculus II (4)	0	MATH 1215	Calculus II Grade of C or better in both courses is required.	0
MATH 2415	Calculus III	4	MATH 2222	Calculus III Grade of C or better is required.	4
MATH 2320	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHYS 2325, 2125	University Physics I and Lab I	4	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHYS 2326, 2126	University Physics II and Lab II	4	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
ENGR 1201	Intro to Engineering	2	FR ENG 1100	Study and Careers in Engineering and Computing	1
ENGL 1301	Composition I	3	ENGLISH 1120	Exposition and Argumentation	3
		Total Hours 28			Total Hours 27

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

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

Aerospace Engineering

Architectural Engineering

Biomedical Engineering/Biomanufacturing or Biomaterials

Ceramic Engineering

Chemical Engineering and Biochemistry Emphasis

Civil Engineering

Computer Engineering

Electrical Engineering

Engineering Management

Environmental Engineering

Geological Engineering

Mechanical Engineering

Metallurgical Engineering

Mining Engineering

Nuclear Engineering

Petroleum Engineering

Engineering Major Requirements are detailed on the following pages.

Free Electives: Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

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

	Aerospace Engine	erin	g Grou	ıp 2 Major R	Requirements	
	Houston City College		Semeste	,	Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ENGR 2405	Electrical Circuits I	3		ELEC ENG 2800	Electrical Circuits	3
ENGR 2301	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2332	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
MATH 2318	Linear Algebra	3		MATH 3108	Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.	3
PHIL 2306	Intro to Ethics or other engineering, business, bio, social or other ethics approved by advisor.	3		PHILOS 1130	How Should I Live? An Introduction to Ethics or other engineering, business, bio, social or other ethics approved by advisor.	3
		nd Socia	Sciences G	eneral Education Requi		
	6 hours Humanitie	es and Find and Socia	e Arts from at I Il Sciences from	elow, select 15 hours to in east two specific discipline n at least two specific disci L SCI 1200 to satisfy the	s and iplines.	
			anities and F			
		hours fro	om at least tw	o specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2327 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History II* or United States History II* or Art Appreciation or Music Appreciation	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation	6
	*Satisfies the State of Missouri government requirement.	Behavio	ral and Soci	al Sciences	*Satisfies the State of Missouri government requirement.	
	Select 6			o specific disciplines.		
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.	6
			s, Arts , and S Select 3 hou	ocial Sciences rs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements Total He	37 28 ours 65			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.	38 27 65

	Architectural E	nginee	rinç	g Group 2 Major F	Requirements	
ENGL 1302 or ENGL 2314 or	Houston City College Composition II or Technical Writing I or		_	Semester ENGLISH 1160 or	Missouri S&T Writing and Research or	
SPCH 1311 or SPCH 1315	Intro to Speech Communication or Public Speaking		3	ENGLISH 3560 or SPMS 1185	Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab		4	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ENGR 2301	Engineering Mechanics - Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2302	Engineering Mechanics - Dynamics		3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 2332	Mechanics of Materials		3	CIV ENG 2210	Mechanics of Materials	3
	Humanities	, Arts, and So	cial S	ciences General Education Requir	ements	
	6 hours I	Humanities and ehavioral and S	Fine A ocial S	ch group below, select 12 hours to include into from at least two specific disciplines ciences from at least two specific disciplines on FOL SCI 1200 to satisfy the Signature.	and lines.	
				ities and Fine Arts at least two specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2327 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation	Select 0 nours	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation	6
	*Satisfies the State of Missouri government requirement.				*Satisfies the State of Missouri government requirement.	
	Select 6 hou			I and Social Sciences specific disciplines to include HISTOR	Y 1200.	
HIST 2312*	Western Civilization II* *Satisfies the State of Missouri Government requirement.		3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
HPHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		3	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
	No free electives applied to the degree.		0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	Total Hours	28 28 56		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.	28 27 55

			ering-Biomanufa or Requirements		
	Houston City College	S	emester	Missouri S&T	
SPCH 1311 or SPPCH 1315	Intro to Speech Communication or Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 1412	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 2423	Organic Chemistry I	4	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHEM 2425 or BIOL 1406	Organic Chemistry II or General Biology I	4	CHEM 2220, 2229 or BIO SCI 1113, 1219	Organic Chemistry II and Lab or General Biology and Lab Applies to degree as Track Elective.	4
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II	4	COMP SCI 1500	Computational Problem Solving	3
		Humanities and Fine Art 3 hours Behavio	n group below, select 12 hours to in- s from at least two specific discipline- oral and Social Sciences. 10, or POL SCI 1200 to satisfy the	s and	
		Humanit	ies and Fine Arts		
		Select 6 hours from a	t least two specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2327 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature II or American Literature II or United States History I* or United States History II* 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 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 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
	Satisfies the State of Missouri government requirement.	Behavioral a	and Social Sciences	Satisfies the State of Missouri government requirement.	
		Sel	lect 3 hours.		
HIST 2311 or HIST 2312* or GEOG 1303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Federal 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	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
			ts, and Social Sciences H 3560 required.		
ENGLISH 2314	Technical Writing I	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 35 28 Total Hours 63		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	0 34 27 61

	Biomed	dical Engir	neering-Biomate	rials	
	Gr	oup 2 Majo	or Requirements		
	Houston City College	Se	emester	Missouri S&T	
SPCH 1311 or SPPCH 1315	Intro to Speech Communication or Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 1412	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 2423	Organic Chemistry I	4	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 2425 or BIOL 1406	Organic Chemistry II	4	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIOL 1406	General Biology I	4	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II	4	COMP SCI 1500	Computational Problem Solving	3
ENGR 2301	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2405	Electrical Circuits I	3	ELEC ENG 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 ELEC ENG 2100. Applies to the degree as a Track Elective (Engineering).	4
	*At least one course must be selected from HIS	3 hours Behavio TORY 1200, 1300, 131	s from at least two specific disciplines a ral and Social Sciences. 0, or POL SCI 1200 to satisfy the St es and Fine Arts		
	Ş	Select 6 hours from at	least two specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* 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 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 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
			ind Social Sciences ect 3 hours.		
HIST 2311 or HIST 2312* or GEOG 1303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Federal 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	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
			s, and Social Sciences H 3560 required.		
ENGLISH 2314	Technical Writing I	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	45		Group 2 Major Requirements	45
	Group 1 Core Requirements	28 Total Hours 73		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.	27 * 72

	Ceramic Engi	ineering	Group 2	2 Major Re	quirements	
	Houston City College		Semester		Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	3	E	NGLISH 1160 or NGLISH 3560 or PMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ENGR 2301	Engineering Mechanics - Statics	3	С	IV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2332	Mechanics of Materials	3	C	IV ENG 2210	Mechanics of Materials	3
CHEM 1311, 1111	General Chemistry I and Lab	4	C	HEM 1310, 1319	General Chemistry I and Lab	5
CHEM 1412	General Chemistry II	4	С	HEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 2423	Organic Chemistry I	4	С	:HEM 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
				eral Education Requi		
	6 hours H 6 hours Be	Humanities and Fine chavioral and Social	Arts from at leas Sciences from at	w, select 15 hours to in t two specific discipline t least two specific disci	s and plines.	
	*At least one course must be selected from HIS			•	State of Missouri government requirement.	
		Select 6 hours from	nities and Fine			
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6	E E E H H	NGLISH 1211 or NGLISH 1212 or NGLISH 1221 or NGLISH 1221 or ISTORY 1300° or ISTORY 1310° or RT 1180 or IUSIC 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 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
		Behavio	ral and Social S	Sciences		
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal 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.	Select 6 hours fro	H H H P P P E E	pecific disciplines. IISTORY 1100 or IISTORY 2100* or IISTORY 2110 or IISTORY 2110 or HILOS 1105 or HILOS 1115 or OL SCI 1200* or SYCH 1101 or CON 1100 or CON 1200 or oreign 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 Soci Select 3 hours.	al Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communicatic philosophy, political science, psychology, economic etymology, or foreign language.	on, 3	Н	IASS 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	36 28 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.	35 27 62

	_	eering -	Bio	ochen		neering Emphasis	
		Group 2	Ma	ajor R≀	equiremen	ts	
	Houston City College	-		Semeste	<u>r</u>	Missouri S&T	
SPCH 1311 or SPPCH 1315	Intro to Speech Communication or Public Speaking		3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111 CHEM 1412	General Chemistry I and Lab General Chemistry II		4		CHEM 1310, 1319 CHEM 1320, 1510*	General Chemistry II and Lab General Chemistry II (3) and Qualitative Analysis* (2) CHEM 1510 is not a degree requirement, transfers as general elective credit.	5 3
CHEM 2423	Organic Chemistry I		4		CHEM 2210, 2219*	Critical 13 (10's flot a degree requirement, parishes as general elective critical. 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
CHEM 2425	Organic Chemistry II		4		CHEM 2220, 2229*	Organic Chemistry II (3) and Lab* (1) CHEM 2220 applies to the degree as 3 of 9 required science elective credits. *CHEM 2229 is not a degree requirement; transfers as general elective credit.	8
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II		4		COMP SCI 1500	Computational Problem Solving	3
	Fro 6 ho 6 hou	m the options liste ours Humanities and ors Behavioral and S m HISTORY 1200,	d in e d Fine Social 1300,	ach group b Arts from at Sciences fro 1310, or PO	•	, include ines and	
				nities and F	Fine Arts o specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	Select 0 Hou	6	ir at least tw	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 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 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 Sciences		
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missour government requirement.		rs fron	n at least tw	o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSVCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Human			ocial Sciences		
ENGLISH 2314	Technical Writing I		ENGI	LISH 3560 r	equired. ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	Total Hours	0 38 28			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 Chemical Engineering degree.	0 41 27 68

	Civil Engi	neering G	roup 2	Major Req	uirements	
	Houston City College		Semester	•	Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	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
CHEM 1311, 1111	General Chemistry I and Lab	4		CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 2301	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2302	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 2332	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
	From 6 hour 6 hours	the options listed in s Humanities and Fine Behavioral and Socia	each group be Arts from at le I Sciences from	eneral Education Requelow, select 15 hours to in east two specific discipline on at least two specific disc L SCI 1200 to satisfy the	nclude es and	
		Huma	anities and F	ine Arts		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature II or American Literature II or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement. Western Civilization I or	6 Behavio	ral and Socia	o specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 al Sciences o specific disciplines. HISTORY 1100 or	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 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
HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		HISTORY 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	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 music, theater, English and technical communic philosophy, political science, psychology, econo etymology, or foreign language.	ation, 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 28 Total Hours 59			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.	31 27 58

	Computer En	gineerinç	g Grou	ıp 2 Major Re	equirements	
	Houston City College		Semeste	r	Missouri S&T	
SPCH 1311 or SPPCH 1315	Intro to Speech Communication or Public Speaking	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4		CHEM 1310, 1319	General Chemistry I and Lab	5
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II	4		COMP SCI 1500	Computational Problem Solving	3
ENGR 2301 and ENGR 2302 or CHEM 2423	Engineering Mechanics - Statics (3) and Engineering Mechanics - Dynamics (3) or Organic Chemistry I (4)	3		CIV ENG 2200 or MECH ENG 2350 or CHEM 2210	Engineering Mechanics-Statics (3) or Engineering Mechanics-Dynamics (2) or Organic Chemistry I (3) Satisfies a required engineering/science elective.	3
ENGR 2405	Electrical Circuits I	3		ELEC ENG 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 ELEC ENG 2100.	4
MATH 2318	Linear Algebra	3		MATH 3108	Linear Algebra Satisfies a required math elective.	3
		Behavioral and Socia	al Sciences fro	•	ines.	
				o specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* 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 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 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
			oral and Soci			
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal 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 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	s, Arts, and S Select 3 hou	Social Sciences urs.		
ENGL 1302 or ENGL 2314	Composition II or Technical Writing I	3		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 38 28 Total Hours 66		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 39 27 66

	Electrical Enginee	ering	Group	o 2 Major Rec	uirements	
	Houston City College		Semester		Missouri S&T	
SPCH 1311 or SPPCH 1315	Intro to Speech Communication or Public Speaking	3	Comoctor	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4		CHEM 1310, 1319	General Chemistry I and Lab	5
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II	4		COMP SCI 1500	Computational Problem Solving	3
ENGR 2301 and ENGR 2302 BOTH of the courses above or ONE of the courses below. OR CHEM 2423	Engineering Mechanics - Statics (3) and Engineering Mechanics - Dynamics (3) Both courses above combined or any one of the following courses will satisfy a require engineering science elective) OR Organic Chemistry I (4)	ed 3		CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR CHEM 2210	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) 8th courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Organic Chemistry I (3)	3
ENGR 2405	Electrical Circuits I	3		ELEC ENG 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 ELEC ENG 2100.	4
MATH 2318	Linear Algebra	3		MATH 3108	Linear Algebra	3
	From the options 6 hours Humanitie	s listed in e es and Fine and Social 1200, 1300,	ach group be Arts from at le Sciences fron 1310, or POL	•	e d es.	
	Select 6		nities and F	ne Arts specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* 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 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 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
	0-14.0		al and Socia			
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal 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 nours 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 Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			Arts, and So	ocial Sciences	<u> </u>	
ENGL 1302 or ENGL 2314	Composition II or Technical Writing I	3	23100t 0 110til	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 Total H	41 28	1		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.	42 27

	Engineering Ma	anagen	ner	nt Group 2 Major F	Requirements	
	Houston City College			Semester	Missouri S&T	
SPCH 1311 or SPPCH 1315	Intro to Speech Communication or Public Speaking		3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab		4	CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 2405	Electrical Circuits I		3	ELEC ENG 2800	Electrical Circuits	3
ENGR 2301	Engineering Mechanics - Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2302	Engineering Mechanics - Dynamics		3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 2332	Mechanics of Materials		3	CIV ENG 2210	Mechanics of Materials	3
	From the 6 hours	ne options liste Humanities and lehavioral and S	d in ea d Fine / Social S	Sciences General Education Requir ach group below, select 15 hours to incl Arts from at least two specific disciplines Sciences from at least two specific discip 1310, or POL SCI 1200 to satisfy the S	ude and ines.	
		i	lumar	nities and Fine Arts		
				at least two specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature II or American Literature II or United States History I* or United States History II* 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 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 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
		Beh	aviora	al and Social Sciences		
	Select 6 ho	ours from at lea	ast two	specific disciplines to include PSYCH	l 1101.	
PSYC 2301	General Psychology		3	PSYCH 1101	General Psychology Required	3
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
		Human		Arts, and Social Sciences Select 3 hours.		
ENGL 1302 or ENGL 2314	Composition II or Technical Writing I		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		34		Group 2 Major Requirements	34
	Group 1 Core Requirements		28		Group 1 Core Requirements	27
		Total Hours	62		Total Hours *S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.	* 61

	Environmental Er	nginee	ring Gr	oup 2 Major	Requirements	
	Houston City College		Semeste	<u>r</u>	Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 1412	General Chemistry II	4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
BIOL 1406	General Biology I	4		BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
ENGR 2301	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2302	Engineering Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 2332	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
	6 hours Hu	manities and Fi avioral and Soc ORY 1200, 13	ne Arts from at lial Sciences fro	•	and blines.	
	S			o specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* 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 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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation States the State of Missouri government requirement.	6
	0.1.101		ioral and Soci		DV 4000	
	Western Civilization II*		wo specific ais	ciplines to include HISTO	Modern Western Civilization*	
HIST 2312*	*Satisfies the State of Missouri Government requirement.	3		HISTORY 1200*	*Satisfies the State of Missouri Government requirement.	3
HPHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3		PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	3i 2i Fotal Hours 6	3		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 Environmental Engineering degree.	34 27 rs* 61

	Goologiest En	ainoorina (Fraun 2 Maior F	Paguiramente	
	Geological En	gineering C	Group 2 Major R	tequirements	
	Houston City College	Se	mester	Missouri S&T	
ENGLISH 2314	Technical Writing I	3	ENGLISH 3560	Technical Writing	3
CHEM 1311, 1111	General Chemistry I and Lab	4	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II	4	COMP SCI 1500	Computational Problem Solving	3
ENGR 2301	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2302	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 2332	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
			ences General Education Requ		
	6 hours	Humanities and Fine Arts Behavioral and Social Scie ISTORY 1200, 1300, 131	•	s and iplines.	
			es and Fine Arts least two specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature II or American Literature II or United States History I* or United States History II* 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 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 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
			nd Social Sciences least two specific disciplines.		
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.	6
			s, and Social Sciences ect 3 hours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any I music, theater, English and technical communical philosophy, political science, psychology, econom etymology, or foreign language.	ion,	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 35 28 Total Hours 63		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours *S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.	0 34 27 s* 61

	Mechanical E	ngineerir	ıg Grou	up 2 Major F	Requirements	
	Houston City College		Semeste	r	Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	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
CHEM 1311, 1111	General Chemistry I and Lab	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ENGR 2405	Electrical Circuits I	3		ELEC ENG 2800	Electrical Circuits	3
ENGR 2301 ENGR 2332	Engineering Mechanics - Statics Mechanics of Materials	3		CIV ENG 2200 CIV ENG 2210	Engineering Mechanics-Statics Mechanics of Materials	3
MATH 2318	Linear Algebra	3		MATH 3108	Linear Algebra I	3
WIA111 2310	•		al Caionaga C	eneral Education Requ	Satisfies the Advanced Math/Statistics elective requirement.	3
	6 hou 6 hour	rs Humanities and Fir s Behavioral and Soci HISTORY 1200, 130	ne Arts from at I al Sciences from 0, 1310, or PO	•	es and	
			nanities and F	ine Arts o specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6	om at loads to	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 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 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
			oral and Soci			
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal 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.	Select 6 hours fi	om at least tw	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
		Humanitie	s, Arts, and S Select 3 hou	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: An music, theater, English and technical communic philosophy, political science, psychology, econo etymology, or foreign language.	cation, 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	34 28 Total Hours 62			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 Mechanical Engineering degree.	35 27 62

	Metallurgical E	ngineer	ing Gro	oup 2 Major	Requirements	
	Houston City College		Semeste	r	Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking		3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ENGR 2301	Engineering Mechanics - Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2332	Mechanics of Materials		3	CIV ENG 2210	Mechanics of Materials	3
CHEM 1311, 1111	General Chemistry I and Lab		4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 1412	General Chemistry II		4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 2423	Organic Chemistry II		4	CHEM 2210	Organic Chemistry I Not specifically required for the degree but will satisfy out-of-department technical elective requirement	3
	Humanitie	s, Arts, and So	cial Sciences G	eneral Education Requ	irements	
	6 hours	Humanities and I Behavioral and So HISTORY 1200, 1	Fine Arts from at I ocial Sciences from 300, 1310, or PO	•	s and iplines.	
			umanities and F from at least tw	Fine Arts o specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* 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 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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfus the State of Missouri government requirement.	6
			vioral and Soci			
	W 4 01 71 11 1	Select 6 hours	from at least tw	o specific disciplines.	5 1 W 1 0: " "	
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanit	ies, Arts, and S Select 3 hou			
HASS Elective	Humanities, Arts, Social Sciences Elective: Any music, theater, English and technical communica philosophy, political science, psychology, econom etymology, or foreign language.	tion,	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	;	3 39 28 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 38 27 65

	Mining Eng	jineering G	roup 2 Major Red	quirements	
ENGL 1302 or	Houston City College Composition II or	<u> </u>	Semester .	<u>Missouri S&T</u> Writing and Research or	
ENGL 2314 or SPCH 1311 or SPCH 1315	Technical Writing I or Intro to Speech Communication or Public Speaking	3	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 2301	Engineering Mechanics - Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2302	Engineering Mechanics - Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 2332	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
2.10.12002	Humanit	ies. Arts. and Social S	ciences General Education Requi		
	6 hou 6 hour	rs Humanities and Fine A s Behavioral and Social So	ch group below, select 12 hours to in rts from at least two specific discipline ciences from at least two specific disci 310, or POL SCI 1200 to satisfy the	s and	
			ities and Fine Arts	3 4	
			at least two specific disciplines.		
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature I or American Literature II or United States History I* or United States History II* 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 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 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		
		Select 6 hours from	at least two specific disciplines.		
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or FOR 2301 or FOR 2301 or FOR 2301 or	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	28 28 Total Hours 56		Group 2 Major Requirements Group 1 Core Requirements Total H- *SAT advisor permission is required to transfer more than 68 credits toward the S&1 Mining Engineering degree.	

	Nuclear Engi	neering	Group	2 Major Re	quirements	
	Houston City College		Semeste	r	Missouri S&T	
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 1311, 1111 MATH 2318	General Chemistry I and Lab Linear Algebra	4		CHEM 1310, 1319 MATH 3108	General Chemistry I and Lab Linear Algebra	5 3
ENGR 2301	Engineering Mechanics - Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 2332	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ENGR 2405	Electrical Circuits I	3		ELEC ENG 2800	Electrical Circuits	3
2110112100			al Sciences G	Seneral Education Regui		_
	6 hours H	umanities and Fir navioral and Soci TORY 1200, 130	ne Arts from at al Sciences fro 0, 1310, or PO	•	s and iplines.	
			nanities and I			
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature II or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation 'Satsifies the State of Missouri government requirement.	Select 6 hours fr	om at least tw	to specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 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 American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation \$\frac{3}{2}\$ Satisfies the State of Missouri government requirement.	6
		Behavi	oral and Soci	ial Sciences		
	\$	Select 6 hours fr	om at least tw	o specific disciplines.		
ECON 2302 or ECON 2301	Principles of Microeconomics or Principles of Macroeconomics	3		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal 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
		Humanitie	s, Arts, and S Select 3 hou	Social Sciences urs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.	٦, ء		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	34 28 Total Hours 62			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 Nuclear Engineering degree.	35 27 62

	Petroleum En	gineering	Group 2 N	lajor Requ	uirements		
	Houston City College	;	Semester		Missouri S&T		
ENGL 1302 or ENGL 2314 or SPCH 1311 or SPCH 1315	Composition II or Technical Writing I or Intro to Speech Communication or Public Speaking	3	ENGLISH ENGLISH SPMS 11	1 3560 or Te	/riting and Research or echnical Writing or rinciples of Speech piles to degree as Gen Ed Communication requirement.	:	3
CHEM 1311, 1111	General Chemistry I and Lab	4	CHEM 13	310, 1319 G	eneral Chemistry I and Lab		5
COSC 1436 or COSC 1437	Programming Fundamentals I or Programming Fundamentals II	4	COMP S	CI 1500 C	omputational Problem Solving		3
ENGR 2301	Engineering Mechanics - Statics	3	CIV ENG	2200 Er	ngineering Mechanics-Statics	;	3
ENGR 2302	Engineering Mechanics - Dynamics	3	MECH EI	NG 2350 Er	ngineering Mechanics-Dynamics		2
ENGR 2332	Mechanics of Materials	3	CIV ENG	2210 M	lechanics of Materials		3
	From 6 hours	es, Arts, and Social S the options listed in ea- s Humanities and Fine A Behavioral and Social S HISTORY 1200, 1300, 1	ch group below, selec rts from at least two sp ciences from at least tv	t 15 hours to include ecific disciplines and vo specific disciplines.			
		Human	ities and Fine Arts				
		Select 6 hours from	at least two specific of	lisciplines.			
ENGL 2322 or ENGL 2323 or ENGL 2327 or ENGL 2328 or HISTORY 1301* or HISTORY 1302* or ARTS 1301 or MUSI 1306	British Literature I or British Literature II or American Literature II or American Literature II or United States History I* or United States History II* or Art Appreciation or Music Appreciation or Statisfies the State of Missouri government requirement.	6	ENGLISH ENGLISH ENGLISH HISTORN HISTORN ART 118 MUSIC 1	I 1212 or Bi I 1221 or Ai I 1222 or Ai I 1222 or Ai I 1300* or Ai I 1310* or Ai O or Ai	ritish Literature I: The Beginnings to 1800 or ritish Literature II: 1800 to Present merican Literature: 1600 to 1865 or merican Literature: 1865 to Present or merican History to 1877* or merican History Since 1877* or rt Appreciation or Lusic Understanding and Appreciation attifies the State of Missouri government requirement.	,	6
		Behaviora	I and Social Science	s			
		Select 6 hours from	at least two specific of	•			
HIST 2311 or HIST 2312* or GEOG 1303 or PHIL 1301 or PHIL 2303 or GOVT 2305* or PSYC 2301 or ECON 2302 or ECON 2301 or Foreign Language	Western Civilization I or Western Civilization II* or World Regional Geography or Intro to Philosophy or Intro to Formal Logic or Federal Government* or General Psychology or Principles of Microeconomics or Principles of Microeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTOR\ PHILOS PHILOS POL SCI PSYCH 1 ECON 11 ECON 12 Foreign L	7 1200° or M 7 2110 or W 1105 or Sr 1105 or Lc 11200° or Ar 101 or G 00 or Pr 000 or Pr anguage Elise	arly Western Civilization or loddern Western Civilization* or loddern Western Civilization* or loddern Western Civilization* or left and World: Intro to Philosophy or ogic and Reasoning: An Introduction or merican Government*or eneral Psychology or rinciples of Microeconomics or rinciples of Macroeconomics or lementary or Intermediate Foreign Language atisfies the State of Missouri government requirement.	,	6
			arts, and Social Scie elect 3 hours.	nces			
HASS Elective	Humanities, Arts, Social Sciences Elective: Any music, theater, English and technical communica philosophy, political science, psychology, econor etymology, or foreign language.	ation,	HASS Ele	ective m	umanities, Arts, Social Sciences Elective: Any history jusic, theater, English and technical communication, nilosophy, political science, psychology, economics, tymology, or foreign language.		3
	No free electives applied to the degree.	0		М	laximum Free Electives		0
	Group 2 Major Requirements Group 1 Core Requirements	35 28 Total Hours 63		G *sa	roup 2 Major Requirements roup 1 Core Requirements Tota &T advisor permission is required to transfer more than 69 credits toward the troleum Engineering degree.	2 al Hours* 6	34 27 31