Eastern Iowa Community Colleges — 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.

	Eastern Iowa Community Colleges		<u>Semester</u>	<u>Missouri S&T</u>		
MAT 210	Calculus I	4	MATH 1214	Calculus I Grade of C or better is required.	4	ļ
MAT 216	Calculus II	4	MATH 1215	Calculus II Grade of C or better is required.	4	ļ
MAT 219	Calculus III	4	MATH 2222	Calculus III Grade of C or better is required.	4	Į.
MAT 227	Differential Equations	3	MATH 3304	Elementary Differential Equations	3	3
PHY 212	Classical Physics I	5	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4	Į.
PHY 222	Classical Physics II	5	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4	Į.
EGR 410	PLTW-Principles of Engineering	3	FR ENG 1100	Study and Careers in Engineering and Computing	1	l
ENG 105	Composition I	3	ENGLISH 1120	Exposition and Argumentation	3	3
		Total Hours 31			Total Hours 27	7

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	equirements	
	Eastern Iowa Community Colleges		Semeste	r	Missouri S&T	
EGR 160	Engineering I	3	333313	MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 165	General Chemistry I	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CIS 161	C++	3		COMP SCI 1971, 1981	Intro to Programming Method and Lab (C++)	3
EGR 285	Intro to Electrical Science	4		ELEC ENG 2800	Electrical Circuits	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		AERO ENG 2360	Dynamics	3
EGR 290	Thermodynamics	3		MECH ENG 2519	Thermodynamics	3
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
PHI 105	Intro to Ethics or other engineering, business, bio, social ethics approved by advisor	3		PHILOS 1130	How Should I Live? An Introduction to Ethics or other engineering, business, bio, social ethics approved by advisor	3
	6 hours Humaniti	es and Find I and Socia 1200, 1300	e Arts from at l Il Sciences from I, 1310, or PO		and lines.	
	0-14		anities and F			
		b nours tro	m at least tw	o specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
			ral and Soci			
		6 hours fro	om at least tw	o specific disciplines.		
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSVCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
	н	umanities	s, Arts, and S Select 3 hou	ocial Sciences Irs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, ar music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	t, 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	47			Group 2 Major Requirements	47
	Group 1 Core Requirements	31			Group 1 Core Requirements	27
		lours 78			Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	74

	Architectural En	gineeri	ng Gro	up 2 Major I	Requirements		
	Eastern Iowa Community Colleges		Semester		Missouri S&T		
EGR 160 ENG 106 or ENG 10 8or SPC 112	Engineering I Composition II or Composition II: Technical Writing or Public Speaking	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
CHM 165	General Chemistry I	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.		5
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics		3
EGR 280	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics		2
EGR 290	Thermodynamics	3		MECH ENG 2519*	Thermodynamics* *Will be substituted for MECH ENG 2527.		3
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials		3
	From the c 6 hours Hu 6 hours Beh *At least one course must be selected from HIST	options listed in manities and Fin avioral and Socia ORY 1200, 1300 Hum	each group be e Arts from at leal Sciences from 0, 1310, or POI nanities and F	ine Arts	elude and blines.		
		elect 6 hours fro	om at least two	o specific disciplines.			
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation **satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
	0.1.101		oral and Socia		21/ 4000		
	Western Civilization III: The Modern Period*		o specific disc	ciplines to include HISTOI	RY 1200. Modern Western Civilization*		
HIS 119*	*Satisfies the State of Missouri Government requirement.	3		HISTORY 1200*	*Satisfies the State of Missouri Government requirement.		3
PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Intro to Philosophy or Intro to Logic or American National Government* or Intro to 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	34			Group 2 Major Requirements		34
	Group 1 Core Requirements	otal Hours 65			Group 1 Core Requirements *S&T advisor permission is required to transfer more than 69 credits tow Architectural Engineering degree.	Total Hours* ard the S&T	27 61

			eering-Biomanufa		
	Gr	oup 2 Ma	ajor Requirements		
	Eastern Iowa Community Colleges		Semester	Missouri S&T	
SPC 112	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 165	General Chemistry I	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 175	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHM 261	Organic Chemistry I	4	CHEM 2210	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry I	3
CHM 271 or BIO 114	Organic Chemistry II or General Biology IA	4	CHEM 2220 or BIO SCI 1113, 1219	Organic Chemistry II (3) or General Biology (3) and Lab (1) Applies to degree as Track Elective.	4
CIS 189 or CIS 161	Python or C++ or	3	COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) *Will be substituted for COMP SCI 1500.	3
EGR 290	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
	From the	e options listed in e Humanities and Fine 3 hours Beh STORY 1200, 1300,		elude and	
			nities and Fine Arts		
		Select 6 hours from	n at least two specific disciplines.	B ***	
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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 *statisfies the State of Missouri government requirement.	6
			al and Social Sciences		
HIS 117 or HIS 119* or GEO 121 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or American National Government* or Intro to Psychology or Principles of Milicroeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	Select 3 hours. 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
			Arts, and Social Sciences LISH 3560 required.		
ENG 108	Composition II: Technical Writing	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	37 31 Total Hours 68		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.	36 27 63

	Biome	edical Er	ng	jineering-Biomater	ials	
			-	jor Requirements		
	Eastern Iowa Community Colleges			Semester	Missouri S&T	
SPC 112	Public Speaking	3	3	SP&MS 1185	Principles of Speech	3
CHM 165	General Chemistry I	4	ļ	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CHM 175	General Chemistry II	4	ı	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHM 261	Organic Chemistry I	4	ļ	CHEM 2210	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry I	3
CHM 271	Organic Chemistry II	4	ŀ	CHEM 2220	Organic Chemistry II	4
BIO 114	General Biology IA	4	ļ	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
CIS 189 or CIS 161	Python or C++ or	3	3	COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) "Will be substituted for COMP SCI 1500.	3
EGR 180	Statics	3	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 285	Intro to Electrical Science	4	ı	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 H	3 hours B HISTORY 1200, 130 Hur	Beha 00, 1 mar	nities and Fine Arts		
	British Literature I or	Select 6 hours f	rom	n at least two specific disciplines.	British Literature I: The Beginnings to 1800 or	
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.	6	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 II: 1800 to Present or 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
		Behav		al and Social Sciences		
HIS 117 or HIS 119* or GEO 121 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* of World Regional Geography or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfes the State of Missouri government requirement.	or 3		Select 3 hours. 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
				Arts, and Social Sciences		
ENG 108	Composition II: Technical Writing	EN 3		LISH 3560 required. ENGLISH 3560	Technical Writing	3
100	No free electives applied to the degree.	0		ENGERGITOGGG	Maximum Free Electives	0
	Group 2 Major Requirements	4:			Group 2 Major Requirements	44
	Group 1 Core Requirements	3. Total Hours 76	1		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

	Ceramic Engin	eering	Group	2 Major Re	quirements	
	Eastern Iowa Community Colleges		Semester	•	Missouri S&T	
EGR 160	Engineering I	3		MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 175	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
CHM 261	Organic Chemistry I	4		CHEM 2210	Organic Chemistry I Satisfies the advanced chemistry elective requirement.	3
	From the o 6 hours Hun	ptions listed in nanities and Fine vioral and Socia DRY 1200, 1300	each group be e Arts from at le Il Sciences fron I, 1310, or POL		clude s and olines.	
	Se		anities and F	ne arts specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation "Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
			ral and Socia			
HIS 117 or HIS 119* or GEO 121 or PHI 101 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.	elect 6 hours fro	om at least two	o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanities	s, Arts, and So Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	ry, art, 3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 39 31 otal Hours 70			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 27 65

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	Chemical Engine				· · · · · · · · · · · · · · · · · · ·	
		oup 2 Ma		equirements		
EGR 160	Eastern Iowa Community Colleges Engineering I	3	<u>Semester</u>	MECH ENG 1720	Missouri S&T Intro to Engineering Design	3
SPC 112	Public Speaking	3		SP&MS 1185	Principles of Speech	3
CHM 165	· •	4			Applies to degree as Gen Ed Communication requirement.	
	General Chemistry I			CHEM 1310, 1319	General Chemistry I and Lab General Chemistry II (3) and Qualitative Analysis* (2)	5
CHM 175	General Chemistry II	4		CHEM 1320, 1510*	*CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHM 261	Organic Chemistry I	4		CHEM 2210	Organic Chemistry I Organic Chemistry II (3) or	4
CHM 271 or BIO 186	Organic Chemistry II or Microbiology Select up to 8 hours from these options.	8		CHEM 2220 or BIO SCI 3313, 3319	Microbiology and Lab (5) Applies to the degree as required science elective credits. Select up to 8 hours from these options.	8
CIS 189 or CIS 161	Python or C++ or	3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) *Will be substituted for COMP SCI 1500.	3
EGR 290	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 B *At least one course must be selected from HI	<mark>STORY 1200, 1300, [.]</mark> Humar	<mark>1310, or POI</mark> nities and F	•		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation "satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
				al Sciences o specific disciplines.		
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Milcroeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		i at iedst tWt	HISTORY 1100 or HISTORY 1100 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 Missourj government requirement.	6
5NO 400	Occurs West II Technical Western	ENGL	Arts, and S ISH 3560 re		To be to IMATE	
ENG 108	Composition II: Technical Writing	3		ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 47 31 Total Hours 78			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *SAT advisor permission is required to transfer more than 68 credits toward the SAT Chemical Engineering degree.	0 47 27 74

	Civil Enginee	ring G	roup 2	Major Requ	uirements	
	Eastern Iowa Community Colleges		Semester		Missouri S&T	
EGR 160	Engineering I	3		MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
	Humanities, Art	ts, and Social	Sciences Ge	eneral Education Requi	rements	
	6 hours Hum	anities and Fine rioral and Social RY 1200, 1300	Arts from at le Sciences from	•	s and plines.	
	Sel			specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
	Sel		ral and Socia m at least two	al Sciences o specific disciplines.		
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to 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
		Humanities	, Arts, and So Select 3 hour	ocial Sciences s.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	/, art, 3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements To	34 31 tal Hours 65			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.	34 27 61

	Computer Eng	ineerir	ng	Group 2 Majo	r Requirements
	Eastern Iowa Community Colleges			Semester	Missouri S&T
SPC 112	Public Speaking		3	SPMS 1185	Principles of Speech 3
CHM 165	General Chemistry I		4	CHEM 1310, 1319 COMP SCI 1200	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab Discrete Math for Computer Science 3
CIS 189 or CIS 161	Python or C++ or		3	COMP SCI 1500 COMP SCI 1971,	Computational Problem Solving or
EGR 180 or EGR 280 or EGR 290 or CHM 261	Statics or Dynamics or Thermodynamics or Organic Chemistry I (4)		3	CIV ENG 2200 or MECH ENG 2350 MECH ENG 2519 CHEM 2210	or Engineering Mechanics-Dynamics (2) or
EGR 285	Intro to Electrical Science		4	ELEC ENG 2100°	Circuits I* (3) and Circuit Analysis Lab (1) A passing grade on the Missour S&T EE Advancement Exam I is required to receive coeffict of ELEC EMS 2100.
	From the 6 hours Hu 6 hours Beh	options listed imanities and avioral and So FORY 1200, 1	l in e Fine ocial 300,	Sciences General Education ach group below, select 15 hou Arts from at least two specific dis Sciences from at least two specification 1310, or POL SCI 1200 to satis nities and Fine Arts	rs to include ciplines and
	S			n at least two specific discipline	₽S.
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.		6	ENGLISH 1211 o ENGLISH 1212 o ENGLISH 1221 o ENGLISH 1222 o HISTORY 1300* o HISTORY 1310* o ART 1180 or MUSIC 1150	British Literature II: 1800 to Present or American Literature: 1600 to 1865 or American Literature: 1865 to Present or American Literature: 1877* or American History to 1877* or American History Since 1877* or
				al and Social Sciences	
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	elect 6 hours	fron	n at least two specific discipline HISTORY 1100 o HISTORY 1200* o HISTORY 2110 o PHILOS 1105 or PHILOS 1115 or POL SCI 1200* o 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
		Humanit		Arts, and Social Sciences Select 3 hours.	
ENG 106 or ENG 108	Composition II or Composition II: Technical Writing		3	ENGLISH 1160 o ENGLISH 3560	r Writing and Research or 3 Technical Writing
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements		3 35 31 66	Electives	Maximum Free Electives 3 Group 2 Major Requirements 39 Group 1 Core Requirements 7 Total Hours* 66 *S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.

	Electrical Enginee	ering	Group	o 2 Major Rec	_l uirements	
Е	astern Iowa Community Colleges		Semester		Missouri S&T	
EGR 160	Engineering I	3		MECH ENG 1720	Intro to Engineering Design	3
SPC 112	Public Speaking	3		SPMS 1185	Principles of Speech	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 189 or CIS 161	Python or C++ or	3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab*	3
EGR 180 and EGR 280 BOTH of the courses above or ONE of the courses below. OR EGR 290 or CHM 261	Statics and Dynamics Both courses above combined or any one of the following courses will satisfy a require engineering science elective. OR Thermodynamics or Organic Chemistry I	d 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	"Will be substituted for COMP SCI 1500. 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	3
EGR 285	Intro to Electrical Science	4		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
	6 hours Humanitie: 6 hours Behavioral a *At least one course must be selected from HISTORY 1.	s and Fine and Social 200, 1300 Huma	Arts from at le Sciences from , 1310, or POL anities and F	•	nd es.	
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
	Select 6		ral and Socia m at least two	al Sciences o specific disciplines.		
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization II: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government:	6		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 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
	Hu	manities	, Arts, and Se Select 3 hour	ocial Sciences s.		
ENG 106 or ENG 108	Composition II or Composition II: Technical Writing	3		ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
Electives	Maximum Free Electives	6		Electives	Maximum Free Electives	6
	Group 2 Major Requirements Group 1 Core Requirements Total Ho	41 31 ours 72			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 69

	Engineering Ma	anagem	ent Gro	up 2 Major F	Requirements	
	Eastern Iowa Community Colleges		Semester		Missouri S&T	
EGR 160	Engineering I	3		MECH ENG 1720	Intro to Engineering Design	3
SPC 112	Public Speaking	,	3	SPMS 1185	Principles of Speech	3
	, ,				Applies to degree as Gen Ed Communication requirement.	
CHM 165 CIS 161	General Chemistry I C++		1 3	CHEM 1310, 1319 COMP SCI 1971, 1981	General Chemistry I and Lab Intro to Programming Method and Lab (C++)	5 3
EGR 285	Intro to Electrical Science		1	ELEC ENG 2800	Electrical Circuits	3
EGR 283 EGR 180	Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics		3	MECH ENG 2350	Engineering Mechanics-Otatics Engineering Mechanics-Dynamics	2
	,				Thermodynamics*	_
EGR 290	Thermodynamics		3	MECH ENG 2519*	*Will be substituted for MECH ENG 2527.	3
EGR 380	Mechanics of Deformable Bodies			CIV ENG 2210	Mechanics of Materials	3
				eneral Education Requir		
	6 hours	Humanities and F Behavioral and So	ine Arts from at le	elow, select 15 hours to incleast two specific disciplines at least two specific disciplines SCI 1200 to satisfy the S	and lines.	
			manities and F	ine Arts o specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.	6	3	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 or 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
	Select 6 h		rioral and Social two specific dis	al Sciences ciplines to include PSYCH	l 1101.	
PSY 111	Intro to Psychology	:	3	PSYCH 1101	General Psychology Required	3
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* of World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.	r	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
		Humaniti	es, Arts, and Se Select 3 hour			
ENG 106 or ENG 108	Composition II or Composition II: Technical Writing	3		ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	4 3 Total Hours 7	4 1	Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hot "S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.	0 43 27 urs* 61

	Environmental E	nginee	ring Gr	oup 2 Major	Requirements	
	Eastern Iowa Community Colleges		Semester	•	Missouri S&T	
EGR 160	Engineering I	3		MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 175	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
BIO 114	General Biology IA	4		BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
	Humanities,	Arts, and Soci	al Sciences G	eneral Education Requi	rements	
		navioral and Soc TORY 1200, 13	ial Sciences fror	•	plines.	
	•			specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	E		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 or 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
		Behav	ioral and Socia	al Sciences	• • • • • • • • • • • • • • • • • • • •	
		s from at least	two specific dise	ciplines to include HISTO		
HIS 119*	Western Civilization III: The Modern Period* *Satisfies the State of Missouri Government requirement.	3		HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Intro to Philosophy or Intro to Logic or American National Government* or Intro to 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 Miscouri government requirement.	3
	No free electives applied to the degree.	C			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	3 3 Total Hours 7	1		Group 2 Major Requirements Group 1 Core Requirements Total Hours* *\$&T advisor permission is required to transfer more than 69 credits toward the \$&T Environmental Engineering degree.	37 27 64

	Geological Eng	ineerin	g Grou	p 2 Major Re	equirements	
	Eastern Iowa Community Colleges		Semester		Missouri S&T	
EGR 160	Engineering I	3	Semester	MECH ENG 1720	Intro to Engineering Design	3
ENG 108	Composition II: Technical Writing	3		ENGLISH 3560	Technical Writing	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 189 or	Python or			COMP SCI 1500 or	Computational Problem Solving or	
CIS 161	C++ or	3		COMP SCI 1971, 1981	Intro to Programming Methodology and Lab	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
	From the c 6 hours Hur	ptions listed in nanities and Fine vioral and Socia ORY 1200, 1300	each group be e Arts from at le I Sciences fron I, 1310, or POI	•	ude and lines.	
	e.		anities and F	ine Arts o specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
	_		ral and Socia			
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanities	, Arts, and S Select 3 hou	ocial Sciences		
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	Select 3 flou	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 T	37 31 otal Hours 68			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.	37 27 64

	Mechanical Eng	gineerir	ıg Grou	ıp 2 Major R	equirements	
	Eastern Iowa Community Colleges		Semester		Missouri S&T	
EGR 160	Engineering I	3		MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 165	General Chemistry I	4		CHEM 1310*, 1319	General Chemistry I and Lab	5
CIS 161	C++	3		COMP SCI 1971, 1981	*CHEM 1310 will be substituted for CHEM 1305. Intro to Programming Method and Lab (C++)	3
EGR 285	Intro to Electrical Science	3		ELEC ENG 2800	Electrical Circuits	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		MECH ENG 2360	Dynamics	3
EGR 290	Thermodynamics	3		MECH ENG 2519	Thermodynamics	3
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
	From the 6 hours Hi	options listed in umanities and Fin navioral and Soci	each group be ne Arts from at le al Sciences from	eneral Education Requirelow, select 15 hours to include two specific disciplines at least two specific disciplines. SCI 1200 to satisfy the S	lude and lines.	
		Hun	nanities and F	ine Arts		
		Select 6 hours fr	om at least two	specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
		Behavi	oral and Socia	I Sciences		
	5	Select 6 hours fr	om at least two	specific disciplines.		
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanitie	s, Arts, and Se Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communicatior philosophy, political science, psychology, economics etymology, or foreign language.	^{1,} 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	44 31 Total Hours 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 Mechanical Engineering degree.	44 27 71

	Metallurgical En	gineeri	'n	g Gro	up 2 Major	Requirements	
	Eastern Iowa Community Colleges			Semester		Missouri S&T	
EGR 160	Engineering I	3	3	<u>Gernester</u>	MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3	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
EGR 180	Statics	3	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 380	Mechanics of Deformable Bodies	3	3		CIV ENG 2210	Mechanics of Materials	3
CHM 165	General Chemistry I	2	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 175	General Chemistry II	4	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
CHM 261 or EGR 285	Organic Chemistry I or Intro to Electrical Science	2	4		CHEM 2210 or EE 2800	Organic Chemistry I (3) or Electrical Circuits (3) Not specifically required for the degree but will satisfy out-of-department technical elective requirement	3
	6 hours Hu	manities and F avioral and Soc FORY 1200, 13	ine i cial (Arts from at le Sciences from	•	es and ciplines.	
	S				specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.	6	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 or 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
				al and Socia			
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	€	6		specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humaniti		Arts, and So Select 3 hour	ocial Sciences s.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any hist music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.	, ,	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements					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 41 27 68

	Mining Engine	eering (Group	2 Major Red	quirements	
	Eastern Iowa Community Colleges		Semester		Missouri S&T	
EGR 160	Engineering I	3	_	MECH ENG 1720	Intro to Engineering Design	3
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as 6en Ed Communication requirement.	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 290	Thermodynamics	3		MECH ENG 2519*	Thermodynamics* *Will be substituted for MECH ENG 2527.	3
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
	6 hours Hun	nanities and Fine vioral and Social ORY 1200, 1300	Arts from at le Sciences from , 1310, or POL	•	s and iplines.	
	e,		anities and Fi	ine Arts o specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation "Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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 3dd Appreciation State of Missouri government requirement.	6
	9		ral and Socia			
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	elect 6 hours fro	m at least two	o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements To	34 31 otal Hours 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 Mining Engineering degree.	34 27 * 61

	Nuclear Engineer	ina	Group	2 Maior Rec	uuirements	
		9				
	Eastern Iowa Community Colleges	_	Semester		Missouri S&T	
EGR 160 ENG 106 or ENG 10 8or SPC 112	Engineering I Composition II or Composition II: Technical Writing or Public Speaking	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	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 161	C++	3		COMP SCI 1971, 1981	Intro to Programming Method and Lab (C++) (3)	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
GR 285	Intro to Electrical Science	4		ELEC ENG 2800	Electrical Circuits	3
EGR 290	Thermodynamics	3		MECH ENG 2519	Thermodynamics	3
LOT 200	•		Sciences G	eneral Education Require		
	6 hours Humanities	and Fine and Socia 200, 1300	e Arts from at le I Sciences from 1, 1310, or POI	•	and ines.	
	Select 6		anities and F	ine Arts o specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation "satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or 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 or 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
			ral and Socia			
EON 400		nours iro	m at least two	specific disciplines.	Driveriales of Missessensusies on	
ECN 130 or ECN 120	Principles of Milcroeconomics or Principles of Macroeconomics	3		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to 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
	Hur	nanities	, Arts, and S Select 3 hou	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	0			Maximum Free Electives	0
	Group 2 Major Requirements	41			Group 2 Major Requirements	41
	Group 1 Core Requirements	31			Group 1 Core Requirements	27
	Total Ho	urs 72			Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.	68

	Petroleum Engi	neerin	g Grou	ıp 2 Major R	Requirements	
	Eastern Iowa Community Colleges		Semeste	<u>r</u>	Missouri S&T	
ENG 106 or ENG 10 8or SPC 112	Composition II or Composition II: Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 165	General Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CIS 189	Python	3		COMP SCI 1500	Computational Problem Solving	3
EGR 180	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 280	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 380	Mechanics of Deformable Bodies	3		CIV ENG 2210	Mechanics of Materials	3
EGR 290	Thermodynamics	3		MECH ENG 2519*	Thermodynamics* *Will be substituted for MECH ENG 2527.	3
	6 hours Hui 6 hours Beha *At least one course must be selected from HIST	manities and Fi avioral and Soc ORY 1200, 130 Hur	ne Arts from at ial Sciences from 1310, or PO manities and I	ine Arts	es and ciplines.	
		elect 6 hours f	rom at least tw	o specific disciplines.		
LIT 140 or LIT 141 or LIT 110 or LIT 111 or HIS 151* or HIS 152* or ART 101 or MUS 100	British Literature I or British Literature II or American Literature to Mid-1800's or American Literature since Mid-1800's or US History to 1877* or US History since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.	6		ENGLISH 1211 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1221 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 or American Literature: 1600 to 1865 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfes the State of Missouri government requirement.	6
			ioral and Soci			
HIS 117 or HIS 119* or GEO 121 or PHI 101 or PHI 110 or POL 111* or PSY 111 or ECN 130 or ECN 120 or Foreign Language	Western Civilization I: Ancient and Medieval or Western Civilization III: The Modern Period* or World Regional Geography or Intro to Philosophy or Intro to Logic or American National Government* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	elect 6 hours f		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	es, Arts, and S Select 3 hou	Social Sciences urs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	ry, art, 3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 37 3 Otal Hours 68	7 1		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.	0 37 27 64