## Illinois Central 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.

	Illinois Central College		Semester	Missouri S&T	
MATH 222	Calculus and Analytical Geometry I	5	MATH 121	4 Calculus I Grade of C or better is required.	4
MATH 223	Calculus and Analytical Geometry II	4	MATH 121	5 Calculus II Grade of C or better is required.	4
MATH 224	Calculus and Analytical Geometry III	4	MATH 222	2 Calculus III Grade of C or better is required.	4
MATH 250	Differential Equations	3	MATH 330	4 Elementary Differential Equations	3
PHYS 211 and PHYS 212 and PHYS 213*	Engineering Physics: Mechanics (4) and Engineering Physics: Electricity/Magnetism (4) and Engineering Physics: Thermodynamics (2) All three courses are required to receive full transfer credit.	10	PHYSICS PHYSICS	Eliquieening Filysics in Grade of C or better is required.	8
ENGL 110	Composition I	3	ENGLISH	1120 Exposition and Argumentation	3
	To	tal Hours 29		Total Hours	3 26

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

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

Aerospace Engineering

Architectural Engineering

Biomedical Engineering/Biomanufacturing or Biomaterials

**Ceramic Engineering** 

Chemical Engineering and Biochemistry Emphasis

**Civil Engineering** 

**Computer Engineering** 

Electrical Engineering

**Engineering Management** 

**Environmental Engineering** 

**Geological Engineering** 

**Mechanical Engineering** 

Metallurgical Engineering

Mining Engineering

**Nuclear Engineering** 

**Petroleum Engineering** 

Engineering Major Requirements are detailed on the following pages.

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

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

	Aerospace Enginee	rinç	g Group 2 Maj	or Requirements	
ENGR 110 and ENGR 113*	Illinois Central College Intro to Engineering (1) and Engineering Graphics (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4	Semester  FR ENG 1100 : MECH ENG 17		4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3	ENGLISH 1160 SPMS 11850	or Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4	CHEM 1310*, 1	Canada Chamistan Land Lah	5
ENGR 230 or CMPSC 125	Programming Engineering Applications or Computer Science I: Programming in C++	3	COMP SCI 197	1, 1981 Intro to Programming Method and Lab (C++)	3
ENGR 240	Engineering Circuit Analysis	3	ELEC ENG 280		3
ENGR 251	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 253 MATH 230	Mechanics of Materials Linear Algebra	3	CIV ENG 2210 MATH 3108	Mechanics of Materials Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.	3
Ethics	Ethics Elective	3	Ethics	Ethics Elective	3
EUTICS	Engineering, business, bio, social or other ethics approved by advisor.		Sciences General Education	Engineering, business, bio, social or other ethics approved by advisor.	3
	6 hours Humanities a	and Fine d Social	each group below, select 15 h Arts from at least two specific Sciences from at least two spe 1310, or POL SCI 1200 to sa	disciplines and cific disciplines.	
			nities and Fine Arts	.,	
	Select 6 ho		n at least two specific discipl	nes.	
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation **Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 ENGLISH 1221 ENGLISH 1222 ENGLISH 1222 HISTORY 1300 HISTORY 1310 ART 1180 or MUSIC 1150	or British Literature II: 1800 to Present or American Literature: 1600 to 1865 or or American Literature: 1865 to Present or * or American History to 1877* or	6
	В	ehavio	al and Social Sciences		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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	m at least two specific discipl HISTORY 1100 HISTORY 2101 HISTORY 2111 PHILOS 1105 POL SCI 1200* PSYCH 1101 or ECON 1100 or FOR 1200 or FOR 1200 or FOR 1200 or	or Early Western Civilization or  * or Modern Western Civilization* or or World Regional Geography or r Self and World: Intro to Philosophy or r Logic and Reasoning: An Introduction or or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or	6
	Huma		Arts, and Social Sciences Select 3 hours.		
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. Group 2 Major Requirements Group 1 Core Requirements Total Hour	0 44 29 s 73		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	0 45 26 71

	Architectural Engine	erir	ng Gro	up 2 Major R	equirements	
	Illinois Central College		Semester		Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3) *The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4		FR ENG 1100 and MECH ENG 1720*	Study and Careers in Engineering (1) and Design with Computer Application (3) Computer Application (3) and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 252	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ARCTK 114	Surveying	2		CIV ENG 2401	Fundamentals of Surveying	3
EASC 116	Intro to Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	*At least one course must be selected from HISTORY 1200	, 1300 Huma	<mark>, 1310, or POL</mark> anities and Fi	The state of the s		6
			ral and Socia			
		ast two	specific disc	iplines to include HISTORY		
HIST 118*	Modern Western Civilization*  *Satisfies the State of Missouri government requirement.	3		HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Intro to Philosophy or 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	38			Group 2 Major Requirements	38
	Group 1 Core Requirements  Total Hours	29 67			Group 1 Core Requirements  Total Hours  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.	26 * 64

			ing-Biomanufa Requirements		
	Illinois Central College	<u>Sem</u>	<u>ester</u>	Missouri S&T	
COMM 110	Communication: Process and Practice	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	General Chemistry	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 220	Organic Chemistry	5	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHEM 230 or BIOL 111 or BIOL 150	Organic Chemistry (4) or Concepts in Biology (4) or Genetics (3)	4	CHEM 2220, 2229 or BIO SCI 1113, 1219 or BIO SCI 2223	Organic Chemistry II and Lab or General Biology and Lab or General Genetics Applies to degree as Track Elective.	4
BIOL 140	Human Anatomy and Physiology	4	BIO SCI 3333, 3359	Anatomy and Physiology I and Lab	4
CMPSC 212 or CMPSC 235 or ENGR 230* or CMPSC 125*	CSII: Advanced programming in C++ or CS III: Advanced Programming in JAVA or Programming Engineering Applications or CS I: Programming in C++	3	COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) *Will be substituted for CS 1500.	3
	6 hours Hun 6 hours Beha *At least one course must be selected from HISTO	nanities and Fine Arts fro vioral and Social Science DRY 1200, 1300, 1310, o Humanities	oup below, select 9 hours to inclimat least two specific disciplines ses from at least two specific discipor POL SCI 1200 to satisfy the Sand Fine Arts set two specific disciplines.	and blines.	
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	Brittsh Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150  Social Sciences	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
		Select	3 hours.		
HIST 117 or HIST 118* or GEOG 116 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World 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	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements To	36 29 otal Hours 65		Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	35 26 61

			_		ing-Biomate equirements		
	Illinois Central College	о.р _		Semester	_	Missouri S&T	
COMM 110	Communication: Process and Practice		3		SP&MS 1185	Principles of Speech	3
CHEM 130	General Chemistry		4		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement.  General Chemistry I and Lab	5
CHEM 132	General Chemistry		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 220	Organic Chemistry		5		CHEM 2210, 2219*	Organic Chemistry I and Lab*  *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 230	Organic Chemistry		4		CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIOL 111	Concepts in Biology		4		BIO SCI 1113*, 1219*	General Biology* and Lab*  *Applies to degree as Track Elective (Non-engineering).	4
BIOL 140	Human Anatomy and Physiology		4		BIO SCI 3333, 3359	Human Anatomy and Physiology I and Lab	4
CMPSC 212 or CMPSC 235 or ENGR 230* or CMPSC 125*	CSII: Advanced programming in C++ or CS III: Advanced Programming in JAVA or Programming Engineering Applications or CS I: Programming in C++		3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) *Will be substituted for CS 1500.	3
ENGR 251	Statics		3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 240	Engineering Circuit Analysis		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. Applies to the degree as a Track Elective (Engineering).	4
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	*At least one course must be selected from Hi  British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.	Н	umar	nities and Fi	•	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
		Beha		al and Socia			
			5	Select 3 hour	S.		
HIST 117 or HIST 118* or GEOG 116 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World 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		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
	No free electives applied to the degree.		0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	Total Hours	47 29 76			Group 2 Major Requirements Group 1 Core Requirements  Total Hours  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.	46 26 * 72

	Ceramic Engine	ering	Group	2 Major Re	equirements	
ENGR 110 and ENGR 113*	Illinois Central College Intro to Engineering (1) and Engineering Graphics (3) *The combination of ENGR 110 and 113 is equivalent to the combination of FR E and MECH ENG 1720.	4 ing 1100	<u>Semeste</u>	FR ENG 1100 and MECH ENG 1720*	Missouri S&T Study and Careers in Engineering (1) and Design with Computer Application (3)  'The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	General Chemistry	4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHEM 220	Organic Chemistry	5		CHEM 2210, 2219*	"CHEM 1510 is not a degree requirement, transfers as general elective credit.  Organic Chemistry I (3) and Lab* (1)  CHEM 2210 satifies the advanced chemistry elective requirement.  "CHEM 2219 is not an S&T degree requirement, transfers as general elective credit.	3
	From the option 6 hours Human	ons listed in hities and Fin oral and Socia	each group be e Arts from at I al Sciences fron	eneral Education Requipelow, select 15 hours to interest two specific disciplined in at least two specific disc.	nclude es and ciplines.	
	"At least one course must be selected from his for			•	State of Missouri government requirement.	
	Selec		nanities and F	o specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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
	Salar		oral and Soci	al Sciences o specific disciplines.		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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	om at least tw	HISTORY 1100 or HISTORY 2200° or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200° or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or  World Regional Geography or  Self and World: Intro to 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	ocial Sciences rs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	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	41			Group 2 Major Requirements	39
	Group 1 Core Requirements Tota	29 Il Hours 70			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.	26 65

				neering or		
	Chemical Engineering			nical Enginee equirements	ering Emphasis	
	Illinois Central College	Z IVI	Semester		Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3) The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 110 and MCPL ENG 1720.	00 4		FR ENG 1100 and MECH ENG 1720*	Study and Careers in Engineering (1) and Design with Computer Application (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
COMM 110	Communication: Process and Practice	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	General Chemistry	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 220	Organic Chemistry	5		CHEM 2210, 2219*	Organic Chemistry I and Lab*  *CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits See note below.	4
CHEM 230 or BIOL 210	Organic Chemistry or Microbiology	4		CHEM 2220 or BIO SCI 3313	Organic Chemistry II (3) or Microbiology and Lab (5)  Applies to the degree as required science elective credits. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab.	8
CMPSC 212 or CMPSC 235 or ENGR 230* or CMPSC 125*	CSII: Advanced programming in C++ or CS III: Advanced Programming in JAVA or Programming Engineering Applications or CS I: Programming in C++	3		COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) *Will be substituted for CS 1500.	3
	6 hours Humanities	and Fine nd Socia <b>00, 1300</b>	Arts from at le Sciences from , 1310, or POI	•	nd nes.	
	Select 6 h		anities and F m at least two	o specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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
			ral and Socia	al Sciences o specific disciplines.		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PPILS 115* or PSY 110 or ECON 111 or ECON 111 or Foreign Language	Barly Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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	m at iedst liw	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 Total Hou	39 29 urs 68			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.	42 26 68

	Civil Engineering	G	roup 2	Major Req	uirements	
	Illinois Central College		Semester		Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4		FR ENG 1100 and MECH ENG 1720*	Study and Careers in Engineering (1) and Design with Computer Application (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
EASC 116	Intro to Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 252	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ARCTK 114	Surveying	2		CIV ENG 2401	Fundamentals of Surveying	3
	6 hours Humanities ar 6 hours Behavioral and *At least one course must be selected from HISTORY 1200	id Fine Social , <b>1300</b>	Arts from at le Sciences from , 1310, or POL	•	es and ciplines.	
			anities and Fi	ne Arts specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150			<b>ral and Socia</b> m at least two	specific disciplines. HISTORY 1100 or	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.  Early Western Civilization or	6
HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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 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
	Huma	nities	, Arts, and So Select 3 hour	ocial Sciences s.		
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 Hours	41 29 70			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.	41 26 67

	Computer Eng	ineering	Group 2 Major Re	equirements	
	Illinois Central College		<u>Semester</u>	Missouri S&T	
COMM 110	Communication: Process and Practice	3	SPMS 1185	Principles of Speech	3
CHEM 130	General Chemistry	4	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement.  General Chemistry I and Lab	5
TILINI 100	Control Onomion y		COMP SCI 1200	Discrete Math for Computer Science	3
CMPSC 212 or CMPSC 235 or ENGR 230* or CMPSC 125*	CSII: Advanced programming in C++ or CS III: Advanced Programming in JAVA or Programming Engineering Applications or CS I: Programming in C++	3	COMP SCI 1500 or COMP SCI 1971,1981*	Computational Problem Solving or Intro to Programming Methodology and Lab* "Will be substituted for COMP SCI 1500.	3
ENGR 251 and ENGR 252 or PHYS 214 or CHEM 220 or BIOL 150	Statics (3) or Dynamics (3) or Engineering Physics: Modern Physics (2) or Organic Chemistry (5) or Genetics (3)	3	CIV ENG 2200 or MECH ENG 2350 or PHYSICS 2311 or CHEM 2210 or BIO SCI 2223	Engineering Mechanics-Statics (3) or Engineering Mechanics-Dynamics (2) or Modern Physics I (3) Organic Chemistry I (3) or General Genetics (3) Satisfies a required engineering/science elective.	3
ENGR 240	Engineering Circuit Analysis	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
MATH 230	Linear Algebra	3	MATH 3108 Sciences General Education Requir	Linear Algebra	3
	6 hours H	umanities and Fine navioral and Social to TORY 1200, 1300,	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 nities and Fine Arts	and lines.	
	\$		at least two specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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
		Behavior	al and Social Sciences		
		Select 6 hours fron	n at least two specific disciplines.		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 1110 or PPILS 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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
			Arts, and Social Sciences Select 3 hours.		
ENGL 111	Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	3 38 29 Total Hours 67	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 42 26

	Electrical Engine	eering (	Group 2 Major Red	quirements	
	Illinois Central College	.5	semester	Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3) *The combination of ENGR 110 and 113 is equivalent to the combination of FR E and MEOH ENG 1720.	4	FR ENG 1100 and MECH ENG 1720*	Study and Careers in Engineering (1) and Design with Computer Application (3)  'The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
COMM 110	Communication: Process and Practice	3	SPMS 1185	Principles of Speech  Applies to degree as Gen Ed Communication requirement.	3
CHEM 130 CMPSC 212 or CMPSC 235 or ENGR 230* or CMPSC 125*	General Chemistry CSII: Advanced programming in C++ or CS III: Advanced Programming in JAVA or Programming Engineering Applications or CS I: Programming in C++	3	CHEM 1310, 1319 COMP SCI 1500 or COMP SCI 1971,1981* or COMP SCI 1570, 1580*	General Chemistry I and Lab  Computational Problem Solving or Intro to Programming Methodology and Lab* or Intro to Programming (C++) and Lab* (4)  "Will be substituted for COMP SCI 1500.	5 3
ENGR 251 and ENGR 252 BOTH of the courses above or ONE of the courses below. OR PHYS 214 or CHEM 220 or BIOL 150	Statics (3) and Dynamics (3) Both courses above combined or any one of the following courses will satisfy a re engineering science elective. OR Engineering Physics: Modern Physics (2) or Organic Chemistry (5) or Genetics (3)	quired 3	CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below.  OR PHYSICS 2311 or CHEM 2210 or BIO SCI 2213	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  Modern Physics I (3)  Organic Chemistry I (3) or General Genetics (3)	3
ENGR 240	Engineering Circuit Analysis	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
MATH 230	Linear Algebra	3	MATH 3108	Linear Algebra	3
	6 hours Human 6 hours Behavio *At least one course must be selected from HISTOR	nities and Fine Art ral and Social Sc Y 1200, 1300, 13 Humanit	h group below, select 15 hours to incluts from at least two specific disciplines a iences from at least two specific discipline 10, or POL SCI 1200 to satisfy the Staties and Fine Arts at least two specific disciplines.	nd nes.	
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History 100 Since 1877* or Art Appreciation or Music Appreciation Statisfies 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		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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	at least two specific disciplines. HISTORY 1100 or HISTORY 2100* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or  World Regional Geography or  Self and World: Intro to Philosophy or  Logic and Reasoning: An Introduction or  American Government*or  General Psychology or  Principles of Microeconomics or  Principles of Macroeconomics or  Elementary or Intermediate Foreign Language  *Satisfies the State of Missouri government requirement.	6
			rts, and Social Sciences		
ENGL 111	Composition II	Se 3	lect 3 hours. ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
LIGUIVES	Group 2 Major Requirements Group 1 Core Requirements	45 29 I Hours 74	Electives	MAXITUTI Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours *S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.	46 26

	Engineering M	anageme	nt Gro	oup 2 Major F	Requirements	
	Illinois Central College		Semeste	er	Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3) *The combination of ENGR 110 and 113 is equivalent to the combinat and MECH ENG 1720.	ion of FR Eng 1100		FR ENG 1100 and MECH ENG 1720*	Study and Careers in Engineering (1) and Design with Computer Application (3) *The combination of BNGR 110 and 113 is equivalent to the combination of FR Eng 11 and MECH ENG 1720.	00 4
COMM 110	Communication: Process and Practice	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 230 or CMPSC 125	Programming Engineering Applications or Computer Science I: Programming in C++	3		COMP SCI 1971, 1981	Intro to Programming Method and Lab (C++)	3
ENGR 240	Engineering Circuit Analysis	4		ELEC ENG 2800	Electrical Circuits	3
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 252	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials	3		CIV ENG 2210 Seneral Education Requir	Mechanics of Materials	3
	6 hours	Humanities and Fine Behavioral and Social HISTORY 1200, 1300	Arts from at Sciences fro 1310, or PC		and lines.	
			inities and	Fine Arts vo specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement.	6	II at least tv	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: 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			ial Sciences isciplines to include PSYCH	11101.	
PSY 110	Intro to Psychology	3		PSYCH 1101	General Psychology Required	3
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or Logic or American National Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3		HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
				Social Sciences		
ENGL 111	Composition II	3	Select 3 hor	urs. ENGLISH 1160	Writing and Research	3
	No free electives applied to the degree.	0		Electives	Maximum Free Electives	0
	Group 2 Major Requirements	42		LIECTIVES	Group 2 Major Requirements	41
	Group 1 Core Requirements	29 Total Hours 71			Group 2 Major Requirements Group 1 Core Requirements Total Hou *S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.	26

	Environmental En	gineering	Group 2 Major	Requirements	
ENGR 110 and ENGR 113*	Illinois Central College Intro to Engineering (1) and Engineering Graphics (3)  The combination of ENGR 110 and 113 is equivalent to the combination of F1 and MECH ENG 1720.	4	FR ENG 1100 and MECH ENG 1720*	Missouri S&T Study and Careers in Engineering (1) and Design with Computer Application (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3	ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
EASC 116	Intro to Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 130	General Chemistry	4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	General Chemistry	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 111	Concepts in Biology	4	BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab is not a degree requirement, transfers as general elective credit.	3
ENGR 251	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 252	Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
		vioral and Social Science PRY 1200, 1300, 1310,	rom at least two specific disciplines ces from at least two specific disci or POL SCI 1200 to satisfy the s and Fine Arts	plines.	
	Se		east two specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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
		Behavioral and	d Social Sciences		
		rom at least two spec	ific disciplines to include HISTO		
HIST 118*	Modern Western Civilization* *Satisfies the State of Missouri government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Intro to Philosophy or 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. Group 2 Major Requirements Group 1 Core Requirements To	0 44 29 otal Hours 73		Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.	0 41 26 s* 67

	Geological Engine	erinç	g Group 2 Ma	ajor Requ	uirements	
	Illinois Central College		Semester		Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3) "The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 110 and MECH ENG 1720.	4	FR ENG 110 MECH ENG	0 and Des 1720* *The	udy and Careers in Engineering (1) and sign with Computer Application (3) e combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 MECH ENG 1720.	4
CHEM 130	General Chemistry	4	CHEM 1310,		eneral Chemistry I and Lab	5
CMPSC 212 or CMPSC 235 or ENGR 230 or CMPSC 125	CSII: Advanced programming in C++ or CS III: Advanced Programming in JAVA or Programming Engineering Applications or CS I: Programming in C++	3	COMP SCI 1		omputational Problem Solving or ro to Programming Methodology and Lab	3
EASC 116	Intro to Geology	4	GEO ENG 1: (GEOLOGY		ysical and Environmental Geology	3
ENGR 251	Statics	3	CIV ENG 220	00 Eng	gineering Mechanics-Statics	3
ENGR 252	Dynamics	3	MECH ENG	2350 Eng	gineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials	3	CIV ENG 22	10 Me	echanics of Materials	3
	From the options I 6 hours Humanities 6 hours Behavioral a	listed in e and Fine nd Social	Sciences General Educa each group below, select 15 Arts from at least two specif Sciences from at least two s	hours to include ic disciplines and specific disciplines.		
	*At least one course must be selected from HISTORY 12			satisty the State of	Missouri government requirement.	
	Select 6 h		inities and Fine Arts m at least two specific disc	inlines		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement.	6	ENGLISH 12 ENGLISH 12 ENGLISH 12 ENGLISH 12 HISTORY 13 HISTORY 13 ART 1180 or	111 or Brit 112 or Brit 121 or Am 122 or Am 100* or Am 110* or Am Mut	tish Literature I: The Beginnings to 1800 or tish Literature II: 1800 to Present nerican Literature: 1600 to 1865 or nerican Literature: 1865 to Present or nerican History to 1877* or nerican History Since 1877* or the Appreciation or usic Understanding and Appreciation tisfies the State of Missouri government requirement.	6
			ral and Social Sciences			
		nours fro	m at least two specific disc	•		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 110 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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 11 HISTORY 12 HISTORY 21 PHILOS 110 PHILOS 111 POL SCI 120 PSYCH 1101 ECON 1100 ECON 1200 Foreign Lang	200* or         Mo           10 or         Wo           5 or         Sel           5 or         Log           200* or         Am           I or         Get           or         Prir           or         Prir           puage         Ele	urly Western Civilization or oddern Western Civilization* or or oddern Western Civilization* or or oddern Western Civilization* or oddern World: Intro to Philosophy or gic and Reasoning: An Introduction or nerican Government* or oddern Government* or oddern Government or oddern Gov	6
	Hun	nanities	Arts, and Social Science Select 3 hours.	es		
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 Electiv	ve mu: phil	manities, Arts, Social Sciences Elective: Any history, art, isic, theater, English and technical communication, ilosophy, political science, psychology, economics, mology, or foreign language.	3
	No free electives applied to the degree.	0			aximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements Total Hou	39 29 urs 68		Gro	oup 2 Major Requirements oup 1 Core Requirements Total Hours* Tadvisor permission is required to transfer more than 65 credits toward the S&T logical Engineering degree.	38 26 64

	Mechanical Enginee	erin	g Grou	ıp 2 Major R	equirements	
	Illinois Central College		Semester		Missouri S&T	
ENGR 110 and ENGR 113*	Intro to Engineering (1) and Engineering Graphics (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4	<u>ocmester</u>	FR ENG 1100 and MECH ENG 1720*	Study and Careers in Engineering (1) and Design with Computer Application (3)  *The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ENGR 230 or CMPSC 125	Programming Engineering Applications or Computer Science I: Programming in C++	3		COMP SCI 1971, 1981	Intro to Programming Method and Lab (C++)	3
ENGR 240	Engineering Circuit Analysis	4		ELEC ENG 2800	Electrical Circuits	3
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
MATH 230	Linear Algebra	3		MATH 3108	Linear Algebra I Satisfies the Advanced Math/Statistics elective requirement.	3
	6 hours Behavioral ar *At least one course must be selected from HISTORY 120	nd Social 00, 1300, Huma	Sciences fron 1310, or POL Inities and F	•	lines.	
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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 m at least two	al Sciences o specific disciplines.		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 111 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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
	Hum		Arts, and Se Select 3 hour	ocial Sciences 's.		
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	42			Group 2 Major Requirements	42
	Group 1 Core Requirements  Total Hou	29 rs 71			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.	26 68

	Metallurgical Enginee	erin	g Gro	oup 2 Major I	Requirements	
ENGR 110 and ENGR 113*	Illinois Central College Intro to Engineering (1) and Engineering Graphics (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4	Semeste	FR ENG 1100 and MECH ENG 1720*	Missouri S&T Study and Careers in Engineering (1) and Design with Computer Application (3)  *The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132				CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHEM 132	General Chemistry	4		CHEM 1320, 1510"	*CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 220 or ENGR 240 or PHYS 214	Organic Chemistry (5) or Engineering Circuit Analysis (4) or Engineering Physics: Modern Physics (2)	3		CHEM 2210 or EE 2800 or PHYSICS 2311	Organic Chemistry I or Electrical Circuits or Modern Physics I Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.	3
	From the options lis 6 hours Humanities a	ted in end Fine Social 1, 1300,	each group be Arts from at l Sciences from , 1310, or PO	•	ude and ines.	
			anities and F			
LIT 212 or LIT 213 or LIT 215 or LIT 216 or <b>HIST 201*</b> or <b>HIST 202*</b> or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation Satisfies the State of Missouri government requirement.	urs tro	m at least tw	o specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* 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
				al Sciences		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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 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
	Huma		, <b>Arts, and S</b> Select 3 hoυ	ocial Sciences Irs.		
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	3			Maximum Free Electives	3
	Group 2 Major Requirements	42			Group 2 Major Requirements	42
	Group 1 Core Requirements	29			Group 1 Core Requirements	26
	Total Hours	71			Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T  Metallurgical Engineering degree.	68

	Mining Engineeri	ng	Group	2 Major Red	quirements	
ENGR 110 and ENGR 113*	Illinois Central College Intro to Engineering (1) and Engineering Graphics (3) *The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 110 and MECH ENG 1720.	4	Semester	FR ENG 1100 and MECH ENG 1720*	Missouri S&T Study and Careers in Engineering (1) and Design with Computer Application (3) *The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 252	Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
EASC 116	Intro to Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	From the options li 6 hours Humanities	sted in and Fir nd Soci	each group be e Arts from at le al Sciences fron	eneral Education Requi elow, select 12 hours to inc east two specific disciplines n at least two specific discip L SCI 1200 to satisfy the S	clude s and olines.	
	Select 6 h		nanities and F om at least two	ine Arts o specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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 Socia			
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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.	ours in	om at least (WC	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 Total Hou	36 29			Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T  Mining Engineering degree.	35 26 61

	Nuclear Engineeri	ng	Group	2 Major Red	quirements	
ENGR 110 and ENGR 113*	Illinois Central College Intro to Engineering (1) and Engineering Graphics (3)  "The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MEOH ENG 1720.	4	Semeste	FR ENG 1100 and MECH ENG 1720*	Missouri S&T  Study and Careers in Engineering (1) and Design with Computer Application (3)  The combination of ENGR 110 and 113 is equivalent to the combination of FR Eng 1100 and MECH ENG 1720.	4
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice	3		ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130	General Chemistry	4		CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 230 or CMPSC 125	Programming Engineering Applications or Computer Science I: Programming in C++	3		COMP SCI 1971, 1981	Intro to Programming Method and Lab (C++) *CSOMP SCI 1570, 1580 will be substituted for COMP SCI 1971, 1981	3
MATH 230	Linear Algebra	3		MATH 3108	Linear Algebra	3
ENGR 251	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 253	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
ENGR 240	Engineering Circuit Analysis	4		EE 2800	Electrical Circuits	3
PHYS 214	Engineering Physics: Modern Physics	3		PHYSICS 2311  Seneral Education Requir	Modern Physics	3
	6 hours Humanities	and Fin d Socia	e Arts from at Il Sciences fro	pelow, select 15 hours to incleast two specific disciplines on at least two specific disciplines on SCI 1200 to satisfy the SC	and lines.	
		Hum	anities and l	Fine Arts		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	Select 6 h British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.	ours fro	om at least tw	vo specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 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
				ial Sciences		
		ours fro	om at least tw	vo specific disciplines.		
ECON 111 or ECON 110	Principles of Microeconomics or Principles of Macroeconomics	3		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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
	Hum	anities	s, Arts, and S Select 3 hou	Social Sciences urs.		
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 Group 2 Major Requirements Group 1 Core Requirements Total Hou	0 45 29 rs 74			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  Nuclear Engineering degree.	0 45 26 71

	Petroleum En	gineeri	ing	Group 2 Major Re	quirements	
	Illinois Central College			<u>Semester</u>	Missouri S&T	
ENGL 111 or COMM 110	Composition II or Communication: Process and Practice		3	ENGLISH 1160 or SPMS 11850	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 130 CMPSC 212 or	General Chemistry CSII: Advanced programming in C++ or		4	CHEM 1310, 1319 COMP SCI 1500	General Chemistry I and Lab Computational Problem Solving	5 3
CMPSC 235 EASC 116	CS III: Advanced Programming in JAVA Intro to Geology		4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENGR 251	Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 252	Dynamics		3	MECH ENG 2350	Engineering Mechanics-Statics  Engineering Mechanics-Dynamics	2
ENGR 253	Mechanics of Materials		3	CIV ENG 2330	Mechanics of Materials	3
LINGIN 200		Arts and S		Sciences General Education Require		3
	From th	e options liste Humanities and ehavioral and S	d in ea d Fine A Social S	ach group below, select 15 hours to includ Arts from at least two specific disciplines al Sciences from at least two specific disciplin	de nd nes.	
	At least one course must be selected from Hi			nities and Fine Arts	tte of Missouri government requirement.	
				at least two specific disciplines.		
LIT 212 or LIT 213 or LIT 215 or LIT 216 or HIST 201* or HIST 202* or ART 110 or MUS 150	British Literature: Beginnings to 1800 or English Literature 1800 to present or American Literature Beginning to 1865 or American Literature 1865 to Present or American History to 1877* or American 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 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 Social Sciences		
HIST 117 or HIST 118* or GEOG 116 or PHIL 110 or PHIL 111 or POLSC 115* or PSY 110 or ECON 111 or ECON 110 or Foreign Language	Early Western Civilization or  Modern Western Civilization* or Geography of the Developing World or Intro to Philosophy or 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.	Select 6 hour	rs from	n at least two specific disciplines.  HISTORY 1100 or  HISTORY 1200* or  HISTORY 2110 or  PHILOS 1105 or  PHILOS 1115 or  POL SCI 1200* or  PSYCH 1101 or  ECON 1100 or  ECON 1200 or  Foreign Language	Early Western Civilization or  Modern Western Civilization* or  World Regional Geography or  Self and World: Intro to Philosophy or  Logic and Reasoning: An Introduction or  American Government*or  General Psychology or  Principles of Microeconomics or  Principles of Macroeconomics or  Elementary or Intermediate Foreign Language  "Satisfies the State of Missouri government requirement.	6
		Human		Arts, and Social Sciences Select 3 hours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any h music, theater, English and technical communicati philosophy, political science, psychology, economi etymology, or foreign language.	on,	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 Hours	38 29 67		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.	37 26 63