Lewis and Clark Community College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2025

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

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

Group 1 - Core Requirements: All Majors Take All Courses

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

	Lewis and Clark Community College	9	Semester	Missouri S&T	
MATH 171	Calculus and Analytic Geometry I	5	MATH 1214	Calculus I Grade of C or better is required.	4
MATH 172	Calculus and Analytic Geometry II	5	MATH 1215	Calculus II Grade of C or better is required.	4
MATH 271	Calculus and Analytic Geometry III	4	MATH 2222	Calculus III Grade of C or better is required.	4
MATH 272	Differential Equations	3	MATH 3304	Elementary Differential Equations	3
PHYS 141	General Physics I	5	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHYS 142	General Physics II	5	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
ENGR 101	Engineering Orientation	1	FR ENG 1100	Study and Careers in Engineering and Computing	1
ENGL 131	First Year-English I	3	ENGLISH 1120	Exposition and Argumentation	3
		Total Hours 21			Total Hours 27

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

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

Aerospace Engineering

Architectural Engineering

Biomedical Engineering/Biomanufacturing or Biomaterials

Ceramic Engineering

Chemical Engineering and Biochemistry Emphasis

Civil Engineering

Computer Engineering

Electrical Engineering

Engineering Management

Environmental Engineering

Geological Engineering

Mechanical Engineering

Metallurgical Engineering

Mining Engineering

Nuclear Engineering

Petroleum Engineering

Engineering Major Requirements are detailed on the following pages.

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

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

	Aerospace Eng	ineerin	g G	roup 2 Major R	equirements	
	Lewis and Clark Community College		Sem	nester	Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or Technical Writing or Public Speaking	3	32	ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 141	General Chemistry I	5		CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CIS 235	C++ Programming	3		CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHYS 210	Engineering Circuit Analysis	3		ELEC ENG 2800	Electrical Circuits	3
PHYS 241	Applied Mechanics-Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Applied Mechanics - Dynamics	3		AERO ENG 2360	Dynamics	3
PHYS 246	Thermodynamics	3		MECH ENG 2519	Thermodynamics	3
PHYS 245	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
_					Linear Algebra I	
MATH 274	Linear Algebra	3		MATH 3108	Satisfies the Advanced Math/Comp Sci elective requirement.	3
Ethics	Ethics Elective any engineering, business, bio, social ethics approved by advisor	3		Ethics	Ethics Elective any engineering, business, bio, social ethics approved by advisor	3
	6 hours Hu	manities and Findayioral and Social ORY 1200, 1300	e Arts fro Il Science I, 1310 ,	roup below, select 15 hours to inclom at least two specific disciplines sees from at least two specific disciplor POL SCI 1200 to satisfy the S and Fine Arts	and lines.	
	S			ast two specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music '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
				Social Sciences		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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		ast two specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
				and Social Sciences 3 hours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any hist music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.			HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	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
		otal Hours 78			Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	

	Architectural Er	ngineerii	ng Gro	up 2 Major	Requirements	
	Lewis and Clark Community College		Semester		Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
CHEM 141	General Chemistry I	5		CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PHYS 241	Applied Mechanics-Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Applied Mechanics - Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
PHYS 246	Thermodynamics	3		MECH ENG 2519*	Thermodynamics* *Will be substituted for MECH ENG 2527.	3
PHYS 245	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
PHSC 145	Intro Geology & Physical Geography	3		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	6 hours Be *At least one course must be selected from HIS	havioral and Socia TORY 1200, 1300 Hum	I Sciences from I, 1310, or POL anities and Fi	ine Arts	iplines.	
LITT 044 an		Select 6 hours fro	om at least two	specific disciplines.	Deitich Literature I. The Deniminate to 1000 on	
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music '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
		Behavio	ral and Socia	I Sciences		
		s from at least tw	o specific disc	iplines to include HISTC		
HIST 132*	Western Civilization II* *Satisfies the State of Missouri government requirement.	3		HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Intro to Philosophy or Fundamentals of Logic Reasoning 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		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
			, Arts, and So RT 3203 regu	ocial Sciences		
ADCG 133	Intro to Architecture	3		ART 3203	Architectural Design I	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 38 31 Total Hours 69			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours'	0 37 27 * 64
					*S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.	

			ring-Biomanufa		
	Gr	oup 2 Majo	or Requirements		
	Lewis and Clark Community College	Se	mester	Missouri S&T	
SPCH 131	Public Speaking	3	SP&MS 1185	Principles of Speech	3
CHEM 141	General Chemistry I	5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CHEM 142	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHEM 261, 262	Organic Chemistry I and Lab	5	CHEM 2210, 2219	*CHEM 1510 is not a degree requirement, transfers as general elective credit. Organic Chemistry I and Lab	4
CHEM 263, 264 or	Organic Chemistry II and Lab (5) or	Ŭ	CHEM 2220, 2229 or	Organic Chemistry II and Lab or	-
BIOL 130 or BIOL 162	Fundamentals of Biological Science (4) or Human Inheritance (3)	3	BIO SCI 1113, 1219 or BIO SCI 2223	General Biology and Lab or General Genetics Applies to degree as Track Elective.	4
CIS 235	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)* Will be substituted for CS 1500.	3
PHYS 246	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
	Humanities,	Arts, and Social Scie	ences General Education Require	ements	
			group below, select 12 hours to incli		
	6 hours H		from at least two specific disciplines and Social Sciences.	and	
	*At least one course must be selected from HIS			tate of Missouri government requirement.	
			es and Fine Arts		
		Select 6 hours from at	least two specific disciplines.		
LITT 241 or LITT 242 or	British Literature I or British Literature II or		ENGLISH 1211 or ENGLISH 1212 or	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present	
LITT 235 or	American Literature I or		ENGLISH 1221 or	American Literature: 1600 to 1865 or	
LITT 236 or	American Literature II or		ENGLISH 1222 or	American Literature: 1865 to Present or	
HIST 231* or	American Republic: Beginnings-1877* or	6	HISTORY 1300* or	American History to 1877* or	6
HIST 232* or ART 141 or	American Nation: 1877-Present* or		HISTORY 1310* or ART 1180 or	American History Since 1877* or	
MUSI 130	History of Art I or Appreciation of Music		MUSIC 1150	Art Appreciation or Music Understanding and Appreciation	
	*Satisfies the State of Missouri government requirement.			*Satisfies the State of Missouri government requirement.	
			nd Social Sciences ct 3 hours.		
HIST 131 or	Western Civilization I or		HISTORY 1100 or	Early Western Civilization or	
HIST 132* or	Western Civilization II* or		HISTORY 1200* or	Modern Western Civilization* or	
GEOG 132 or POL SCI 131 * or	Geography by World Regions or American Government* or		HISTORY 2110 or POL SCI 1200* or	World Regional Geography or American Government* or	
PSYC 131 or	General Psychology or	3	PSYCH 1101 or	General Psychology or	3
ECON 152 or	Principles of Microeconomics or		ECON 1100 or	Principles of Microeconomics or	
ECON 151 or	Principles of Macroeconomics or		ECON 1200 or	Principles of Macroeconomics or	
Foreign Language	Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		Foreign Language	Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	
			s, and Social Sciences		
ENGL 137	Technical Writing	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	39		Group 2 Major Requirements	37
	Group 1 Core Requirements	31		Group 1 Core Requirements	27
		Total Hours 70		Total Hours* *S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	64

			ering-Biomate Requirements		
	Lewis and Clark Community College	Seme	ester	Missouri S&T	
SPCH 131	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 141	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 142	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 261, 262	Organic Chemistry I and Lab	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 263, 264	Organic Chemistry II and Lab	5	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIOL 130	Fundamentals of Biological Science	4	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
CIS 235	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)* Will be substituted for CS 1500.	3
PHYS 241	Applied Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 210	Engineering Circuit Analysis	3	ELEC ENG 2100*, 2101	Circuits I* (3) and Circuit Analysis Lab (1) *A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for ELEC ENG 2100. Applies to the degree as a Track Elective (Engineering).	4
	6 hours l	3 hours Behavioral a STORY 1200, 1300, 1310, o			
		Select 6 hours from at lea			
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music 'Satisfes 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
			Social Sciences		
HIST 131 or HIST 132* or GEOG 132 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions 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.	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
			ind Social Sciences 560 required.		
ENGL 137	Technical Writing	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	0 48 31 Total Hours 79		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 Biomedical Engineering degree.	0 45 27 5* 72

	Ceramic Engir	neering	Group	2 Major Re	quirements	
	Lewis and Clark Community College		Semester		Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
PHYS 241	Applied Mechanics-Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 245	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
CHEM 141	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 142	General Chemistry II	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 261	Organic Chemistry I	3		CHEM 2210	Organic Chemistry I (3) Will satisfy the advanced chemistry elective requirement.	3
PHYS 244	Intro to Modern Physics	3		PHYS 2305	Intro to Modern Physics	3
	From the c 6 hours Hu	options listed in manities and Fine avioral and Socia	each group belo e Arts from at lea Il Sciences from a	neral Education Requirements to incurs to incurs two specific disciplines at least two specific disciplines SCI 1200 to satisfy the S	lude and Jines.	
			anities and Fin	•		
	S	elect 6 hours fro	om at least two	specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music *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 Statisfies the State of Missouri government requirement.	6
		Behavio	ral and Social	Sciences		
		elect 6 hours fro		specific disciplines.		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization II* or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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		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 Soc Select 3 hours			
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.			HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	40 31 Total Hours 71			Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	38 27 65

		Chemical E	ngineering or		
	Chemical Engine	ering - Bioc	hemical Engine	ering Emphasis	
	G	roup 2 Majo	r Requirements	5	
	Lewis and Clark Community College		nester	Missouri S&T	
SPCH 131	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 141	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 142	General Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 261, 262	Organic Chemistry I and Lab	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 263, 264	Organic Chemistry II and Lab	5	CHEM 2220, 2229*	Organic Chemistry II (3) and Lab* (1) CHEM 2220 applies to the degree as 3 of the 9 required science elective credits (above). CHEM 2229 is not a degree requirement; transfers as general elective credit.	8
CIS 235	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)* Will be substituted for CS 1500.	3
PHYS 246	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	Humanities and Fine Arts fehavioral and Social Scients ISTORY 1200, 1300, 1310	group below, select 15 hours to inc from at least two specific disciplines acces from at least two specific disci to, or POL SCI 1200 to satisfy the s s and Fine Arts	s and plines.	
			east two specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music '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: 1805 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 3statisfies the State of Missouri government requirement.	6
			d Social Sciences		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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	east two specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			, and Social Sciences 3560 required.		
ENGL 137	Technical Writing	3	ENGLISH 3560	Technical Writing	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	44		Group 2 Major Requirements	44
	Group 1 Core Requirements	31 Total Hours 75		Group 1 Core Requirements Total Hours	27 * 71
		. Star Hours 10		*S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.	

	Civil Enginee	ering Gı	oup 2	Major Requ	uirements	
	Lewis and Clark Community College		Semester		Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
CHEM 141	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
PHSC 145	Intro Geology & Physical Geography	3		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
PHYS 241	Applied Mechanics-Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Applied Mechanics-Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
PHYS 245	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
	From the op 6 hours Hum	otions listed in e panities and Fine vioral and Social DRY 1200, 1300,	ach group be Arts from at le Sciences from 1310, or POL	•	clude s and olines.	
	Se		nities and Fi	ne Arts specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music *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
	S.a.		al and Socia			
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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		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
			Arts, and So Select 3 hour	ocial Sciences s.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	y, art, 3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements To	0 35 31 otal Hours 66			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *\$&T advisor permission is required to transfer more than 69 credits toward the \$&T Civil Engineering degree.	0 34 27 61

	Computer En	gineering	g Grou	p 2 Major R	equirements	
	Lewis and Clark Community College		Semeste	r	Missouri S&T	
SPCH 131	Public Speaking	3		SPMS 1185	Principles of Speech	3
CHEM 141	General Chemistry I	5		CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab	5
CIS 235	C++ Programming	3		CS 1500	Computational Problem Solving	3
PHYS 241 or PHYS 242 or PHYS 246 or PHYS 244 or CHEM 261	Applied Mechanics-Statics or Applied Mechanics-Dynamics or Thermodynamics or Intro to Modern Physics or Organic Chemistry I	3		CIV ENG 2200 or MECH ENG 2350 or MECH ENG 2519 or PHYSICS 2305 or CHEM 2210	Engineering Mechanics-Statics (3) or Engineering Mechanics-Dynamics (2) or Thermodynamics (3) or Intro to Modern Physics (3) or Organic Chemistry I (4) Satisfies a required regineering/science elective.	3
PHYS 210	Engineering Circuit Analysis	3		EE 2100**	Circuits I **A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	4
MATH 274	Linear Algebra	3		MATH 3108 eneral Education Requ	Linear Algebra Satisfies a required math elective.	3
		Behavioral and Social ISTORY 1200, 130	al Sciences from 0, 1310, or PO	•	plines.	
			anities and F	ine Arts o specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music "satisfies the State of Missouri government requirement.	6	om at least tw	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *	6
			oral and Soci			
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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		o specific disciplines. HISTORY 1100 or HISTORY 2100* 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	s, Arts, and S Select 3 hou	ocial Sciences rs.		
ENGL 132 or ENGL 137	First-Year English II or Technical Writing	3		ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing	3
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	3 38 31 Total Hours 69		Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.	3 39 27 66

	Electrical Enginee	ring	Group 2 Majo	r Requirements	
Le	wis and Clark Community College		Semester	Missouri S&T	
SPCH 131	Public Speaking	3	SPMS 1185	Principles of Speech	3
	. •			Applies to degree as Gen Ed Communication requirement.	
CHEM 141 CIS 235	General Chemistry I C++ Programming	5 3	CHEM 1310, 13 CS 1500	19 General Chemistry I and Lab Computational Problem Solving	5 3
PHYS 241 and PHYS 242 BOTH of the courses above or ONE of the courses below. OR PHYS 246 or PHYS 244 or CHEM 261	Applied Mechanics-Statics (3) and Applied Mechanics-Dynamics (3) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Thermodynamics (3) or Intro to Modern Physics (3) Organic Chemistry I (4)	3	CIV ENG 2200 a MECH ENG 235 BOTH of the courses al the courses below. OR MECH ENG 251 PHYSICS 2311 CHEM 2210	nd Engineering Mechanics-Statics (3) and 0 Engineering Mechanics-Dynamics (2) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR 9 or Thermodynamics (3) or	3
PHYS 210	Engineering Circuit Analysis	3	ELEC ENG 2100	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 274	Linear Algebra	3	MATH 3108	Linear Algebra	3
	Humanities, Arts, and	Social	Sciences General Education	*	
	6 hours Humanities	and Fine d Social 0, 1300 ,	each group below, select 15 ho Arts from at least two specific d Sciences from at least two spec 1310, or POL SCI 1200 to sati inities and Fine Arts	isciplines and ific disciplines.	
	Select 6 h		n at least two specific disciplir	nes.	
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211: ENGLISH 1221: ENGLISH 1221: 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
			al and Social Sciences		
		ours from	n at least two specific disciplir		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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	HISTORY 1100 HISTORY 1200* HISTORY 2110 PHILOS 1105 or PHILOS 1115 or POL SCI 1200* PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	6
	Hum		Arts, and Social Sciences Select 3 hours.		
ENGL 132 or ENGL 137	First-Year English II or Technical Writing	3	ENGLISH 1160 ENGLISH 3560	or Writing and Research or Technical Writing	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 1 Core Requirements Total Hou	41 31	Liouros	Group 2 Major Requirements Group 1 Core Requirements Total Hours *S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.	42 27

	Engineering Ma	anagem	ent Gr	oup 2 Major	Requirements		
	Lewis and Clark Community College		Semest	ter	Missouri S&T		
SPCH 131	Public Speaking	:	3	SPMS 1185	Principles of Speech		3
CHEM 141	General Chemistry I		5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab		5
CIS 235	C++ Programming		3	CS 1971, 1981	Intro to Programming Method and Lab (C++)		3
PHYS 210	Engineering Circuit Analysis		3	ELEC ENG 2800	Electrical Circuits		3
PHYS 241	Applied Mechanics-Statics	;	3	CIV ENG 2200	Engineering Mechanics-Statics		3
PHYS 242	Applied Mechanics-Dynamics	:	3	MECH ENG 2350	Engineering Mechanics-Dynamics		2
PHYS 246	Thermodynamics	:	3	MECH ENG 2519*	Thermodynamics*		3
PHYS 245	Mechanics of Solids		3	CIV ENG 2210	*Will be substituted for MECH ENG 2527. Mechanics of Materials		3
	From t 6 hours	he options listed Humanities and F Behavioral and So	in each group ine Arts from a cial Sciences fi	General Education Requipelow, select 15 hours to in at least two specific discipline from at least two specific discipline from at least two specific disciplines.	nclude es and ciplines.		
	At least one course must be selected from t		manities and	•	State of Missouri government requirement.		
				two specific disciplines.			
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music *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
				cial Sciences			
			•	disciplines to include PSYO	CH 1101.		
PSYC 131	General Psychology	;	3	PSYCH 1101	General Psychology Required		3
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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	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 Select 3 h	Social Sciences			
ENGL 132 or ENGL 137	First-Year English II or Technical Writing		Select 3 no	ENGLISH 1160 or ENGLISH 3560	Writing and Research or Technical Writing		3
	No free electives applied to the degree.)	Electives	Maximum Free Electives		0
	Group 2 Major Requirements		1		Group 2 Major Requirements		40
	Group 1 Core Requirements	-	1		Group 1 Core Requirements		27
		Total Hours 7	2		*S&T advisor permission is required to transfer more than 61 credits towar Engineering Management degree.	Total Hours* rd the S&T	61

	Environmental En	gineer	ing Gro	oup 2 Major	Requirements	
	Lewis and Clark Community College		Semester		Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
PHSC 145	Intro Geology & Physical Geography	3		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 141	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 142	General Chemistry II	5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
BIOL 130 or BIOL 131	Fundamentals of Biological Science or Biology: A Contemporary Approach	4		BIO SCI 1113, 1219* or BIO SCI 1113	General Biology (3) and Lab* (1) or General Biology (3) *Bio Sci 1219 is not a degree requirement; transfers as general elective credit.	3
PHYS 241	Applied Mechanics-Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Applied Mechanics-Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
PHYS 245	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
	6 hours Beha *At least one course must be selected from HISTO	vioral and Socia DRY 1200, 1300 Hum	Sciences from , 1310, or POL anities and F	ine Arts	ines.	
		lect 6 hours fro	m at least two	specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music "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			
		rom at least tw	o specific disc	ciplines to include HISTOR		
HIST 132*	Western Civilization II* *Satisfies the State of Missouri government requirement.	3		HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Intro to Philosophy or Fundamentals of Logic Reasoning 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		PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements	41 31 otal Hours 72			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.	37 27 64

	Geological Engi		<u> </u>	•	
	Lewis and Clark Community College		<u>Semester</u>	Missouri S&T	
ENGL 137	Technical Writing	3	ENGLISH 3560	Technical Writing Applies to degree as Gen Ed Communication requirement.	3
CHEM 141	General Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CIS 235	C++ Programming	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHSC 145	Intro Geology & Physical Geography	3	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
PHYS 241	Applied Mechanics-Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Applied Mechanics-Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
PHYS 245	Mechanics of Solids	3	CIV ENG 2210 Sciences General Education Requ	Mechanics of Materials	3
	6 hours Hum	anities and Fine A vioral and Social S	ach group below, select 15 hours to in Arts from at least two specific discipline Sciences from at least two specific disc 1310, or POL SCI 1200 to satisfy the	es and iplines.	
	7.1.000.000.000.000.000.000.000.000.000.		nities and Fine Arts	outo or missouri government roquironioni.	
			at least two specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1220 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: 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
	Se		al and Social Sciences at least two specific disciplines.		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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	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.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	y, art, 3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements To	38 31 otal Hours 69		Group 2 Major Requirements Group 1 Core Requirements Total Hours* *\$&T advisor permission is required to transfer more than 65 credits toward the \$&T	37 27 64

	Mechanical En	gineer	ing	Group 2 Major Re	equirements	
	Lewis and Clark Community College			Semester	Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
CHEM 141	General Chemistry I		5	CHEM 1310*, 1319	General Chemistry I* and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CIS 235 PHYS 210 PHYS 241 PHYS 242	C++ Programming Engineering Circuit Analysis Applied Mechanics-Statics Applied Mechanics - Dynamics		3 3 3	CS 1971, 1981 ELEC ENG 2800 CIV ENG 2200 MECH ENG 2360	Intro to Programming Method and Lab (C++) Electrical Circuits Engineering Mechanics-Statics Dynamics	3 3 3
PHYS 246 PHYS 245	Thermodynamics Mechanics of Solids		3	MECH ENG 2519 CIV ENG 2210	Thermodynamics Mechanics of Materials	3
MATH 274	Linear Algebra		3	MATH 3108	Linear Algebra I Satisfies the Advanced Math/Statistics elective requirement.	3
	6 hours H	lumanities and havioral and S TORY 1200,	l Fine A Social S 1300, 1	•	and nes.	
				at least two specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music "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
		Beh	aviora	I and Social Sciences		
		Select 6 hour	s from	at least two specific disciplines.		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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	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 his music, theater, English and technical communicatio philosophy, political science, psychology, economic etymology, or foreign language.	n,	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements	Total Hours	0 44 31 75		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 Mechanical Engineering degree.	0 44 27 71

	Metallurgical En	gineer	rin	g Gro	oup 2 Major	Requirements	
	Lewis and Clark Community College			Semeste	r	Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
PHYS 241	Applied Mechanics-Statics		3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 245 CHEM 141	Mechanics of Solids General Chemistry I		3 5		CIV ENG 2210 CHEM 1310, 1319	Mechanics of Materials General Chemistry I and Lab	3 5
CHEM 142	General Chemistry II		5		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 261 or PHYS 210 or PHYS 244	Organic Chemistry or Engineering Circuit Analysis or Intro to Modern Physics		3		CHEM 2210 or EE 2800 or PHYSICS 2305	Organic Chemistry I (3) or Electrical Circuits (3) or Intro to Modern Physics (3) Not specifically required for the degree but will satisfy out-of-department technical elective requirement	3
	From the 6 hours H	options listed lumanities and havioral and S	d in ea	ach group b Arts from at Sciences fro	eneral Education Req elow, select 15 hours to least two specific disciplin m at least two specific dis L SCI 1200 to satisfy the	include es and ciplines.	
				nities and I	Fine Arts o specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music "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 Sciences o specific disciplines.		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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.	Select o nour	6	ii at least tw	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 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
		Humani		Arts, and S	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.	n,	3	ociect o not	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 Hours	3 40 31 71			Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements *S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.	3 38 27 65

	Mining Engir	neering	Group	2 Major Re	quirements		
	Lewis and Clark Community College		Semester		Missouri S&T		
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or Technical Writing or Public Speaking	3		ENGLISH 1160 or ENGLISH 3560 or SPMS 1185	Writing and Research or Technical Writing or Principles of Speech Apples to degree as Gen Ed Communication requirement.		3
CHEM 141	General Chemistry I	5		CHEM 1310, 1319	General Chemistry I and Lab		5
PHYS 241	Applied Mechanics-Statics	3		CIV ENG 2200	Engineering Mechanics-Statics		3
PHYS 242	Applied Mechanics-Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics		2
PHYS 246	Thermodynamics	3		MECH ENG 2519*	Thermodynamics* *Will be substituted for MECH ENG 2527.		3
PHYS 245	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials		3
PHSC 145	Intro Geology & Physical Geography	3		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology		3
	From the 6 hours H	e options listed in Humanities and Fin ehavioral and Socia STORY 1200, 1300	each group be e Arts from at le al Sciences fron D, 1310, or POL	•	nclude es and ciplines.		
			anities and F	ine Arts o specific disciplines.			
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music "Satisfies the State of Missouri government requirement.	6	on at load two	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300° or HISTORY 1310° or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1800 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation 'Satisfies the State of Missouri government requirement.		6
			oral and Socia				
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PPOL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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.	Select 6 hours fro	om at least two	o specific disciplines. 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
	No free electives applied to the degree.	0			Maximum Free Electives		0
	Group 2 Major Requirements	35			Group 2 Major Requirements		34
	Group 1 Core Requirements	Total Hours 66			Group 1 Core Requirements *S&T advisor permission is required to transfer more than 68 credits to Mining Engineering degree.	Total Hours* ward the S&T	27 61

	Nuclear Engin	eerin	g Grou	ıp 2 Major Re	quirements	
	Lewis and Clark Community College		Semes	ster	Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
CHEM 141 CIS 235 MATH 274	General Chemistry I C++ Programming Linear Algebra		5 3 3	CHEM 1310, 1319 CS 1971, 1981 MATH 3108	General Chemistry I and Lab Intro to Programming Method and Lab (C++) Linear Algebra	5 3 3
PHYS 241 PHYS 245 PHYS 210 PHYS 246	Applied Mechanics-Statics Mechanics of Solids Engineering Circuit Analysis Thermodynamics		3 3 3	CIV ENG 2200 CIV ENG 2210 ELEC ENG 2800 MECH ENG 2519	Engineering Mechanics-Statics Mechanics of Materials Electrical Circuits Thermodynamics	3 3 3
PHYS 244	From the op 6 hours Hum	otions listed nanities and	l in each grou Fine Arts from	PHYSICS 2305 s General Education Requi p below, select 15 hours to in at least two specific disciplines from at least two specific disci	clude s and	3
	*At least one course must be selected from HISTO		300, 1310, or umanities ar		State of Missouri government requirement.	
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	Sei British Literature I or British Literature II or American Literature I or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music "Satisfies the State of Missouri government requirement.			t two specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 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
	So			t two specific disciplines.		
ECON 152 or ECON 151	Principles of Microeconomics or Principles of Macroeconomics	lect o flours	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
		Humanit	ties, Arts, an Select 3	d Social Sciences hours.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	y, art,	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements To		0 44 31 75		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 44 27 71

	Petroleum Eng	jineeri	ng Grou	ıp 2 Major R	Requirements	
	Lewis and Clark Community College		Semeste	<u>r</u>	Missouri S&T	
ENGL 132 or ENGL 137 or SPCH 131	First-Year English II or 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
CHEM 141	General Chemistry I		5	CHEM 1310, 1319	General Chemistry I and Lab	5
PHSC 145	Intro Geology & Physical Geography		3	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
PHYS 241	Applied Mechanics-Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHYS 242	Applied Mechanics-Dynamics		3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
PHYS 245	Mechanics of Solids		3	CIV ENG 2210	Mechanics of Materials	3
PHYS 246	Thermodynamics		3	MECH ENG 2519*	Thermodynamics* *Will be substituted for MECH ENG 2527.	3
	6 hours H	umanities and havioral and So TORY 1200, 1	Fine Arts from at ocial Sciences fro		es and ciplines.	
	9			o specific disciplines.		
LITT 241 or LITT 242 or LITT 235 or LITT 236 or HIST 231* or HIST 232* or ART 141 or MUSI 130	British Literature I or British Literature II or American Literature II or American Literature II or American Republic: Beginnings-1877* or American Nation: 1877-Present* or History of Art I or Appreciation of Music 'satsfies 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
			vioral and Soci			
		Select 6 hours	from at least tw	o specific disciplines.		
HIST 131 or HIST 132* or GEOG 132 or PHIL 131 or PHIL 231 or POL SCI 131* or PSYC 131 or ECON 152 or ECON 151 or Foreign Language	Western Civilization I or Western Civilization II* or Geography by World Regions or Intro to Philosophy or Fundamentals of Logic Reasoning 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	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
		Humani	ties, Arts, and S Select 3 hou	Social Sciences urs.		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any his music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.	n,	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements		0 38 31 69		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