Principia 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.

	Ţ	ollow math plac	cemer	nt testing and	i advising recommendatio	ns at their college.	
	Principia College			Semester	,	Missouri S&T	
MATH 181 and MATH 182	Calculus I and Calculus II		8		MATH 1214 and MATH 1215	Calculus I and Calculus II The combination of Principia MATH 181 and 182 is equivalent to the combination of S&T MATH 1214 and 1215. A grade of C or better in both courses is required.	8
MATH 283	Multivariable Calculus		4		MATH 2222	Calculus III Grade of C or better is required.	4
MATH 284	Differential Equations		3		MATH 3304	Elementary Differential Equations	3
PHYS 201 and PHYS 202 and PHYS 203 and PHYS 204	Physics for Scientists and Engineers I (4) and Physics for Scientists and Engineers II (4) and Physics for Scientists and Engineers III (4) and Physics for Scientists and Engineers IV (5)		17		PHYSICS 1135 and PHYSICS 2135	Engineering Physics I and Engineering Physics II* *The combination of PHYS 201, 202, 203, and 204 is equivalent to the combination of PHYSICS 1135 and 2135. A grade of C or better in all courses is required.	8
ENGR 160	Intro to the Engineering Profession		2		FR ENG 1100	Study and Careers in Engineering and Computing	1
WRIT 151	Fundamentals of Academic Writing		3		ENGLISH 1120	Exposition and Argumentation	3
		Total Hours	37			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	neerinç	g Grou	p 2 Major Ro	equirements	
	Principia College		Semester	•	Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
CSCI 171 ENGR 206	Intro to Programming Electrical Engineering Circuit Analysis	4		COMP SCI 1971, 1981 ELEC ENG 2800	Intro to Programming Method and Lab (C++) Electrical Circuits	3
ENGR 201	Engineering Mechanics: Statics Mechanics of Materials	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203 MATH 273 or MATH 364	Mechanics of Materials Linear Algebra or Mathematical Statistics	3		CIV ENG 2210 MATH 3108 or STAT 3117*	Mechanics of Materials Linear Algebra I or Intro to Probability and Statistics* *Will be substituted for STAT 3115 to satisfy the Advanced Math/Comp Sci elective requirement.)	3
Ethics	Ethics Elective	3		Ethics	Ethics Elective	3
	Engineering, business, bio, social or other ethics approved by advisor.	uta and Casial	Saianasa Ca	eneral Education Require	Engineering, business, bio, social or other ethics approved by advisor.	
	6 hours Hur 6 hours Beha *At least one course must be selected from HISTO	nanities and Fine vioral and Social DRY 1200, 1300, Huma	Arts from at le Sciences from 1310, or POL nities and F	•	and lines.	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
	Se		ral and Socia	al Sciences o specific disciplines.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	ii at least two	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			Arts, and Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	ry, art, 3		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	41
	Group 1 Core Requirements	37 otal Hours 79			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.	27 * 68

	Architectural E	nginee	rin	g Gro	up 2 Major	Requirements	
	Principia College			Semester		Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking		3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I		4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
ENGR 201	Engineering Mechanics: Statics		3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics		3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials		3		CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical Statistics		3		STAT 3117*	Intro to Probability and Statistics *Will be substituted for STAT 3113.	3
GEOL 111	Introductory Geology		4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	*At least one course must be selected from HI	STORY 1200, 1 H	300, 1 umar	<mark>1310, or POL</mark> nities and F	•	State of Missouri government requirement.	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	Colour o Hour	6	at loudt two	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
		Beha	viora	al and Socia	I Sciences	3 11	
			S	Select 3 hour	S.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* 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 ECON 1100 or ECON 1200 or Foreign Language	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 Missourl 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	32 37 69			Group 2 Major Requirements Group 1 Core Requirements **St advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.	31 27 58

		_			-Biomanufac equirements	cturing	
	Principia College			Semeste		Missouri S&T	
MCOM 140	Public Speaking		3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I		4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	Fundamentals of Chemistry II		4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 262	Organic Chemistry I		4		CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHEM 263	Organic Chemistry II		4		CHEM 2220, 2229	Organic Chemistry II and Lab Applies to degree as Track Elective.	4
CSCI 171	Intro to Programming		3		COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for CS 1500	3
	6 hours I *At least one course must be selected from HI	Humanities and 3 hour STORY 1200, I	Fine / s Beha 1300, lumar	Arts from at I avioral and S 1310, or PO nities and F	ine Arts o specific disciplines.	nd ate of Missouri government requirement.	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music		6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
		Beh		al and Socia Select 3 hou	al Sciences rs.		
POLS 120* or ECON 203 or ECON 204 or Foreign Language	American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		3		POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	American Government*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		31			Group 2 Major Requirements	31
	Group 1 Core Requirements	Total Hours	37 68			Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	27 58

			\sim	ing-Biomate equirements	rials	
	Principia College		Semeste	<u>r</u>	Missouri S&T	
MCOM 140	Public Speaking	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	Fundamentals of Chemistry II	4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 262	Organic Chemistry I	4		CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHEM 263	Organic Chemistry II	4		CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
CSCI 171	Intro to Programming	3		COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for CS 1500	3
ENGR 201	Engineering Mechanics: Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 206	Electrical 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
	6 hours l	3 hours B STORY 1200, 130	ehavioral and S	L SCI 1200 to satisfy the Sta		
				o specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
		Behavi	oral and Soci	al Sciences	3 11	
			Select 3 hou	:=:		
POLS 120* or ECON 203 or ECON 204 or Foreign Language	American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3		POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	American Government*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	38 37 Total Hours 75	,		Group 2 Major Requirements Group 1 Core Requirements Total Hours*	38 27 * 65
					*S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.	

	Ceramic Engi	neerin	g Group	2 Major Rec	quirements	
	Principia College		Semeste	<u>r</u>	Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking		3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ENGR 201	Engineering Mechanics: Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203	Mechanics of Materials		3	CIV ENG 2210	Mechanics of Materials	3
CHEM 131	Fundamentals of Chemistry I		4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	Fundamentals of Chemistry II		4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 262	Organic Chemistry I		4	CHEM 2210	Organic Chemistry I (3) and Lab* (1) Satisfies the advanced chemistry elective requirement. *The lab is not a degree requirement, transfers as general elective credit.	3
MATH 364	Mathematical Statistics		3	STAT 3117	Intro to Probability and Statistics or any statistics course 3000-level or higher. Satisfies statistics elective requirement.	3
	6 hours Hu	imanities and lavioral and Sc FORY 1200, 1	Fine Arts from at locial Sciences from	•	and ines.	
	s			o specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music		6	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			vioral and Soci			
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* 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. PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanit	ies, Arts, and S Select 3 hou			
HASS Elective	Humanities, Arts, Social Sciences Elective: Any hist music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.	,	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.		0		Maximum Free Electives	0
	Group 2 Major Requirements		39		Group 2 Major Requirements	38
	Group 1 Core Requirements .	Total Hours	37 76		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.	27 65

	Chemical Engine		_	ineering or nical Enginee	ering Emphasis	
	G	roup 2 N	lajor R	equirements		
	Principia College		Semeste	<u>er</u>	Missouri S&T	
MCOM 140	Public Speaking	3		SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	Fundamentals of Chemistry II	4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 262	Organic Chemistry I	4		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	Organic Chemistry II	4		CHEM 2220, 2229*	Organic Chemistry II (3) and Lab* (1) CHEM 2220 applies to the degree as 3 of 9 required science elective credits. *CHEM 2229 is not a degree requirement; transfers as general elective credit.	8
CSCI 171	Intro to Programming	3		COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for CS 1500	3
MATH 364	Mathematical Statistics	3		STAT 3117*	Intro to Probability and Statistics *Will be substituted for STAT 3113.	3
		Behavioral and Soc	ial Sciences fro	least two specific disciplines a om at least two specific discipli DL SCI 1200 to satisfy the Sta	nes.	
	At least one course must be selected from the		manities and		ate of missouri government requirement.	
		Select 6 hours f	rom at least tw	vo specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			ioral and Soc			
		Select 6 hours f	rom at least tw	vo specific disciplines.		
PHIL 150 or	Intro to Philosophy or			PHILOS 1105 or	Self and World: Intro to Philosophy or	
PHIL 120 or POLS 120* or	Critical Thinking or American Government and Politics* or			PHILOS 1115 or POL SCI 1200* or	Logic and Reasoning: An Introduction or American Government*or	
ECON 203 or	Principles of Microeconomics or	6		ECON 1100 or	Principles of Microeconomics or	6
ECON 204 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.	
	No free electives applied to the degree.	C			Maximum Free Electives	0
	Group 2 Major Requirements	3			Group 2 Major Requirements	41
	Group 1 Core Requirements	3			Group 1 Core Requirements	27
		Total Hours 7	4 		Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.	68

	Civil Enginee	ering Grou	up 2 Major Requ	uirements	
	Principia College	Se	mester_	Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4	CHEM 1310, 1319	General Chemistry I and Lab	5
ERTH 111	Introductory Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical Statistics	3	STAT 3117*	Intro to Probability and Statistics *Will be substituted for STAT 3113.	3
	6 hours Hum	nanities and Fine Arts vioral and Social Scier DRY 1200, 1300, 1310		s and plines.	
	Se		es and Fine Arts least two specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			nd Social Sciences		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	least two specific disciplines. PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			s, and Social Sciences ct 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.		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 37 otal Hours 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 Civil Engineering degree.	0 37 27 64

	Computer Eng	jineering	Grou	p 2 Major Re	equirements	
	Principia College		Semester		Missouri S&T	
MCOM 140	Public Speaking	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
MATH 261	Discrete Math	3		CS 1200	Discrete Math for Computer Science	3
CSCI 171	Intro to Programming	4		COMP SCI 1971,1981*	Intro to Programming Methodology and Lab* *Will be substituted for CS 1500.	3
ENGR 201 or ENGR 202 or CHEM 262	Engineering Mechanics: Statics or Engineering Mechanics: Dynamics or Organic Chemistry I	3		CIV ENG 2200 or MECH ENG 2350 or CHEM 2210	Engineering Mechanics-Statics (3) or Engineering Mechanics-Dynamics (2) or Organic Chemistry I (3) Satisfies a required engineering/science elective.	3
ENGR 206	Electrical Engineering Circuit Analysis	4		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 273	Linear Algebra	3		MATH 3108	Linear Algebra Satisfies a required math elective.	3
MATH 364	Mathematical Statistics	3		STAT 3117	Intro to Probability and Statistics	3
	6 hours Be *At least one course must be selected from HIS	STORY 1200, 1300		•		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6	m at least two	specific disciplines. ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			ral and Socia			
		Select 6 hours fro	m at least two	specific disciplines.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6		PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanities	, Arts, and So Select 3 hour	ocial Sciences s.		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3		ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	3		Electives	Maximum Free Electives	3
	Group 2 Major Requirements Group 1 Core Requirements	45 37 Total Hours 82			Group 2 Major Requirements Group 1 Core Requirements Total Hours*	45 27 72
		. Stail Hours UZ			*S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.	, 2

	Electrical Eng	ineering	Group	o 2 Major Rec	quirements	
	Principia College		Semester		Missouri S&T	
MCOM 140	Public Speaking	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CSCI 171	Intro to Programming	4		COMP SCI 1971,1981*	Intro to Programming Methodology and Lab* *Will be substituted for CS 1500.	3
ENGR 201 and ENGR 202 BOTH of the courses above or ONE of the courses below. OR CHEM 262	Engineering Mechanics: Statics and Engineering Mechanics: Dynamics Both courses combined will satisfy a required engineering science elective OR Organic Chemistry I	. 3		CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR CHEM 2210, 2219*	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) Both courses combined will satisfy a required engineering science elective. OR Organic Chemistry I (3) and Lab* (1) *CHEM 2219 is not a degree requirement; transfers as general elective credit.	3
ENGR 206	Electrical Engineering Circuit Analysis	4		EE 2100**	Circuits 1 **A passing grade on the Missouri S&T EE Advancement Exam I is required to receive credit for EE 2100.	4
MATH 273	Linear Algebra	3		MATH 3108	Linear Algebra	3
MATH 364	Mathematical Statistics	3		STAT 3117	Intro to Probability and Statistics	3
		havioral and Social TORY 1200, 1300,	Sciences fron 1310, or POL	•	es.	
			nities and F			
ENIOL 050		Select 6 hours from	n at least two	specific disciplines.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			al and Socia			
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	Select 6 nours from	n at least two	o specific disciplines. PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			Arts, and Solect 3 hour	ocial Sciences		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3		ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements	6 45 37 Total Hours 82		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 Electrical Engineering degree.	6 45 27 72

	Engineering Ma	nagemen	t Group 2 Maj	or Requirements	
	Principia College		Semester	Missouri S&T	
MCOM 140	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4	CHEM 1310, 1319		5
CSCI 171	Intro to Programming	3	COMP SCI 1971,	1981 Intro to Programming Method and Lab (C++)	3
ENGR 206	Electrical Engineering Circuit Analysis	4	ELEC ENG 2800	Electrical Circuits	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical Statistics	3	STAT 3117	Intro to Probability and Statistics	3
		3 hours Behar TORY 1200, 1300, 1	uts from at least two specific dis- vioral and Social Sciences. 310, or POL SCI 1200 to satisf ities and Fine Arts	ciplines and fy the State of Missouri government requirement.	
	;	Select 6 hours from	at least two specific discipline	es.	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			I and Social Sciences elect 3 hours.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfes the State of Missouri government requirement.	3	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Principles of Microeconomics or Principles of Macroeconomics or	3
		,	Arts, and Social Sciences elect 3 hours.		
GEN 101 or WRIT 158	FYE: Integrated Learning or Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
	No free electives applied to the degree.	0	Electives	Maximum Free Electives	0
	Group 2 Major Requirements	38		Group 2 Major Requirements	37
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
		Total Hours 75		*S&T advisor permission is required to transfer more than 61 credits Engineering Management degree.	Total Hours* 61 toward the S&T

	Environmental E	ngineer	ing Gro	oup 2 Major	Requirements	
	Principia College		Semester	•	Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3		ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
ERTH 111	Introductory Geology	4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	Fundamentals of Chemistry II	4		CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
ENGR 201	Engineering Mechanics: Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials	3		CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical Statistics	3		STAT 3117*	Intro to Probability and Statistics *Will be substituted for STAT 3113.	3
	6 hours H	Humanities and Fin 3 hours Be STORY 1200, 1300 Hum	e Arts from at le havioral and So), 1310, or POL anities and F	SCI 1200 to satisfy the Sine Arts	s and	
ENOL OFO		Select 6 hours from	om at least two	specific disciplines.	Annual	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
		Behavio	oral and Socia			
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	Select 3 hour	S. PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 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	36			Group 2 Major Requirements	34
	Group 1 Core Requirements	Total Hours 73			Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.	27 61

	Geological Engi	neering (Group 2 Major R	equirements	
CHEM 131	Principia College	<u>Se</u>	mester CHEM 1310, 1319	Missouri S&T	-
CSCI 171	Fundamentals of Chemistry I Intro to Programming	3	COMP SCI 1971, 1981	General Chemistry I and Lab Intro to Programming Method and Lab (C++)	5
ERTH 111	Introductory Geology	4	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
MATH 364	Mathematical Statistics	3	STAT 3117* ences General Education Requir	Intro to Probability and Statistics *STAT 3113 or 3115 is preferred; STAT 3117 will be accepted.	3
	6 hours Hum	anities and Fine Arts rioral and Social Scie PRY 1200, 1300, 131	•	and lines.	
	Sel		es and Fine Arts least two specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
	Sel		nd Social Sciences least two specific disciplines.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
			s, and Social Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histor music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.		ect 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
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements To	38 37 tal Hours 75		Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 65 credits toward the S&T	37 27 64

	Mechanical Eng	jineering G	roup 2 Major R	equirements	
GEN 101 or WRIT 158 or MCOM 140	Principia College FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	<u>Sem</u>	ENGLISH 1160 or SPMS 1185	Missouri S&T Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131 CSCI 171 ENGR 206 ENGR 201 ENGR 203	Fundamentals of Chemistry I Intro to Programming Electrical Engineering Circuit Analysis Engineering Mechanics: Statics Mechanics of Materials	4 3 4 3 3	CHEM 1310*, 1319 COMP SCI 1971, 1981 ELEC ENG 2800 CIV ENG 2200 CIV ENG 2210	General Chemistry I and Lab "CHEM 1310 will be substituted for CHEM 1305. Intro to Programming Method and Lab (C++) Electrical Circuits Engineering Mechanics-Statics Mechanics of Materials	5 3 3 3
MATH 273 or MATH 364	Linear Algebra or Mathematical Statistics	3	MATH 3108 or STAT 3117*	Linear Algebra I or Intro to Probability and Statistics* *Will be substituted for STAT 3115 to satisfy the Advanced Math/Comp Sci elective requirement.)	3
	From the 6 hours Hu	options listed in each gr umanities and Fine Arts fro avioral and Social Scienc FORY 1200, 1300, 1310,	ces General Education Require oup below, select 15 hours to inclo- om at least two specific disciplines es from at least two specific discipl or POL SCI 1200 to satisfy the St and Fine Arts	ude and ines.	
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6 Behavioral and	ast two specific disciplines. ENGLISH 1221 or MUSIC 1150 Social Sciences ast two specific disciplines.	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 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.	, 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 37 Total Hours 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 38 27 * 65

	Metallurgical Enç	gineer	ing Gro	oup 2 Major F	Requirements	
	Principia College		Semester	•	Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking		3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
MATH 364	Mathematical Statistics		3	STAT 3117*	Intro to Probability and Statistics *Will be substituted for STAT 3113.	3
ENGR 201	Engineering Mechanics: Statics		3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 203	Mechanics of Materials		3	CIV ENG 2210	Mechanics of Materials	3
CHEM 131	Fundamentals of Chemistry I		4	CHEM 1310, 1319	General Chemistry I and Lab	5
CHEM 132	Fundamentals of Chemistry II		4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHEM 262 or ENGR 206	Organic Chemistry I or Electrical Engineering Circuit Analysis		4	CHEM 2210, 2219* or ELEC ENG 2800	Organic Chemistry I (3) and Lab* (1) or Electrical Circuits (3) or Not specifically required for the degree but satisfies out-of-department technical elective requirement "OrIEM 2219 is not a degree requirement, transfers as general elective credit.	3
	From the c 6 hours Hui	pptions listed manities and F avioral and So	in each group be ine Arts from at le cial Sciences fron	eneral Education Require elow, select 15 hours to inclu- east two specific disciplines a n at least two specific discipli _ SCI 1200 to satisfy the St	rde and nes.	
	Se		manities and F	ine Arts o specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music		6	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
	Se		vioral and Social	al Sciences o specific disciplines.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.		6	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
		Humanit	es, Arts, and Select 3 hou			
HASS Elective	Humanities, Arts, Social Sciences Elective: Any histo 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		12		Group 2 Major Requirements	41
	Group 1 Core Requirements	otal Hours	37 79		Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.	27 68

	Mining Eng	ineerinç	g Gr	roup 2	2 Major Requ	uirements	
GEN 101 or WRIT 158 or MCOM 140	Principia College FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking		3		ENGLISH 1160 or SPMS 1185	Missouri S&T Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
MATH 364	Mathematical Statistics		3		STAT 3117*	Intro to Probability and Statistics "Will be substituted for STAT 3113.	3
CHEM 131	Fundamentals of Chemistry I		4		CHEM 1310, 1319	General Chemistry I and Lab	5
ENGR 201	Engineering Mechanics: Statics		3		CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics		3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials		3		CIV ENG 2210	Mechanics of Materials	3
ERTH 111	Introductory Geology		4		GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENGL 256 or	6 hours	s Humanities and Behavioral and S HISTORY 1200, 1	Fine Art ocial Sc 1300, 13 Iumanit	ts from at leadiences from 8310, or POL 5410 ties and First least two	•	and nes.	
MUS 100	Intro to the Art of Music		6		MUSIC 1150	Music Understanding and Appreciation	6
				and Social	Sciences specific disciplines.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	SSISSI O HOUN	6		PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 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 Hours	35 37 72			Group 2 Major Requirements Group 1 Core Requirements Total Hours* *S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.	34 27 61

	Nuclear Engine	ering	Group	2 Major Rec	_l uirements	
	Principia College		Semester		Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	Comester	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131 CSCI 171 MATH 273 or	Fundamentals of Chemistry I Intro to Programming Linear Algebra or	4 3		CHEM 1310, 1319 COMP SCI 1971, 1981 MATH 3108 or	General Chemistry I and Lab Intro to Programming Method and Lab (C++) Linear Algebra or	5 3
MATH 360 ENGR 201	Numerical Analysis Engineering Mechanics: Statics	3		COMP SCI 3200 CIV ENG 2200	Intro to Numerical Methods	3
ENGR 203 MATH 364 ENGR 206	Mechanics of Materials Mathematical Statistics Electrical Engineering Circuit Analysis	3 3 4		CIV ENG 2210 STAT 3117 ELEC ENG 2800	Engineering Mechanics-Statics Mechanics of Materials Intro to Probability and Statistics Electrical Circuits	3 3 3
	6 hours Human	nities and Fine oral and Social XY 1200, 1300,	Arts from at le Sciences from 1310, or POL	•	and ines.	
	Sele		nities and Fi m at least two	ine Arts o specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6		ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
	Sele		ral and Socia m at least two	Il Sciences specific disciplines.		
ECON 203 or ECON 204	Principles of Microeconomics or Principles of Macroeconomics	3		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
PHIL 150 or PHIL 120 or POLS 120* or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3		PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government*or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
		Humanities,	Arts, and So Select 3 hour	ocial Sciences		
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	art, 3		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 Tota	0 41 37 al Hours 78			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 41 27 68

	Petroleum Engin	eering	Group 2 Major R	equirements	
	Principia College	5	<u>Semester</u>	Missouri S&T	
GEN 101 or WRIT 158 or MCOM 140	FYE: Integrated Learning or Reading and Writing Inquiry or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHEM 131	Fundamentals of Chemistry I	4	CHEM 1310, 1319	General Chemistry I and Lab	5
ERTH 111	Introductory Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
ENGR 201	Engineering Mechanics: Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
ENGR 202	Engineering Mechanics: Dynamics	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
ENGR 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	3
	6 hours Human	nities and Fine A oral and Social S Y 1200, 1300, 1	ch group below, select 15 hours to in- rts from at least two specific discipline- ciences from at least two specific disci- 310, or POL SCI 1200 to satisfy the ities and Fine Arts	s and iplines.	
	Sele		at least two specific disciplines.		
ENGL 256 or MUS 100	U.S. Literature to 1860 or Intro to the Art of Music	6	ENGLISH 1221 or MUSIC 1150	American Literature: 1600 to 1865 or Music Understanding and Appreciation	6
			I and Social Sciences		
		ct 6 hours from	at least two specific disciplines.		
PHIL 150 or PHIL 120 or POLS 120* or ECON 203 or ECON 204 or Foreign Language	Intro to Philosophy or Critical Thinking or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* 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 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		
	Home with a Arts Or del Original Flority	_	elect 3 hours.	Homewitter Arts Oscial Osianova Election April 1	
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	art, 3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements Group 1 Core Requirements Tota	35 37 al Hours 72		Group 2 Major Requirements Group 1 Core Requirements Total Hours* *SAT advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.	34 27 61