Principia College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2026

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.

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
Biomedical Engineering - 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
Semiconductor 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 2026.
Further information or updates are available from Missouri S&T Transfer Admissions at transfer.mst.edu, transfer@mst.edu, or 800-522-0938.

Aerospace Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
WRIT 158 or MDIA 140	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	Intro to Programming	4	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 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	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
Ethics	Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3	Ethics	Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**				
	Humanities and Fine Arts Select 6 hours from at least two specific disciplines.				
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
	Behavioral and Social Sciences Select 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
	Humanities, Arts, and Social Sciences Select 3 hours.				
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	42		Group 2 Major Requirements	41
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
	Total Hours	79		Total Hours*	68
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.	

Architectural Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 3 hours Humanities and Fine Arts and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 3 hours.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	3	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	3
Behavioral and Social Sciences Select 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 ***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 Missouri government requirement.**	3
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	32		Group 2 Major Requirements	31
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
	Total Hours	69		Total Hours*	58
				*S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.	

Biomedical Engineering-Biomanufacturing
Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
MDIA 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 COMP SCI 1500	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 3 hours.						
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	37			Group 1 Core Requirements	27
	Total Hours	68			Total Hours*	58
					*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	

Biomedical Engineering-Biomaterials
Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
MDIA 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 COMP SCI 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*	Circuits I* *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score, the course will transfer as ELEC ENG 2800. ELEC ENG 2100 applies to the degree as a Track Elective (Engineering).	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 3 hours.						
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	38			Group 2 Major Requirements	37
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	75			Total Hours*	64
					*S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.	

Ceramic Engineering Group 2 Major Requirements

	Principia College	Semester		Missouri S&T	
WRIT 158 or MDIA 140	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
CSCI 171	Intro to Programming	3	COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 1500	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
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**				
	Humanities and Fine Arts Select 6 hours from at least two specific disciplines.				
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
	Behavioral and Social Sciences Select 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
	Humanities, Arts, and Social Sciences Select 3 hours.				
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	38		Group 2 Major Requirements	38
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
	Total Hours	75		Total Hours*	65
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	

Chemical Engineering or
Chemical Engineering - Biochemical Engineering Emphasis
Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
MDIA 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.	4
CSCI 171	Intro to Programming	3	COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 1500	3
MATH 364	Mathematical Statistics	3	STAT 3117*	Intro to Probability and Statistics *Will be substituted for STAT 3113.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
No free electives applied to the degree.		0		Maximum Free Electives	0
Group 2 Major Requirements		37		Group 2 Major Requirements	37
Group 1 Core Requirements		37		Group 1 Core Requirements	27
	Total Hours	74		Total Hours*	64
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Chemical Engineering degree.	

Civil Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		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		Total Hours*	64
				*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.	

Computer Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
MDIA 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 *CHEM 1310 will be substituted for CHEM 1305.	5
MATH 261	Discrete Math	3	COMP SCI 1200	Discrete Math for Computer Science	3
CSCI 171	Intro to Programming	3	COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 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	ELEC ENG 2100*	Circuits I* *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score, the course will transfer as ELEC ENG 2800.	3
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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.					
WRIT 158	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	44		Group 2 Major Requirements	44
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
	Total Hours	81		Total Hours*	71
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.	

Electrical Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
MDIA 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 *CHEM 1310 will be substituted for CHEM 1305.	5
CSCI 171	Intro to Programming	3	COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 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	ELEC ENG 2100*	Circuits I* *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score, the course will transfer as ELEC ENG 2800.	3
MATH 273	Linear Algebra	3	MATH 3108	Linear Algebra	3
MATH 364	Mathematical Statistics	3	STAT 3117	Intro to Probability and Statistics	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.					
WRIT 158	Reading and Writing Inquiry	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	44		Group 2 Major Requirements	44
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
	Total Hours	81		Total Hours*	71
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.	

Engineering Management Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
MDIA 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	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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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 ***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 Missouri government requirement.**	3
Humanities, Arts, and Social Sciences Select 3 hours.						
WRIT 158	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			Total Hours*	64
					*S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.	

Environmental Engineering Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, or 1310 to satisfy the State of Missouri government requirement and a degree-specific gen ed requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines. At least one course in either the HFA or the BSS (below) section must be selected from HISTORY 1200, 1300, or 1310.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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 ***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 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	37			Group 1 Core Requirements	27
	Total Hours	73			Total Hours*	61
					*S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.	

Geological Engineering Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
CHEM 131	Fundamentals of Chemistry I	4		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	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*	Intro to Probability and Statistics *STAT 3113 or 3115 is preferred; STAT 3117 will be accepted.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	35			Group 2 Major Requirements	34
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	72			Total Hours*	61
					*S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.	

Mechanical Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		
WRIT 158 or MDIA 140	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	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 203	Mechanics of Materials	3	CIV ENG 2210	Mechanics of Materials	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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.					
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3	HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0		Maximum Free Electives	0
	Group 2 Major Requirements	38		Group 2 Major Requirements	38
	Group 1 Core Requirements	37		Group 1 Core Requirements	27
	Total Hours	75		Total Hours*	65
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.	

Metallurgical Engineering Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
CSCI 171	Intro to Programming	3		COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 1500	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 *CHEM 2219 is not a degree requirement; transfers as general elective credit.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	42			Group 2 Major Requirements	41
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	79			Total Hours*	68
					*S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.	

Mining Engineering Group 2 Major Requirements

Principia College		Semester	Missouri S&T		Semester
WRIT 158 or MDIA 140	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
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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**					
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.					
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6	ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
	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	37		Group 1 Core Requirements	27
	Total Hours	72		Total Hours*	61

*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.

Nuclear Engineering Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
CSCI 171	Intro to Programming	3		COMP SCI 1971, 1981	Intro to Programming Method and Lab (C++)	3
MATH 273 or MATH 360	Linear Algebra or Numerical Analysis	3		MATH 3108 or COMP SCI 3200	Linear Algebra or Intro to Numerical Methods	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
MATH 364	Mathematical Statistics	3		STAT 3117	Intro to Probability and Statistics	3
ENGR 206	Electrical Engineering Circuit Analysis	4		ELEC ENG 2800	Electrical Circuits	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include either ECON 1100 or 1200.						
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 Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	0			Maximum Free Electives	0
	Group 2 Major Requirements	41			Group 2 Major Requirements	41
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	78			Total Hours*	68

*S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.

Petroleum Engineering Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
WRIT 158	Reading and Writing Inquiry	3		ENGLISH 1160	Writing and Research Applies to degree as Gen Ed Communications 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
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
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	No free electives applied to the degree.	0			Maximum Free Electives	0
	Group 2 Major Requirements	35			Group 2 Major Requirements	34
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	72			Total Hours*	61
					*S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.	

Semiconductor Engineering-Device Engineering Emphasis
Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
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 206	Electrical Engineering Circuit Analysis	4		ELEC ENG 2100*	Circuits I* *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score, the course will transfer as ELEC ENG 2800.	3
MATH 364	Mathematical Statistics	3		STAT 3117	Intro to Probability and Statistics	3
CSCI 171	Intro to Programming	3		COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 1500	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	3			Maximum Free Electives	3
	Group 2 Major Requirements	39			Group 2 Major Requirements	38
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	76			Total Hours*	65
					*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	

Semiconductor Engineering-Process Engineering Emphasis
Group 2 Major Requirements

Principia College			Semester	Missouri S&T		
WRIT 158 or MDIA 140	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
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 206	Electrical Engineering Circuit Analysis	4		ELEC ENG 2100*	Circuits I* *A passing grade on the Missouri S&T ELEC ENG 2100 final exam is required to receive credit for ELEC ENG 2100. Without the required passing score, the course will transfer as ELEC ENG 2800.	3
MATH 364	Mathematical Statistics	3		STAT 3117*	Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
CSCI 171	Intro to Programming	3		COMP SCI 1971*, 1981*	Intro to Programming Method and Lab* (C++) *Course will be substituted for COMP SCI 1500	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENGL 256 or MUS 100 or Literature	U.S. Literature to 1860 or Intro to the Art of Music or Any literature with prerequisite of no more than English Composition I.	6		ENGLISH 1221 or MUSIC 1150 or Literature	American Literature: 1600 to 1865 or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120.	6
Behavioral and Social Sciences Select 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
Humanities, Arts, and Social Sciences Select 3 hours.						
HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3		HASS Elective	Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.	3
	Maximum Free Electives	3			Maximum Free Electives	3
	Group 2 Major Requirements	39			Group 2 Major Requirements	38
	Group 1 Core Requirements	37			Group 1 Core Requirements	27
	Total Hours	76			Total Hours*	65
					*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	