

Donnelly 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.

<u>Donnelly College</u>			<u>Semester</u>	<u>Missouri S&T</u>		
MT 231	Calculus and Analytic Geometry I	5		MATH 1214	Calculus I	Grade of C or better is required. 4
MT 232	Calculus and Analytic Geometry II	5		MATH 1215	Calculus II	Grade of C or better is required. 4
MT 233	Calculus and Analytic Geometry III	5		MATH 2222	Calculus III	Grade of C or better is required. 4
EN 111	English Composition I	3		ENGLISH 1120	Exposition and Argumentation	3
		Total Hours	18			Total Hours 15

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

Donnelly College		Semester	Missouri S&T		
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
PH 211 or PH 213	The Ethics of Everyday Life or General Ethics or other engineering, business, bio, social ethics approved by advisor	3	PHILOS 1130	How Should I Live? An Introduction to Ethics or other engineering, business, bio, social ethics approved by advisor	3
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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		26	Group 2 Major Requirements		26
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		44			Total Hours*
*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

Donnelly College		Semester		Missouri S&T	
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 3 hours Humanities and Fine Arts 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 3 hours.					
HS 121* or HS 122* or FA 105 or Literature	Early American History* or Late American History* or Appreciation of Music or Any literature with prerequisite of no more than English Composition I, *Satisfies the State of Missouri government requirement.	3	HISTORY 1300* or HISTORY 1310* or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	3
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines, to include HISTORY 1200.					
HS 102*	Modern World Civilizations* *Satisfies the State of Missouri Government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3
PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
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		20	Group 2 Major Requirements		20
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		38	Total Hours*		35
*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

Donnell College		Semester	Missouri S&T		
EN 140	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
BL 101, 101L	Principles of Biology and Lab	5	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective.	4
IS 315	Object - Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 3 hours.					
HS 101 or HS 102* or GE 101 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		25	Group 2 Major Requirements		24
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		43	Total Hours*		39
*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.					

Biomedical Engineering-Biomaterials Group 2 Major Requirements

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
BL 101, 101L	Principles of Biology and Lab	5	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
IS 315	Object - Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 3 hours.					
HS 101 or HS 102* or GE 101 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		25	Group 2 Major Requirements		24
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		43	Total Hours*		39
*S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.					

*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

Donnelly College		Semester	Missouri S&T		
EN 112 or EN 140	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IS 315	Object - Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		26	Group 2 Major Requirements		26
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		44	Total Hours*		41
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.					

*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 140	Public Speaking	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IS 315	Object - Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. <i>*Satisfies the State of Missouri government requirement.</i>	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. <i>*Satisfies the State of Missouri government requirement.</i>	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	6
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0
Group 2 Major Requirements		23	Group 2 Major Requirements		23
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		41			Total Hours* 38
*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

Donnelly College		Semester	Missouri S&T		
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		23	Group 2 Major Requirements		23
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		41	Total Hours*		70
*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>	
EN 140	Public Speaking	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.
IS 315	Object-Oriented Programming	3	COMP SCI 1500	Computational Problem Solving
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.				
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.				
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.
Humanities, Arts, and Social Sciences Select 3 hours.				
EN 112	English Composition II	3	ENGLISH 1160	Writing and Research
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives
	Group 2 Major Requirements	29		Group 2 Major Requirements
	Group 1 Core Requirements	18		Group 1 Core Requirements
	Total Hours	47		Total Hours*
				44
*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

Donnelly College		Semester	Missouri S&T		
EN 140	Public Speaking	3	SPMS 1185	Principles of Speech	3
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab	5
IS 315	Object-Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, Arts, and Social Sciences					
Select 3 hours.					
EN 112	English Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	32		Group 2 Major Requirements	32
	Group 1 Core Requirements	18		Group 1 Core Requirements	15
	Total Hours	50		Total Hours*	47
*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>			
EN 140	Public Speaking	3	SPMS 1185	Principles of Speech	3	
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
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.						
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. <i>*Satisfies the State of Missouri government requirement.</i>	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. <i>*Satisfies the State of Missouri government requirement.</i>	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines to include PSYCH 1101.						
PY 101	General Psychology	3	PSYCH 1101	General Psychology Required	3	
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <i>*Satisfies the State of Missouri government requirement.</i>	3	
Humanities, Arts, and Social Sciences						
Select 3 hours.						
EN 112	English Composition II	3	ENGLISH 1160	Writing and Research	3	
<i>No free electives applied to the degree.</i>		0	Electives	Maximum Free Electives	0	
Group 2 Major Requirements		23	Group 2 Major Requirements		23	
Group 1 Core Requirements		18	Group 1 Core Requirements		15	
Total Hours		41			Total Hours*	61
<i>*S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.</i>						

Environmental Engineering Group 2 Major Requirements

Donnelly College		Semester	Missouri S&T		
EN 112 or EN 110 or CH 101	English Composition I or Public Speaking College Chemistry I	3 5	ENGLISH 1100 or SCMG 1105 CHEM 1310, 1319	Writing and Research or Principles of Speech General Chemistry I and Lab	3 5
BL 101, 101L	Principles of Biology and Lab	5	BIO SCI 1113, 1219*	General Biology (3) and Lab* (1) *The lab 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 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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines..					
At least one course in either the HFA (above) or the BSS section must be selected from HISTORY 1200, 1300, or 1310.					
HS 102* or PH 210 or PH 100 or PY 101 or EC 202 or EC 201 or Foreign Language	Modern World Civilizations* or Intro to Philosophy or Logic or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1200* or PHILOS 1105 or PHILOS 1115 or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Modern Western Civilization* or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement and a degree-specific gen ed requirement.	6
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		25	Group 2 Major Requirements		23
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		43	Total Hours*		38
*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

Donnelly College		Semester	Missouri S&T		
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IS 315	Object-Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		23	Group 2 Major Requirements		23
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		41	Total Hours*		64
*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

Donnelly College		Semester	Missouri S&T		
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		23	Group 2 Major Requirements		23
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		41	Total Hours*		38
*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 112 or EN 140	English Composition II or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
Applies to degree as Gen Ed Communication requirement.					
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IS 315	Object-Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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
<i>No free electives applied to the degree.</i>		3	Maximum Free Electives		0
Group 2 Major Requirements		29	Group 2 Major Requirements		26
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		47	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

Donnelly College		Semester	Missouri S&T		
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
No free electives applied to the degree.		0	Maximum Free Electives		0
Group 2 Major Requirements		20	Group 2 Major Requirements		20
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		38	Total Hours*		35
*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

Donnelly College		Semester	Missouri S&T			
EN 112 or EN 140	English Composition II 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	
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
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.						
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences						
Select 6 hours from at least two specific disciplines to include either ECON 1100 or 1200.						
EC 202 or EC 201	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
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		23	Group 2 Major Requirements		23	
Group 1 Core Requirements		18	Group 1 Core Requirements		15	
Total Hours		41			Total Hours*	38
*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
IS 315	Object - Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		26	Group 2 Major Requirements		26
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		44			Total Hours*
					41
*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>			
EN 112 or EN 140	English Composition II 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	
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
IS 315	Object-Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.						
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6	
Behavioral and Social Sciences Select 6 hours from at least two specific disciplines.						
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	
Humanities, 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		29	Group 2 Major Requirements		29	
Group 1 Core Requirements		18	Group 1 Core Requirements		15	
Total Hours		47			Total Hours*	44
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.						

*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

<u>Donnelly College</u>		<u>Semester</u>	<u>Missouri S&T</u>		
EN 112 or EN 140	English Composition II 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
CH 101	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
IS 315	Object-Oriented Programming	3	COMP SCI 1500	Computational Problem Solving	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.					
HS 121* or HS 122* or FA 110 or FA 105 or Literature	Early American History* or Late American History* or Art in the World or Appreciation of Music or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or Literature	American History to 1877* or American History Since 1877* or Art Appreciation or Architectural Design I or Music Appreciation or Any literature with prerequisite of no more than ENGLISH 1120. *Satisfies the State of Missouri government requirement.	6
Behavioral and Social Sciences					
Select 6 hours from at least two specific disciplines.					
HS 101 or HS 102* or GE 101 or PH 210 or PH 100 or PS 111* or PY 101 or EC 202 or EC 201 or Foreign Language	Early World Civilizations or Modern World Civilizations* or World Geography or Intro to Philosophy or Logic or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	6
Humanities, 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		29	Group 2 Major Requirements		29
Group 1 Core Requirements		18	Group 1 Core Requirements		15
Total Hours		47	Total Hours*		44
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.					

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