

Hannibal-LaGrange University — 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.

Hannibal-LaGrange University			Semester	Missouri S&T		
MTH 185	Analytic Geometry and Calculus I	5		MATH 1214	Calculus I	Grade of C or better is required. 4
MTH 186	Calculus II	5		MATH 1215	Calculus II	Grade of C or better is required. 4
MTH 215	Calculus III	5		MATH 2222	Calculus III	Grade of C or better is required. 4
MTH 223	Differential Equations	3		MATH 3304	Elementary Differential Equations	3
ENG 104	English Composition I	3		ENGLISH 1120	Exposition and Argumentation	3
		Total Hours	21			Total Hours 18

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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <i>Applies to degree as Gen Ed Communication requirement.</i>	3
CHM 135	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab <i>*CHEM 1310 will be substituted for CHEM 1305.</i>	5
MTH 354	Linear Algebra	3	MATH 3108	Linear Algebra I <i>Satisfies the Advanced Math/Comp Sci elective requirement.</i>	3
Ethics	Ethics Elective <i>Engineering, business, bio, social or other ethics approved by advisor.</i>	3	Ethics	Ethics Elective <i>Engineering, business, bio, social or other ethics approved by advisor.</i>	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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. <i>*Satisfies the State of Missouri government requirement.</i>	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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
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>		0	Maximum Free Electives		0
Group 2 Major Requirements		29	Group 2 Major Requirements		29
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		50	Total Hours*		47
<i>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.</i>					

Architectural Engineering Group 2 Major Requirements

Hannibal-LaGrange University		Semester	Missouri S&T			
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHM 135	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		Behavioral and Social Sciences from at least two specific disciplines.		6 hours		
*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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	3	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Music Understanding and Appreciation or Theatre via Video 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.						
HST 163*	World History II (1600 to present)* or *Satisfies the State of Missouri Government requirement.	3	HISTORY 1200*	Modern Western Civilization* *Satisfies the State of Missouri Government requirement.	3	
PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		21	Group 1 Core Requirements		18	
Total Hours		41			Total Hours*	38
*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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
CAS 101	Intro to Speech Communication	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
CHM 335	Organic Chemistry I	5	CHEM 2210, 2219	Organic Chemistry I and Lab	4	
CHM 345 or BIO 105, 105L	Organic Chemistry II (5) or General Biology and Lab (4)	4	CHEM 2220, 2229 or BIO SCI 1113, 1219	Organic Chemistry II and Lab or General Biology and Lab Applies to degree as Track Elective.	4	
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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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 PHILOS 3223.						
PHL 373	Bioethics	3	PHILOS 3223	Bioethics	3	
HST 153 or HST 163* or GEO 103 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		34	Group 2 Major Requirements		31	
Group 1 Core Requirements		21	Group 1 Core Requirements		18	
Total Hours		55			Total Hours*	49
*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.						

Biomedical Engineering-Biomaterials Group 2 Major Requirements

Hannibal-LaGrange University		Semester	Missouri S&T		
CAS 101	Intro to Speech Communication	3	SP&MS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHM 335	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHM 345	Organic Chemistry II	5	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIO 105, 105L	General Biology and Lab	4	BIO SCI 1113*, 1219*	General Biology* and Lab* *Applies to degree as Track Elective (Non-engineering).	4
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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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 PHILOS 3223.					
PHL 373	Bioethics	3	PHILOS 3223	Bioethics	3
HST 153 or HST 163* or GEO 103 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		39	Group 2 Major Requirements		35
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		60			Total Hours* 53
*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

Hannibal-LaGrange University		Semester	Missouri S&T		
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2)	3
CHM 335	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) *Satisfies the advanced chemistry 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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		33	Group 2 Major Requirements		29
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		54	Total Hours*		47
*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

Hannibal-LaGrange University		Semester	Missouri S&T			
CAS 101	Intro to Speech Communication	3	SP&MS 1185	Principles of Speech	3	
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis* (2)	3	
				*CHEM 1510 is not a degree requirement; transfers as general elective credit.		
CHM 335	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I and Lab*	4	
				*CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits. See note below .		
CHM 345	Organic Chemistry II	5	CHEM 2220, 2229*	Organic Chemistry II (3) and Lab* (1)	3	
				CHEM 222 applies to the degree as 3 pf 0 required science elective credits. *CHEM 2229 is not a degree requirement; transfers as general elective credit.		
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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.						
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		35	Group 2 Major Requirements		30	
Group 1 Core Requirements		21	Group 1 Core Requirements		18	
Total Hours		56			Total Hours*	48
*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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech <i>Applies to degree as Gen Ed Communication requirement.</i>	3
CHM 135	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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. <i>*Satisfies the State of Missouri government requirement.</i>	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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
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>		0	Maximum Free Electives		0
Group 2 Major Requirements		23	Group 2 Major Requirements		23
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		44	Total Hours*		70
<i>*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.</i>					

Computer Engineering Group 2 Major Requirements

Hannibal-LaGrange University		Semester	Missouri S&T		
CAS 101	Intro to Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 335	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) CHEM 2210 satisfies a required engineering/science elective. *CHEM 2219 is not a degree requirement; transfers as general elective credit.	3
MAT 354	Linear Algebra	3	MATH 3108	Linear Algebra Satisfies a required math elective.	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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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.					
ENG 106	English Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	3	Electives	Maximum Free Electives	3
	Group 2 Major Requirements	34		Group 2 Major Requirements	32
	Group 1 Core Requirements	21		Group 1 Core Requirements	18
	Total Hours	55		Total Hours*	50
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.					

*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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
CAS 101	Intro to Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 335	Organic Chemistry I	5	CHEM 2210, 2219*	Organic Chemistry I (3) and Lab* (1) CHEM 2210 satisfies a required engineering/science elective. *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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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.					
ENG 106	English Composition II	3	ENGLISH 1160	Writing and Research	3
Electives	Maximum Free Electives	6	Electives	Maximum Free Electives	6
	Group 2 Major Requirements	34		Group 2 Major Requirements	32
	Group 1 Core Requirements	21		Group 1 Core Requirements	18
	Total Hours	55		Total Hours*	50
*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>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
CAS 101	Intro to Speech Communication	3	SPMS 1185	Principles of Speech	3	
CHM 135	College Chemistry I	5	CHEM 1310, 1319	Applies to degree as Gen Ed Communication requirement. 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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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 PSYCH 1101.						
PSY 113	General Psychology	3	PSYCH 1101	General Psychology Required	3	
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or Principles of Economics II (Micro) or Principles of Economics I (Macro) or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language	Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or Logic and Reasoning: An Introduction or American Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.	3	
Humanities, Arts, and Social Sciences						
Select 3 hours.						
ENG 106	English Composition II	3	ENGLISH 1160	Writing and Research	3	
No free electives applied to the degree.		0	Electives	Maximum Free Electives	0	
Group 2 Major Requirements		23	Group 2 Major Requirements		23	
Group 1 Core Requirements		21	Group 1 Core Requirements		18	
Total Hours		44			Total Hours*	61
*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

Hannibal-LaGrange University		Semester	Missouri S&T	
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement. 3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab 5
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit. 3
BIO 105	General Biology	3	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.				
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.				
HST 163* or PHL 213 or PHL 253 or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History II (1600 to present)* or *Intro to Philosophy or Intro to Logic or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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	
Group 2 Major Requirements		28	Group 2 Major Requirements	
Group 1 Core Requirements		21	Group 1 Core Requirements	
Total Hours		49	Total Hours*	
			44	

*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

Hannibal-LaGrange University		Semester	Missouri S&T	
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab
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.				
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.				
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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.				
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.
No free electives applied to the degree.		0	Maximum Free Electives	
Group 2 Major Requirements		20	Group 2 Major Requirements	
Group 1 Core Requirements		21	Group 1 Core Requirements	
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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHM 135	College Chemistry I	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5	
MTH 354	Linear Algebra	3	MATH 3108	Linear Algebra I Satisfies the Advanced Math/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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.						
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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>		0	Maximum Free Electives		0	
Group 2 Major Requirements		26	Group 2 Major Requirements		26	
Group 1 Core Requirements		21	Group 1 Core Requirements		18	
Total Hours		47			Total Hours*	44
*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

Hannibal-LaGrange University			Semester	Missouri S&T	
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
CHM 335	Organic Chemistry I	5	CHEM 2210	Organic Chemistry I Not specifically required for the degree but will satisfy out-of-department technical 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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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.		3	Maximum Free Electives		0
Group 2 Major Requirements		36	Group 2 Major Requirements		29
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		57	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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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
<i>No free electives applied to the degree.</i>		0	Maximum Free Electives		0
Group 2 Major Requirements		20	Group 2 Major Requirements		20
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		41	Total Hours*		38
*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

<u>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
MTH 354	Linear Algebra	3	MATH 3108	Linear Algebra	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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.						
ECO 223 or ECO 213	Principles of Economics II (Micro) or Principles of Economics I (Macro)	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to 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		26	Group 2 Major Requirements		26	
Group 1 Core Requirements		21	Group 1 Core Requirements		18	
Total Hours		47			Total Hours*	44
*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

Hannibal-LaGrange University		Semester	Missouri S&T		
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		21	Group 1 Core Requirements		18
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>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>			
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3	
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5	
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3	
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.						
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.						
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		31	Group 2 Major Requirements		29	
Group 1 Core Requirements		21	Group 1 Core Requirements		18	
Total Hours		52			Total Hours*	47
*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>Hannibal-LaGrange University</u>		<u>Semester</u>	<u>Missouri S&T</u>		
ENG 106 or CAS 101	English Composition II or Intro to Speech Communication	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHM 135	College Chemistry I	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHM 145	College Chemistry II	5	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
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.					
ENG 243 or ENG 233 or HST 213* or HST 223* or ART 103 or MUS 103 or THR 100 or Literature	British Literature or American Literature or US History I* or US History II* or Art Appreciation or Music Appreciation or Theatre Appreciation or Any literature with prerequisite of no more than English Composition I. *Satisfies the State of Missouri government requirement.	6	ENGLISH 1211 or ENGLISH 1221 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature	British Literature I: The Beginnings to 1800 or American Literature: 1600 to 1865 or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation or Theatre via Video 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.					
HST 153 or HST 163* or GEO 103 or PHL 213 or PHL 253 or PLSC 113* or PSY 113 or ECO 223 or ECO 213 or Foreign Language	World History I (up to 1600) or World History II (1600 to present)* or World Geography or Intro to Philosophy or Intro to Logic or Intro to Government* or General Psychology or Principles of Economics II (Micro) or Principles of Economics I (Macro) 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		31	Group 2 Major Requirements		29
Group 1 Core Requirements		21	Group 1 Core Requirements		18
Total Hours		52	Total Hours*		47
*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.					

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Ceramic Engineering degree.