William Jewell 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.

William Jewell College		Semester	Missouri S&T		
MAT 109 and MAT 200	Calculus I and Calculus II BOTH MAT 109 and MAT 200 must be taken to receive credit for S&T MATH 1214 and 1215.	8	MATH 1214 and MATH 1215	Calculus I and Calculus II Grade of C or better is required. BOTH MAT 109 and MAT 200 must be taken to receive credit for S&T MATH 1214 and 1215.	8
MAT 201 and MAT 302	Calculus III and Calculus IV BOTH MAT 201 and MAT 302 must be taken to receive credit for S&T MATH 2222.	8	MATH 2222	Calculus III Grade of C or better is required. BOTH MAT 201 and MAT 302 must be taken to receive credit for S&T MATH 2222.	4
MAT 202	Intro to Differential Equations	4	MATH 3304	Elementary Differential Equations	3
PHY 213, 213L	General Physics I and Lab	5	PHYSICS 1135	Engineering Physics I Grade of C or better is required.	4
PHY 214, 214L	General Physics II and Lab	5	PHYSICS 2135	Engineering Physics II Grade of C or better is required.	4
CTI 102	Written Communication	4	ENGLISH 1120	Exposition and Argumentation	3
	Total Hours	34		Total Hours	26

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

	William Jewell College	Semester		Missouri S&T	
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443	Classical Mechanics	4	AERO ENG 2360	Dynamics	3
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
MAT 281	Linear Algebra	4	MATH 3108	Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.	3
Ethics	Ethics Elective	3	Ethics	Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**				
	Humanities and Fine Arts Select 6 hours from at least two specific disciplines.				
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.				
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	40		Group 2 Major Requirements	38
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	74		Total Hours*	64
				*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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
MAT 301	Intro to Probability	4		STAT 3117*	Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 9 hours to include 3 hours Humanities and Fine Arts and 3 hours Behavioral and Social Sciences. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 3 hours.						
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	3		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** or Any literature with prerequisite of no more than ENGLISH 1120. ***Satisfies the State of Missouri government requirement.**	3
Behavioral and Social Sciences Select 3 hours.						
PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science 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	30			Group 2 Major Requirements	28
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	64			Total Hours*	54
					*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

William Jewell College		Semester	Missouri S&T	
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
CHE 301, 301L	Organic Chemistry I and Lab	5	CHEM 2210, 2219	Organic Chemistry I and Lab	4
CHE 301, 301L or BIO 234	Organic Chemistry I and Lab (5) or Genetics (4)	4	CHEM 2220, 2229 or BIO SCI 2223	Organic Chemistry II and Lab or General Genetics Applies to degree as Track Elective.	4
BIO 233, 233L	Cell and Molecular Biology and Lab	5	BIO SCI 2213, 2219	Cell Biology and Lab	4
BIO 243, 243L and BIO 250, 250L	Human Anatomy and Lab (5) and Human Physiology and Lab (5) *The combination of WJC BIO 243, 243L, 250, 250L is equivalent to the combination of Missouri S&T BIO SCI 3333, 3339, 3343, 3349. All four WJC courses must be taken to receive full transfer credit.	10	BIO SCI 3333, 3339* and BIO SCI 3343*, 3349*	Human Anatomy and Physiology I and Lab* or Human Anatomy and Physiology II* and Lab* *The combination of WJC BIO 243, 243L, 250, 250L is equivalent to the combination of Missouri S&T BIO SCI 3333, 3339, 3343, 3349. All four WJC courses must be taken to receive full transfer credit. BIO SCI 3339, 3343, 3349 are not Missouri S&T degree requirements, and will apply to degree totals as general elective credits per catalog requirements.	3
DTS 190	Intro to Computer Science	4	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.					
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.					
GEO 304 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3	HISTORY 2110 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	50		Group 2 Major Requirements	38
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	84		Total Hours*	64
				*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.	

Biomedical Engineering-Biomaterials
Group 2 Major Requirements

William Jewell College		Semester	Missouri S&T		Semester
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
CHE 301, 301L	Organic Chemistry I and Lab	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).	4
CHE 302, 302L	Organic Chemistry II and Lab	5	CHEM 2220, 2229*	Organic Chemistry II and Lab* CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).	4
BIO 233, 233L	Cell and Molecular Biology and Lab	5	BIO SCI 2213, 2219	Cell Biology and Lab	4
BIO 243, 243L and BIO 250, 250L	Human Anatomy and Lab (5) and Human Physiology and Lab (5) *The combination of WJC BIO 243, 243L, 250, 250L is equivalent to the combination of Missouri S&T BIO SCI 3333, 3339, 3343, 3349. All four WJC courses must be taken to receive full transfer credit.	10	BIO SCI 3333, 3339* and BIO SCI 3343*, 3349*	Human Anatomy and Physiology I and Lab* or Human Anatomy and Physiology II* and Lab* *The combination of WJC BIO 243, 243L, 250, 250L is equivalent to the combination of Missouri S&T BIO SCI 3333, 3339, 3343, 3349. All four WJC courses must be taken to receive full transfer credit. BIO SCI 3339, 3343, 3349 are not Missouri S&T degree requirements, and will apply to degree totals as general elective credits per catalog requirements.	3
DTS 190	Intro to Computer Science	4	COMP SCI 1500	Computational Problem Solving	3
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	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.					
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.					
GEO 304 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3	HISTORY 2110 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	54		Group 2 Major Requirements	41
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	88		Total Hours*	67
				*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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
DTS 190	Intro to Computer Science	4		COMP SCI 1500	Computational Problem Solving	3
MAT 305	Intro to Probability	4		STAT 3117	Intro to Probability and Statistics or any statistics course 3000-level or higher. Satisfies statistics elective requirement.	3
PHY 316	Modern Physics	4		PHYS 2305	Intro to Modern Physics	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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	46			Group 2 Major Requirements	41
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	80			Total Hours*	67
					*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

	William Jewell College	Semester		Missouri S&T	
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
CHE 301, 301L	Organic Chemistry I and Lab	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits See note below .	4
CHE 302 or CHE 406 or BIO 233, 233L or BIO 321, 321L	Organic Chemistry II (4) or Instrumental Analysis (4) or Cell and Molecular Biology and Lab (5) or Microbiology and Lab (5) Select up to 8 hours.	8	CHEM 2220 or CHEM 2510 or BIO SCI 2213, 2219 or BIO SCI 3313, 3319	Organic Chemistry II (3) or Analytical Chemistry (4) or Cell Biology and Lab (4) or Microbiology and Lab (5) Applies to the degree as required science elective credits. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab.	8
DTS 190	Intro to Computer Science	4	COMP SCI 1500	Computational Problem Solving	3
MAT 301	Intro to Probability	4	STAT 3117*	Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.				
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	46		Group 2 Major Requirements	41
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	80		Total Hours*	67
				*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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
MAT 301	Intro to Probability	4		STAT 3117*	Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	36			Group 2 Major Requirements	34
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	70			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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
DTS 190	Intro to Computer Science	4		COMP SCI 1500	Computational Problem Solving	3
EGR 230 and PHY 443 or EGR 231 BOTH of the courses above or ONE of the courses below. OR PHY 316 or CHE 301 or BIO 233	Statics (3) and Classical Mechanics (4) or Dynamics (3) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Modern Physics (4) or Organic Chemistry I (4) or Cell and Molecular Biology (4)	4		CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR PHYSICS 2305 or CHEM 2210 or BIO SCI 2213	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Intro to Modern Physics (3) or Organic Chemistry I (3) or Cell Biology (3) or	3
MAT 281	Linear Algebra	4		MATH 3108	Linear Algebra Will satisfy a required math elective.	3
MAT 305	Intro to Probability	4		STAT 3117	Intro to Probability and Statistics	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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
Electives	Maximum Free Electives	3		Electives	Maximum Free Electives	3
	Group 2 Major Requirements	39			Group 2 Major Requirements	35
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	73			Total Hours*	61
					*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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
DTS 190	Intro to Computer Science	4		COMP SCI 1500	Computational Problem Solving	3
EGR 230 and PHY 443 or EGR 231 BOTH of the courses above or ONE of the courses below. OR PHY 316 or CHE 301 or BIO 233	Statics (3) and Classical Mechanics (4) or Dynamics (3) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Modern Physics (4) or Organic Chemistry I (4) or Cell and Molecular Biology (4)	4		CIV ENG 2200 and MECH ENG 2350 BOTH of the courses above or ONE of the courses below. OR PHYSICS 2305 or CHEM 2210 or BIO SCI 2213	Engineering Mechanics-Statics (3) and Engineering Mechanics-Dynamics (2) Both courses above combined or any one of the following courses will satisfy a required engineering science elective. OR Intro to Modern Physics (3) or Organic Chemistry I (3) or Cell Biology (3) or	3
MAT 281	Linear Algebra	4		MATH 3108	Linear Algebra I	3
MAT 305	Intro to Probability	4		STAT 3117	Intro to Probability and Statistics	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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
Electives	Maximum Free Electives	6		Electives	Maximum Free Electives	6
	Group 2 Major Requirements	42			Group 2 Major Requirements	38
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	76			Total Hours*	64
					*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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310, 1319	General Chemistry I and Lab	5
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 445 or EGR 314	Classical Mechanics (4) or Dynamics (3)	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
MAT 305	Intro to Probability	4		STAT 3117	Intro to Probability and Statistics	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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 101	Intro to Psychological Science	3		PSYCH 1101	General Psychology Required	3
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3		ISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or ECON 1100 or ECON 1200 or Foreign Language	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
	No free electives applied to the degree.	0		Electives	Maximum Free Electives	0
	Group 2 Major Requirements	33			Group 2 Major Requirements	31
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	67			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

	William Jewell College	Semester		Missouri S&T	Semester
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122	General Chemistry II	4	CHEM 1320, 1510*	General Chemistry II (3) and Qualitative Analysis (2) *CHEM 1510 is not a degree requirement, transfers as general elective credit.	3
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
MAT 301	Intro to Probability	4	STAT 3117*	Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, or 1310 to satisfy the State of Missouri government requirement and a degree-specific gen ed requirement.**				
	Humanities and Fine Arts Select 6 hours from at least two specific disciplines. At least one course in either the HFA or the BSS (below) section must be selected from HISTORY 1200, 1300, or 1310.				
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.				
PHI 201 or PHI 331 or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Intro to Philosophy or Symbolic Logic or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	PHILOS 1105 or PHILOS 1115 or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	37		Group 2 Major Requirements	34
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	71		Total Hours*	60

*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

	William Jewell College	**Semester**		**Missouri S&T**	**Semester**
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3	MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
MAT 301	Intro to Probability	4	STAT 3117*	Intro to Probability and Statistics* *Will be substituted for STAT 3113.	3
	Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**				
	Humanities and Fine Arts Select 6 hours from at least two specific disciplines.				
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.				
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	31
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	67		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

William Jewell College		Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443	Classical Mechanics	4	AERO ENG 2360	Dynamics	3
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
MAT 281	Linear Algebra	4	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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.					
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	37		Group 2 Major Requirements	35
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	71		Total Hours*	61
				*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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
DTS 190	Intro to Computer Science	4		COMP SCI 1500	Computational Problem Solving	3
MAT 305	Intro to Probability	4		STAT 3117	Intro to Probability and Statistics or any statistics course 3000-level or higher. Satisfies statistics elective requirement.	3
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
CHE 301 or PHY 316	Organic Chemistry I or Modern Physics	4		CHEM 2210 or PHYSICS 2305	Organic Chemistry I (4) or Intro to Modern Physics (3) 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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	49			Group 2 Major Requirements	41
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	83			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

William Jewell College			Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3		SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
MAT 301	Intro to Probability	4		STAT 3117*	Intro to Probability and Statistics* *Will be substituted for the STAT 3113/3115 requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310, 1319	General Chemistry I and Lab	5
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	33			Group 2 Major Requirements	31
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	67			Total Hours*	57
					*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

William Jewell College		Semester	Missouri S&T		
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
MAT 281	Linear Algebra	4	MATH 3108	Linear Algebra I	3
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
MAT 301	Intro to Probability	4	STAT 3117	Intro to Probability and Statistics	3
PHY 316	Modern Physics	4	PHYSICS 2305	Intro to Modern Physics	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 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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 101 or ECO 202	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	3	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or Foreign Language	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	41		Group 2 Major Requirements	38
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	75		Total Hours*	64
				*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

William Jewell College			Semester	Missouri S&T		
CHE 121, 121L	General Chemistry I and Lab	5		CHEM 1310*, 1319	General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.	5
DTS 190	Intro to Computer Science	4		COMP SCI 1500	Computational Problem Solving	3
EGR 230	Statics	3		CIV ENG 2200	Engineering Mechanics-Statics	3
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3		MECH ENG 2350	Engineering Mechanics-Dynamics	2
EGR 233	Mechanics of Solids	3		CIV ENG 2210	Mechanics of Materials	3
MAT 301	Intro to Probability	4		STAT 3117	Intro to Probability and Statistics	3
Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. ***At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement.**						
Humanities and Fine Arts Select 6 hours from at least two specific disciplines.						
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6		ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.						
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6		HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	37			Group 2 Major Requirements	34
	Group 1 Core Requirements	34			Group 1 Core Requirements	26
	Total Hours	71			Total Hours*	60
					*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

	William Jewell College	Semester		Missouri S&T	
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement.	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
MAT 301	Intro to Probability	4	STAT 3117	Intro to Probability and Statistics	3
DTS 190	Intro to Computer Science	4	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.				
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.				
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	39		Group 2 Major Requirements	35
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	73		Total Hours*	61
				*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

	William Jewell College	Semester		Missouri S&T	Semester
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech Applies to degree as Gen Ed Communication requirement	3
CHE 121, 121L	General Chemistry I and Lab	5	CHEM 1310, 1319	General Chemistry I and Lab	5
CHE 122, 122L	General Chemistry II and Lab	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
MAT 301	Intro to Probability	4	STAT 3117	Intro to Probability and Statistics	3
DTS 190	Intro to Computer Science	4	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.				
ENG 340 or ENG 345 or ENG 350 or ENG 360 or **HIS 121*** or **HIS 122*** or Literature	Studies in English Literature I or Studies in English Literature II or Studies in U.S. Literature I or Great Works of World Literature or **Foundations of U.S. History*** or **The Modern United States*** or Any literature with prerequisite of no more than English Composition I. ***Satisfies the State of Missouri government requirement.**	6	ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1222 or ENGLISH 1231 or **HISTORY 1300*** or **HISTORY 1310*** or Literature	British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or **American History to 1877*** or **American History Since 1877*** 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.				
GEO 304 or PHI 201 or PHI 331 or **POL 150*** or PSY 101 or ECO 101 or ECO 202 or Foreign Language	Economic Geography or Intro to Philosophy or Symbolic Logic or **Intro to American Government*** or Intro to Psychological Science or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language ***Satisfies the State of Missouri government requirement.**	6	HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or **POL SCI 1200*** or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language	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	39		Group 2 Major Requirements	35
	Group 1 Core Requirements	34		Group 1 Core Requirements	26
	Total Hours	73		Total Hours*	61
				*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.	