

# William Jewell College — Missouri S&T

## General Engineering Transfer Guide

Effective as of Fall 2023

Complete Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice.

### Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>	
MAT 109	Calculus I	4	MATH 1214	Calculus I Grade of C or better is required. 4
MAT 200	Calculus II	4	MATH 1215	Calculus II Grade of C or better is required. 4
MAT 201 and MAT 302	Calculus III and Calculus IV <small>BOTH MAT 201 and MAT 302 must be taken to receive credit for S&amp;T MATH 2222.</small>	4	MATH 2222	Calculus III Grade of C or better is required. 4
MAT 202	Intro to Differential Equations	4	MATH 3304	Elementary Differential Equations 3
PHY 213	General Physics I and Lab	5	PHYSICS 1135	Engineering Physics I Grade of C or better is required. 4
PHY 214	General Physics II and Lab	5	PHYSICS 2135	Engineering Physics II Grade of C or better is required. 4
CHE 121	General Chemistry I and Lab	4	CHEM 1310, 1319	General Chemistry I and Lab 5
CTI 102	Written Communication	4	ENGLISH 1120	Exposition and Argumentation 3
ECO 101 or ECO 202	Principles of Microeconomics or Principles of Macroeconomics	4	ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics 3
Total Hours		38	Total Hours 34	

### 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**  
**Ceramic Engineering**  
**Chemical Engineering**  
**Chemical Engineering/Biochemistry Emphasis**  
**Civil Engineering**  
**Computer Engineering**  
**Electrical Engineering**

**Engineering Management**  
**Environmental Engineering**  
**Geological Engineering**  
**Mechanical Engineering**  
**Metallurgical Engineering**  
**Mining Engineering**  
**Nuclear Engineering**  
**Petroleum Engineering**

Engineering Major Requirements are detailed on the following pages.

**Free Electives:** Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

**Humanities/Social Science (HSS) Electives:** HSS electives may include any art, English and technical communication, etymology, foreign language, music, philosophy, speech and media studies, or theatre. Your campus may have additional acceptable options. Consult with your advisor or email [transfer@mst.edu](mailto:transfer@mst.edu) with questions. See Missouri S&T online catalog at <https://catalog.mst.edu/undergraduate/degreeprogramsandcourses/> for more information.

## Aerospace Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech	3
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 (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
	Literature Elective	3		Literature Elective	3
	Ethics Elective	3		Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	24
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	65		Total Hours*	58

\*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

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122	Foundations of U.S. History or The Modern United States	4	HISTORY 1300 or HISTORY 1310	American History to 1877 or American History since 1877	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
HSS Elective	Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	HSS Elective	Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	20		Group 2 Major Requirements	17
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	58		Total Hours*	51

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

## Ceramic Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	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 301	Organic Chemistry I	4	CHEM 2210	Organic Chemistry I (Will satisfy the advanced chemistry elective requirement.)	4
CHE 122	General Chemistry II	4	CHEM 1320	General Chemistry II	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
GEN 102 or COM 100 or HSS Elective	Written Communication or Fundamentals of Speech Communication or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Principles of Speech or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	32		Group 2 Major Requirements	28
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	70		Total Hours*	62

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

## Chemical Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CHE 122	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHE 301, 301L	Organic Chemistry I and Lab	5	CHEM 2210, 2219*	Organic Chemistry I and Lab* *The lab is not required for the degree, will transfer as 1 of the 9 science elective credits (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) (Will satisfy science elective requirement. Select up to 8 hours from these options.)	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) or (Will satisfy science elective requirement. Select up to 9 hours from these options or CHEM 2219 Organic Chemistry Lab.)	8
DTS 190	Intro to Computer Science	4	CS 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
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	30
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	72		Total Hours*	64

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

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

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
CHE 122	General Chemistry II	4	CHEM 1320	General Chemistry II	3
CHE 301, 301L	Organic Chemistry I and Lab	5	CHEM 2210, 2219	Organic Chemistry I and Lab	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) <small>(Will satisfy science elective requirement. Select up to 8 hours from these options.)</small>	8	CHEM 2220 or CHEM 2510 or BIO SCI 2213, 2219 or BIO SCI 3313, 3319	Organic Chemistry II or Analytical Chemistry (4) or Cell Biology and Lab (4) or Microbiology and Lab (5) <small>(Will satisfy science elective requirement. Select up to 9 hours from these options.)</small>	8
DTS 190	Intro to Computer Science	4	CS 1500	Computational Problem Solving	3
MAT 301	Intro to Probability	4	STAT 3117*	Intro to Probability and Statistics* <small>*Will be substituted for STAT 3113.</small>	3
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	30
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	72		Total Hours*	64

\*S&T advisor permission is required to transfer more than 70 credits toward the S&T Chemical/Biochemical Engineering degree.

## Civil Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	3	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	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* <small>*Will be substituted for STAT 3113.</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	23		Group 2 Major Requirements	20
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	61		Total Hours*	54

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

## Computer Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
DTS 190	Intro to Computer Science	4	CS 1500	Computational Problem Solving	3
EGR 230 or PHY 443 or EGR 231 or CHE 301 or BIO 233 or PHY 316	Statics (3) or Classical Mechanics (4) or Dynamics (3) or Organic Chemistry I (4) or Cell and Molecular Biology (4) or Modern Physics (4)	3	CIV ENG 2200 or MECH ENG 2350 or CHEM 2210 or BIO SCI 2213 or PHYSICS 2305	Engineering Mechanics-Statics (3) or Engineering Mechanics-Dynamics (2) or Organic Chemistry I (4) or Cell Biology (3) or Modern Physics (3)	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/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	27		Group 2 Major Requirements	24
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	65		Total Hours*	58

\*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>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
DTS 190	Intro to Computer Science	4	CS 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) 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/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	28		Group 2 Major Requirements	24
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	66		Total Hours*	58

\*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>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
PSY 101	Intro to Psychological Science	4	PSYCH 1101	General Psychology	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	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 305	Intro to Probability	4	STAT 3117	Intro to Probability and Statistics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	3		Maximum Free Electives	3
	Group 2 Major Requirements	29		Group 2 Major Requirements	26
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	67		Total Hours*	60

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

## Environmental Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122	Foundations of U.S. History or The Modern United States	4	HISTORY 1300 or HISTORY 1310	American History to 1877 or American History since 1877	3
CHE 122	General Chemistry II	4	CHEM 1320	General Chemistry II	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/Social Science Elective	3		*Will be substituted for STAT 3113. Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	23
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	64		Total Hours*	57

\*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

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	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
CHE 122 or CHE 2210	General Chemistry II or Organic Chemistry I or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.	4	CHEM 1320 or CHEM 2210	General Chemistry II or Organic Chemistry I or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.	3
MAT 301	Intro to Probability	4	STAT 3117	Intro to Probability and Statistics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	23
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	65		Total Hours*	57

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

## Mechanical Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	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	3
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
MAT 281	Linear Algebra	4	MATH 3108	Linear Algebra I (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
	Literature Elective	3		Literature Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	25		Group 2 Major Requirements	24
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	58

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

## Metallurgical Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	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 122	General Chemistry II	4	CHEM 1320	General Chemistry II	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)	3
				<i>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</i>	
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	5		Maximum Free Electives	3
	Group 2 Major Requirements	31		Group 2 Major Requirements	27
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	69		Total Hours*	61

\*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>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
MAT 301	Intro to Probability	4	STAT 3117*	Intro to Probability and Statistics*	3
EGR 230	Statics	3		<i>*Will be substituted for the STAT 3113/3115 requirement.</i>	
PHY 443 or EGR 231	Classical Mechanics (4) or Dynamics (3)	3	CIV ENG 2200*	Engineering Mechanics - Statics	3
EGR 233	Mechanics of Solids	3	MECH ENG 2350	Engineering Mechanics - Dynamics	2
	Humanities/Social Science Elective	3	CIV ENG 2210	Mechanics of Materials	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Humanities/Social Science Elective	3
	Group 2 Major Requirements	25		Maximum Free Electives	0
	Group 1 Core Requirements	38		Group 2 Major Requirements	23
	Total Hours	63		Group 1 Core Requirements	34
				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

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
COM 100	Fundamentals of Speech Communication	2	SPMS 1185	Principles of Speech	3
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	3
MAT 281	Linear Algebra	4	MATH 3108	Linear Algebra I	3
EGR 230	Statics	3	CIV ENG 2200	Engineering Mechanics - Statics	3
MAT 301	Intro to Probability	4	STAT 3117	Intro to Probability and Statistics	3
EGR 233	Mechanics of Solids	3	CIV ENG 2210	Mechanics of Materials	3
PHY 316	Modern Physics	4	PHYSICS 2305	Intro to Modern Physics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Maximum Free Electives	6		Maximum Free Electives	6
	Group 2 Major Requirements	36		Group 2 Major Requirements	33
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	74		Total Hours*	67

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

## Petroleum Engineering Group 2 Major Requirements

<u>William Jewell College</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIS 121 or HIS 122 or POL 150	Foundations of U.S. History or The Modern United States or Intro to American Government	4	HISTORY 1300 or HISTORY 1310 or POL SCI 1200	American History to 1877 or American History since 1877 or American Government	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
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	17
	Group 1 Core Requirements	38		Group 1 Core Requirements	34
	Total Hours	57		Total Hours*	51

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