## Northwest Missouri State University — Missouri S&T

**General Engineering** 

Transfer Guide Effective as of Fall 2025

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.

|                   | Northwest Missouri State University          | 9              | <u>Semester</u> | <u>Missouri S&amp;T</u>                                  |             |    |
|-------------------|--|----------------|-----------------|--|-------------|----|
| MATH 17120        | Calculus I                                   | 4              | MATH 1214       | Calculus I Grade of C or better is required.             |             | 4  |
| MATH 17121        | Calculus II                                  | 5              | MATH 1215       | Calculus II Grade of C or better is required.            |             | 4  |
| MATH 17321        | Multivariate Calculus                        | 4              | MATH 2222       | Calculus III Grade of C or better is required.           |             | 4  |
| MATH 17361        | Differential Equations                       | 3              | MATH 3304       | Elementary Differential Equations                        |             | 3  |
| PHYS 25120, 25121 | Fundamentals of Classical Physics I and Lab  | 5              | PHYSICS 1135    | Engineering Physics I Grade of C or better is required.  |             | 4  |
| PHYS 25230, 25231 | Fundamentals of Classical Physics II and Lab | 5              | PHYSICS 2135    | Engineering Physics II Grade of C or better is required. |             | 4  |
| ENGL 10111        | Composition I: Writing in Academic Contexts  | 3              | ENGLISH 1120    | Exposition and Argumentation                             |             | 3  |
|                   |  | Total Hours 29 |                 |  | 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 or 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** 

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.

This transfer guide is published by Missouri University of Science and Technology and is in effect as of Fall 2025.
Further information or updates are available from Missouri S&T Transfer Admissions at transfer.mst.edu, transfer@mst.edu, or 800-522-0938

|   | Aerospace Engir   | neering  | g Group 2   | Major R  | equirements   |                     |
|---|---|--|---|--|---|---------------------|
|   | Northwest Missouri State University   |  | Semester  |  | Missouri S&T  |                     |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   | 3  | ENGLI   | SH 1160 or<br>SH 3560 or<br>1185   | Writing and Research or Technical Writing or Principles of Speech Applies to degre as Gen Ed Communication requirement.   | 3                   |
| CHEM 24114, 24115   | General Chemistry I and Lab   | 4  | CHEM  | 1310*, 1319  | General Chemistry I and Lab  *CHEM 1310 will be substituted for CHEM 1305.  | 5                   |
| PHYS 25322<br>PHYS 25325  | Statics<br>Classical Mechanics I  | 3  |   | NG 2200<br>ENG 2360  | Engineering Mechanics-Statics Dynamics  | 3                   |
| MATH 17311  | Linear Algebra  | 3  | MATH  | 3108   | Linear Algebra I Satisfies the Advanced Math/Comp Sci elective requirement.   | 3                   |
| Ethics  | Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.   | 3  | Ethics  |  | Ethics Elective Engineering, business, bio, social or other ethics approved by advisor.   | 3                   |
|   | From the opt<br>6 hours Huma  | ions listed in e<br>nities and Fine<br>oral and Social | Sciences General E<br>each group below, sel<br>Arts from at least two<br>Sciences from at least | ect 15 hours to include specific disciplines to two specific disciplines   | ude<br>and<br>lines.  |                     |
|   | At least one course must be selected from his for   |  | inities and Fine Arts   | •  | tate of Missouri government requirement.  |                     |
|   | Sele  |  | m at least two specific   |  |   |                     |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement.   | 6  | ENGLI:<br>ENGLI:<br>ENGLI:<br>HISTO   |  | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                                      | 6                   |
|   |   | Behavio  | ral and Social Scien  | ces  |   |                     |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Sele Western Civ I: The Ancient World to 1500 MOTR WCIV 101 I Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics I or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | or<br>6  | HISTO HISTO PHILO: POL S: PSYCH ECON ECON Foreign   | RY 1100 or<br>RY 1200* or<br>RY 2110 or<br>S 1105 or<br>CI 1200* or<br>1 1101 or<br>1100 or<br>1200 or<br>1 Language | Early Western Civilization MOTR WCIV 101 Or  Modern Western Civilization* or  World Regional Geography MOTR GEOG 101 Or  Self and World: Intro to Philosophy 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                   |
|   |   |  | Arts, and Social Sc<br>Select 3 hours.  | ciences  |   |                     |
| HASS Elective   | Humanities, Arts, Social Sciences Elective: Any history,<br>music, theater, English and technical communication,<br>philosophy, political science, psychology, economics,<br>etymology, or foreign language.  | art,<br>3  | HASS  | Elective   | Humanities, Arts, Social Sciences Elective: Any history, art,<br>music, theater, English and technical communication,<br>philosophy, political science, psychology, economics,<br>etymology, or foreign language.   | 3                   |
|   | No free electives applied to the degree.<br>Group 2 Major Requirements<br>Group 1 Core Requirements<br>Tota   | 0<br>34<br>29<br>al Hours 63                           |   |  | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  "S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.  | 0<br>35<br>26<br>61 |

|   | Architectural Er  | ngineeri                            | ng Gro                                 | up 2 Major  | Requirements   |    |
|---|---|-------------------------------------|--|---|--|----|
|   | Northwest Missouri State University   |                                     | Semester                               | 1   | Missouri S&T   |    |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   | 3                                   |  | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or<br>Technical Writing or<br>Principles of Speech<br>Applies to degree as Gen Ed Communication requirement.  | 3  |
| CHEM 24114, 24115   | General Chemistry I and Lab   | 4                                   |  | CHEM 1310*, 1319  | General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.  | 5  |
| PHYS 25322  | Statics   | 3                                   |  | CIV ENG 2200  | Engineering Mechanics-Statics  | 3  |
| PHYS 25325  | Classical Mechanics I   | 3                                   |  | MECH ENG 2350   | Engineering Mechanics-Dynamics   | 2  |
| GEOL 27110, 27111   | General Geology and Lab   | 4                                   |  | GEOLOGY 1110<br>(GEO ENG 1150)  | Physical and Environmental Geology   | 3  |
|   |   |                                     |  | eneral Education Requ   |  |    |
|   | 6 hours H<br>6 hours Be   | Humanities and Firehavioral and Soc | ne Arts from at le<br>al Sciences fror | elow, select 12 hours to in<br>east two specific discipline<br>n at least two specific disc   | es and<br>ciplines.  |    |
|   | *At least one course must be selected from HIS  |                                     |  | •   | State of Missouri government requirement.  |    |
|   |   |                                     | nanities and F                         | ine Arts<br>o specific disciplines.   |  |    |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201 | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation  "satisfies the State of Missouri government requirement. | 6                                   | om at least two                        | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150 | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation "Satisfies the State of Missouri government requirement. | 6  |
|   |   |                                     | oral and Socia                         |   |  |    |
|   |   | rs from at least to                 | vo specific disc                       | ciplines to include HISTO   |  |    |
| HUM 26103*  | Western Civ II: 1500 to the Present*  *Satisfies the State of Missouri Government requirement.  | 3                                   |  | HISTORY 1200*   | Modern Western Civilization*  *Satisfies the State of Missouri Government requirement.   | 3  |
| PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language                            | Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.  | 3                                   |  | PHILOS 1105 or<br>POL SCI 1200* or<br>PSYCH 1101 or<br>ECON 1100 or<br>ECON 1200 or<br>Foreign Language                                       | Self and World: Intro to Philosophy 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  | 29                                  |  |   | Group 2 Major Requirements   | 28 |
|   | Group 1 Core Requirements   | Total Hours 58                      |  |   | Group 1 Core Requirements  Total H  *S&T advisor permission is required to transfer more than 69 credits toward the S& Architectural Engineering degree.   |    |

|  |   |                                     |   | _  | -Biomanufa<br>equirements   |  |                        |
|--|---|-------------------------------------|---|--|---|--|------------------------|
|  | Northwest Missouri State University   |                                     |   | Semester   |   | Missouri S&T   |                        |
| COM 29230  | Public Speaking   |                                     | 3   |  | SP&MS 1185  | Principles of Speech   | 3                      |
| CHEM 24114, 24115  | General Chemistry I and Lab   |                                     | 4   |  | CHEM 1310, 1319   | Applies to degree as Gen Ed Communication requirement.  General Chemistry I and Lab  | 5                      |
| CHEM 24116   | General Chemistry II  |                                     | 4   |  | CHEM 1320, 1510*  | General Chemistry II (3) and Qualitative Analysis (2)  | 3                      |
| CHEM 24342, 24343  | Organic Chemistry I and Lab   |                                     | 5   |  | CHEM 2210, 2219   | *CHEM 1510 is not a degree requirement, transfers as general elective credit.  Organic Chemistry I and Lab   | 4                      |
| BIOL 04102, 04103 or<br>BIOL 04350   | General Biology and Lab or<br>Genetics  |                                     | 4   |  | BIO SCI 1113, 1219 or<br>BIO SCI 2223   | General Biology and Lab or<br>General Genetics<br>Applies to degree as Track Elective.   | 4                      |
| BIOL 04310   | Cell Biology  |                                     | 4   |  | BIO SCI 2213, 2219  | Cell Biology and Lab   | 4                      |
| CSIS 44141 or<br>CSIS 44241  | Computer Programming I or<br>Computer Programming II  |                                     | 3   |  | CS 1500   | Computational Problem Solving  | 3                      |
|  |   | nanities and<br>3 hour<br>ORY 1200, | d Fine <i>A</i><br>s Beha<br><b>1300, 1</b> | Arts from at le<br>vioral and So<br>1310, or POL | •   | and  |                        |
|  | Sa  |                                     |   | ities and F                                      | ne Arts specific disciplines.   |  |                        |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201                        | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.  |                                     | 6   |  | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150 | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1800 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement. | 6                      |
|  |   | Beh                                 |   | and Socia<br>Select 3 hou                        | al Sciences   |  |                        |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV 10 Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 OF People and Cultures of the World MOTR GEOG 101 OF Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 1 Or                                | 3   | elect 3 HOU                                      | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language                    | Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.                                       | 3                      |
|  |   | Human                               |   | Arts, and So                                     | ocial Sciences<br>equired.  |  |                        |
| ENGL 10315   | Technical Writing   |                                     | 3   |  | ENGLISH 3560  | Technical Writing  | 3                      |
|  | No free electives applied to the degree.<br>Group 2 Major Requirements<br>Group 1 Core Requirements   | otal Hours                          | 0<br>39<br>29<br>68                         |  |   | Maximum Free Electives<br>Group 2 Major Requirements<br>Group 1 Core Requirements<br>Total Hours   | 0<br>38<br>26<br>5* 64 |
|  | 11  | nai riours                          |   |  |   | *S&T advisor permission is required to transfer more than 69 credit hours toward the degree.   | , 04                   |

|  |  |                            | $\sim$          | ring-Biomate<br>equirements   |   |                |
|--|--|----------------------------|-----------------|---|---|----------------|
|  | Northwest Missouri State University  |                            | Semeste         | er  | Missouri S&T  |                |
| COM 29230<br>CHEM 24114, 24115   | Public Speaking  General Chemistry I and Lab   | 3                          |                 | SP&MS 1185<br>CHEM 1310, 1319   | Principles of Speech Applies to degree as Gen Ed Communication requirement. General Chemistry I and Lab   | 3<br>5         |
| CHEM 24116   | 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              |
| CHEM 24342, 24343  | 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              |
| BIOL 04102, 04103  | General Biology and Lab  | 4                          |                 | BIO SCI 1113*, 1219*  | General Biology* and Lab*  *Applies to degree as Track Elective (Non-engineering).  | 4              |
| BIOL 04310   | Cell Biology   | 4                          |                 | BIO SCI 2213, 2219  | Cell Biology and Lab  | 4              |
| CSIS 44141 or<br>CSIS 44241  | Computer Programming I or<br>Computer Programming II   | 3                          |                 | CS 1500   | Computational Problem Solving   | 3              |
| PHYS 25322   | Statics  | 3                          |                 | CIV ENG 2200<br>Seneral Education Reguir  | Engineering Mechanics-Statics   | 3              |
|  | *At least one course must be selected from HISTO   | 3 hours B<br>ORY 1200, 130 | ehavioral and S | •   |   |                |
|  | Se   | lect 6 hours fi            | om at least tw  | vo specific disciplines.  |   |                |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201                        | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement.   | 6                          |                 | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150 | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation  *Satisfies the State of Missouri government requirement. | 6              |
|  |  | Behavi                     | oral and Soc    |   |   |                |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV 10  Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 1 or<br>3                  | Select 3 hou    | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language                    | Early Western Civilization or  Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement.                                       | 3              |
|  |  |                            | s, Arts, and S  | Social Sciences   |   |                |
| ENGL 10315   | Technical Writing  | 3                          |                 | ENGLISH 3560  | Technical Writing   | 3              |
|  | No free electives applied to the degree.   | 0                          |                 |   | Maximum Free Electives  | 0              |
|  | Group 2 Major Requirements<br>Group 1 Core Requirements<br>To  | 42<br>29<br>otal Hours 71  | )               |   | Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Biomedical Engineering degree.  | 41<br>26<br>67 |

|   | Ceramic Engir   | neering   | Group   | 2 Major Re  | equirements   |                     |
|---|---|---|---|---|---|---------------------|
|   | Northwest Missouri State University   |   | Semester  |   | Missouri S&T  |                     |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   | 3   |   | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.  | 3                   |
| PHYS 25322<br>CHEM 24114, 24115   | Statics<br>General Chemistry I and Lab  | 3 4   |   | CIV ENG 2200<br>CHEM 1310, 1319   | Engineering Mechanics-Statics<br>General Chemistry I and Lab  | 3<br>5              |
| CHEM 24116  | 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                   |
| CHEM 24342  | Organic Chemistry I   | 3   |   | CHEM 2210   | Organic Chemistry I Will satisfy the advanced chemistry elective requirement.   | 3                   |
|   | From the o<br>6 hours Hu<br>6 hours Beha  | options listed in<br>manities and Fir<br>avioral and Soci | each group be<br>le Arts from at le<br>al Sciences fron | eneral Education Requi<br>elow, select 15 hours to in-<br>east two specific disciplines<br>of at least two specific disci   | clude<br>s and<br>iplines.  |                     |
|   | *At least one course must be selected from HIST   |   | บ, างาบ, or POL<br>nanities and F                       | •   | State of Missouri government requirement.   |                     |
|   | Si  |   |   | specific disciplines.   |   |                     |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.  | 6   |   | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300° or<br>HISTORY 1310° or<br>ART 1180 or<br>MUSIC 1150                     | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfes the State of Missouri government requirement.                                       | 6                   |
|   |   |   | oral and Socia  |   |   |                     |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV 1 Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 OF People and Cultures of the World MOTR GEOG 101 OF Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | o1 or<br>6  |   | o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization MOTR WCIV 101 Or  Modern Western Civilization* or  World Regional Geography MOTR GEOG 101 Or  Self and World: Intro to Philosophy 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                   |
|   |   | Humanitie   | s, Arts, and Se<br>Select 3 hour                        | ocial Sciences  |   |                     |
| HASS Elective   | Humanities, Arts, Social Sciences Elective: Any histo<br>music, theater, English and technical communication,<br>philosophy, political science, psychology, economics,<br>etymology, or foreign language.   | 3   | Jelect 3 Houl   | 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.<br>Group 2 Major Requirements<br>Group 1 Core Requirements   | 0<br>32<br>29<br>otal Hours 61                            |   |   | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *\$&T advisor permission is required to transfer more than 68 credits toward the \$&T Ceramic Engineering degree.  | 0<br>32<br>26<br>58 |

|   |  |                          |                                 | neering or  |   |                     |
|---|--|--------------------------|---------------------------------|---|---|---------------------|
|   | Chemical Engineering   |                          |                                 |   | ering Emphasis  |                     |
|   | Group  | 2 M                      | ajor Re                         | equirements   |   |                     |
|   | Northwest Missouri State University  |                          | Semeste                         | <u>r</u>  | Missouri S&T  |                     |
| COM 29230   | Public Speaking  | 3                        |                                 | SP&MS 1185  | Principles of Speech Applies to degree as Gen Ed Communication requirement.   | 3                   |
| CHEM 24114, 24115   | General Chemistry I and Lab  | 4                        |                                 | CHEM 1310, 1319   | General Chemistry I and Lab   | 5                   |
| CHEM 24116  | 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                   |
| CHEM 24342, 24343   | 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                   |
| CHEM 24344 or<br>BIOL 04140   | Organic Chemistry II (3) or<br>General Microbiology (4)<br>Will satisfy science elective requirement. Select up to 8 hours from these options.   | 8                        |                                 | CHEM 2220 or<br>BIO SCI 3313, 3319  | Organic Chemistry II (3) or<br>Microbiology and Lab (5)<br>Will satisfy science elective requirement. Select up to 9 hours from these options or CHEM<br>2219 Organic Chemistry Lab.  | 8                   |
| CSIS 44141 or<br>CSIS 44241   | Computer Programming I or<br>Computer Programming II   | 3                        |                                 | CS 1500   | Computational Problem Solving   | 3                   |
|   |  | d Social                 | Sciences G                      | eneral Education Require  | ments   |                     |
|   | 6 hours Humanities   | s and Fine<br>and Social | Arts from at I<br>Sciences from | elow, select 15 hours to include ast two specific disciplines at most least two specific disciplines.   | and<br>nes.   |                     |
|   | Actions one course must be selected from the Forth 12  |                          | nities and F                    | •   | ate of missouri government requirement.   |                     |
|   | Select 6   |                          |                                 | o specific disciplines.   |   |                     |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement.  | 6                        |                                 | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150 | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation 'Satisfies the State of Missouri government requirement.                              | 6                   |
|   |  | Behavio                  | ral and Soci                    | al Sciences   | •   |                     |
|   |  | hours fro                | m at least tw                   | o specific disciplines.   |   |                     |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV 101 or Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to Philosophy or General Psychology or General Economics II or General Economics II or General Economics I or Illementary or Intermediate Foreign Language Statisfies the State of Missouri government requirement. | 6                        |                                 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language     | Early Western Civilization work worv 101 or Modern Western Civilization* or World Regional Geography work GEOG 101 or Self and World: Intro to Philosophy 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                   |
|   | Hui  |                          | Arts, and S                     | ocial Sciences<br>equired.  |   |                     |
| ENGL 10315  | Technical Writing  | 3                        |                                 | ENGLISH 3560  | Technical Writing   | 3                   |
|   | No free electives applied to the degree.<br>Group 2 Major Requirements<br>Group 1 Core Requirements<br>Total Ho  | 0<br>42<br>29<br>ours 71 |                                 |   | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T  | 0<br>41<br>26<br>67 |
|   | Total Ho   | urs 71                   |                                 |   |   |                     |

|  | Civil Enginee  | ering Gı   | roup 2 Major Req   | uirements  |                     |
|--|--|--|--|--|---------------------|
|  | Northwest Missouri State University  |  | <u>Semester</u>  | Missouri S&T   |                     |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230  | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking  | 3  | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185  | Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.   | 3                   |
| CHEM 24114, 24115  | General Chemistry I and Lab  | 4  |  | General Chemistry I and Lab  | 5                   |
| GEOL 27110, 27111  | General Geology and Lab  | 4  | GEOLOGY 1110<br>(GEO ENG 1150)   | Physical and Environmental Geology   | 3                   |
| PHYS 25322<br>PHYS 25325   | Statics<br>Classical Mechanics I   | 3  | CIV ENG 2200<br>MECH ENG 2350  | Engineering Mechanics-Statics<br>Engineering Mechanics-Dynamics  | 3                   |
|  | From the o<br>6 hours Hun  | ptions listed in e<br>nanities and Fine<br>vioral and Social | Sciences General Education Req<br>each group below, select 15 hours to<br>Arts from at least two specific disciplin<br>Sciences from at least two specific dis<br>1310, or POL SCI 1200 to satisfy the   | include<br>es and<br>ciplines.   |                     |
|  |  |  | nities and Fine Arts   |  |                     |
| ENGL 10318 or ENGL 10319 or ENGL 10306 or ENGL 10307 or HIST 33155* or HIST 33155* or ART 13102 or MUS 19201  HUM 26102 or HUM 26103* or GEOG 32101 or GEOG 32102 or PHIL 39171 or POLS 34102* or PSYC 08103 or ECON 52150 or ECON 52150 or Foreign Language | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation 'Satisfies the State of Missouri government requirement. | 6 <b>Behavio</b> lect 6 hours fro                            | m at least two specific disciplines.  ENGLISH 1211 or  ENGLISH 1212 or  ENGLISH 1222 or  ENGLISH 1222 or  HISTORY 1300* or  HISTORY 1310* or  ART 1180 or  MUSIC 1150  ral and Social Sciences  m at least two specific disciplines.  HISTORY 1100 or  HISTORY 1100 or  HISTORY 2110 or  POL SCI 1200* or  POL SCI 1200* or  PSYCH 1101 or  ECON 1100 or  ECON 1200 or  Foreign Language | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.  Early Western Civilization MOTR WCIV 101 or Modern Western Civilization* or World Regional Geography MOTR GEOG 101 or Self and World: Intro to Philosophy or American Government*or General Psychology or Principles of Microeconomics or Principles of Microeconomics or Principles of Microeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 6                   |
|  | *Satisfies the State of Missouri government requirement.   |  | Arts, and Social Sciences  |  |                     |
|  |  |  | Select 3 hours.  |  |                     |
| HASS Elective  | Humanities, Arts, Social Sciences Elective: Any histor<br>music, theater, English and technical communication,<br>philosophy, political science, psychology, economics,<br>etymology, or foreign language.   | ry, art,<br>3  | HASS Elective  | Humanities, Arts, Social Sciences Elective: Any history, art,<br>music, theater, English and technical communication,<br>philosophy, political science, psychology, economics,<br>etymology, or foreign language.  | 3                   |
|  | No free electives applied to the degree.<br>Group 2 Major Requirements<br>Group 1 Core Requirements  | 0<br>32<br>29<br>otal Hours 61                               |  | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.   | 0<br>31<br>26<br>57 |

|  | Computer Eng  | ineerin   | g Grou   | ıp 2 Major R  | equirements  |                     |
|--|---|---|--|---|--|---------------------|
|  | Northwest Missouri State University   |   | Semeste  | r   | Missouri S&T   |                     |
| COM 29230  | Public Speaking   | 3   | _  | SPMS 1185   | Principles of Speech   | 3                   |
| CHEM 24114, 24115  | General Chemistry I and Lab   | 4   |  | CHEM 1310, 1319   | Applies to degree as Gen Ed Communication requirement.  General Chemistry I and Lab  | 5                   |
| CSIS 44141 or<br>CSIS 44241  | Computer Programming I or<br>Computer Programming II  | 3   |  | CS 1500   | Computational Problem Solving  | 3                   |
| PHYS 25322 or<br>PHYS 25325 or<br>CHEM 24342 or<br>BIOL 04310 or<br>BIOL 04350   | Statics (3) or<br>Classical Mechanics I (3) or<br>Organic Chemistry I (3) or<br>Cell Biology (3) or<br>Genetics (3)   | 3   |  | CIV ENG 2200 or<br>MECH ENG 2350 or<br>CHEM 2210 or<br>BIO SCI 2213 or<br>BIO SCI 2223  | Engineering Mechanics-Statics (3) or<br>Engineering Mechanics-Dynamics (2) or<br>Organic Chemistry I (3) or<br>Cell Biology (3) or<br>General Genetics (3)<br>Satisfies a required engineering/science elective.   | 3                   |
| MATH 17311   | Linear Algebra  | 3   |  | MATH 3108   | Linear Algebra Will satisfy a required math elective.  | 3                   |
|  | From the<br>6 hours Hu  | options listed in<br>umanities and Finavioral and Soc | n each group b<br>ne Arts from at<br>al Sciences fro | deneral Education Requivelence, select 15 hours to in least two specific discipline m at least two specific discounts SCI 1200 to satisfy the   | nclude<br>es and<br>ciplines.  |                     |
|  |   |   | nanities and I                                       |   |  |                     |
| ENGL 10318 or ENGL 10319 or ENGL 10306 or ENGL 10307 or HIST 33155* or HIST 33156* or ART 13102 or MUS 19201  HUM 26102 or HUM 26103* or GEOG 32101 or GEOG 32102 or PHIL 39171 or POLS 34102* or PSYC 08103 or ECON 52151 or ECON 52151 or ECON 52151 or FOreign Language | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement. | 6<br><b>Behavi</b><br>Select 6 hours fi               | oral and Soci  | vo specific disciplines. ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1221 or ENGLISH 1222 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150  ial Sciences vo specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or FOCON 1200 or Foreign Language | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1805 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *satisfies the State of Missouri government requirement.  Early Western Civilization MOTR WCW 101 Or Modern Western Civilization* or World Regional Geography MOTR GEOG 101 Or Self and World: Intro to Philosophy 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                   |
|  | *Satisfies the State of Missouri government requirement.  | Humanitie   |  | Social Sciences   |  |                     |
| ENGL 10112 or<br>ENGL 10315  | Composition II: Writing as Engagement or<br>Technical Writing   | 3   | Select 3 hou   | urs.<br>ENGLISH 1160 or<br>ENGLISH 3560   | Writing and Research or<br>Technical Writing   | 3                   |
| Electives  | Maximum Free Electives<br>Group 2 Major Requirements<br>Group 1 Core Requirements   | 3<br>34<br>29<br>Total Hours 63                       | <u>,</u>   | Electives   | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  "S&T advisor permission is required to transfer more than 68 credits toward the S&T Computer Engineering degree.  | 3<br>35<br>26<br>61 |

|   | Electrical Engine  | ering  | Group   | 2 Major Req  | <sub>l</sub> uirements   |                     |
|---|--|--|---|--|--|---------------------|
| No  | orthwest Missouri State University   |  | Semester  |  | Missouri S&T   |                     |
| COM 29230   | Public Speaking  | 3  |   | SPMS 1185  | Principles of Speech   | 3                   |
| CHEM 24114, 24115   | General Chemistry I and Lab  | 4  |   | CHEM 1310, 1319  | Applies to degree as Gen Ed Communication requirement.  General Chemistry I and Lab  | 5                   |
| CSIS 44141 or   | Computer Programming I or  | 3  |   | CS 1500  | Computational Problem Solving  | 3                   |
| CSIS 44241 PHYS 25322 and PHYS 25325 BOTH of the courses above or ONE of the courses below. OR CHEM 24342 or BIOL 04310 or BIOL 04350 MATH 17311                          | Computer Programming II Statics and Classical Mechanics I Both courses above combined or any one of the following courses will satisfy a recentification of the following courses will satisfy a recent of the following courses will satisfy a recentification of the following courses will satisfy a recent of the following course will satisfy a recent of the following course will satisfy a recent of the following course will be a recent of the following course will be a recent of the following course will | quired 3   |   | CIV ENG 2200 and<br>MECH ENG 2350<br>BOTH of the courses above or ONE of<br>the courses below.<br>OR<br>CHEM 2210 or<br>BIO SCI 2213 or<br>BIO SCI 2223<br>MATH 3108 | 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 Organic Chemistry I (3) or Cell Biology (3) or General Genetics (3)  Linear Algebra   | 3                   |
| IVIA 1 II 1/311   | 3  |  | Saianaga Ca   | MATH 3108<br>neral Education Requiren  |  | 3                   |
|   | From the optio<br>6 hours Human  | ons listed in e<br>ities and Fine<br>ral and Social<br>/ 1200, 1300, | each group be<br>Arts from at le<br>Sciences from<br>1310, or POL | low, select 15 hours to includ<br>east two specific disciplines an<br>at least two specific discipline<br>SCI 1200 to satisfy the Stat                               | e<br>d<br>es.  |                     |
|   | 0-1  |  | inities and Fi  | ne Arts<br>specific disciplines.   |  |                     |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.   | 6  |   | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150                        | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                             | 6                   |
|   |  |  | ral and Socia   |  |  |                     |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Select Western Civ I: The Ancient World to 1500 MOTR WCIV 101 of Wastern Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 OF People and Cultures of the World MOTR GEOG 101 OF Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics I or General Economics I or General Economics I or General Feonomics I or   |  | m at least two  | specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language      | Early Western Civilization MOTR WCIV 101 OF Modern Western Civilization* or World Regional Geography MOTR GEOG 101 OF Self and World: Intro to Philosophy or American Government*or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 6                   |
|   | I  |  |   | ocial Sciences   |  |                     |
| ENGL 10112 or<br>ENGL 10315   | Composition II: Writing as Engagement or Technical Writing   | 3  | Select 3 hour   | s.<br>ENGLISH 1160 or<br>ENGLISH 3560  | Writing and Research or<br>Technical Writing   | 3                   |
| Electives   | Maximum Free Electives<br>Group 2 Major Requirements<br>Group 1 Core Requirements<br>Total   | 6<br>37<br>29<br>Hours 66  |   | Electives  | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours' *S&T advisor permission is required to transfer more than 68 credits toward the S&T Electrical Engineering degree.   | 6<br>38<br>26<br>64 |

|  | Engineering Ma  | nageme   | nt Gro  | up 2 Major I  | Requirements  |                     |
|--|---|--|---|---|---|---------------------|
|  | Northwest Missouri State University   |  | Semester  |   | Missouri S&T  |                     |
| COM 29230  | Public Speaking   | 3  |   | SPMS 1185   | Principles of Speech Applies to degree as Gen Ed Communication requirement.   | 3                   |
| CHEM 24114, 24115  | General Chemistry I and Lab   | 4  |   | CHEM 1310, 1319   | General Chemistry I and Lab   | 5                   |
| PHYS 25322   | Statics   | 3  |   | CIV ENG 2200  | Engineering Mechanics-Statics   | 3                   |
| PHYS 25325   | Classical Mechanics I   | 3  | 0-1   | MECH ENG 2350   | Engineering Mechanics-Dynamics  | 2                   |
|  | From the 6 hours Hu   | options listed in e<br>umanities and Fine<br>navioral and Social | each group be<br>Arts from at le<br>Sciences from | neral Education Requi<br>low, select 15 hours to inc<br>ast two specific disciplines<br>at least two specific disciplines<br>SCI 1200 to satisfy the S            | clude<br>s and<br>plines.   |                     |
|  |   |  | anities and Fi                                    | •   |   |                     |
|  | S   | Select 6 hours fro   | m at least two                                    | specific disciplines.   |   |                     |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201                        | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation or Statisfies the State of Missouri government requirement.   | 6  |   | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150                     | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                              | 6                   |
|  | Soloat 6 hour   |  | ral and Socia                                     | I Sciences<br>ciplines to include PSYC  | LI 1101   |                     |
| PSYC 08103   |   | s irom at least tv   | vo specific disc                                  | PSYCH 1101  |   | 3                   |
| PSYC 08103   | General Psychology  | 3  |   | PSYCH 1101  | General Psychology Required   | 3                   |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 3  |   | HISTORY 1100 or<br>HISTORY 1200* or<br>HISTORY 2110 or<br>PHILOS 1105 or<br>POL SCI 1200* or<br>PSYCH 1101 or<br>ECON 1100 or<br>ECON 1200 or<br>Foreign Language | Early Western Civilization MOTR WCIV 101 Or  Modern Western Civilization* or World Regional Geography MOTR GEOG 101 Or Self and World: Intro to Philosophy 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   | , <b>Arts, and So</b><br>Select 3 hour            | ocial Sciences<br>s.  |   |                     |
| ENGL 10112 or<br>ENGL 10315  | Composition II: Writing as Engagement or<br>Technical Writing   | 3  |   | ENGLISH 1160 or<br>ENGLISH 3560   | Writing and Research or<br>Technical Writing  | 3                   |
|  | No free electives applied to the degree. Group 2 Major Requirements Group 1 Core Requirements   | 0<br>28<br>29<br>Total Hours 57                                  |   | Electives   | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.   | 0<br>28<br>26<br>61 |

|   | Environmental En  | ginee                             | ring Gr                             | oup 2 Major   | Requirements   |                   |
|---|---|-----------------------------------|-------------------------------------|---|--|-------------------|
|   | Northwest Missouri State University   |                                   | Semeste                             | <u>er</u>   | Missouri S&T   |                   |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   | 3                                 |                                     | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or<br>Technical Writing or<br>Principles of Speech<br>Applies to degree as Gen Ed Communication requirement.  | 3                 |
| GEOL 27110, 27111   | General Geology and Lab   | 4                                 |                                     | GEOLOGY 1110<br>(GEO ENG 1150)  | Physical and Environmental Geology   | 3                 |
| CHEM 24114, 24115   | General Chemistry I and Lab   | 4                                 |                                     | CHEM 1310, 1319   | General Chemistry I and Lab  | 5                 |
| CHEM 24116  | 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                 |
| BIOL 04102  | General Biology   | 3                                 |                                     | BIO SCI 1113, 1219*   | General Biology (3) and Lab* (1)  *The lab is not a degree requirement, transfers as general elective credit.  | 3                 |
| PHYS 25322  | Statics   | 3                                 |                                     | CIV ENG 2200  | Engineering Mechanics-Statics  | 3                 |
| PHYS 25325  | Classical Mechanics I   | 3                                 |                                     | MECH ENG 2350<br>Seneral Education Regui  | Engineering Mechanics-Dynamics   | 2                 |
|   | 6 hours Hum   | nanities and Fi<br>vioral and Soc | ne Arts from at<br>ial Sciences fro | pelow, select 12 hours to inc<br>least two specific disciplines<br>on at least two specific disciplines<br>on SCI 1200 to satisfy the         | s and<br>plines.   |                   |
|   | At least one course must be selected from mis re  |                                   | nanities and                        | •   | state of Missouri government requirement.  |                   |
|   | Se  |                                   |                                     | vo specific disciplines.  |  |                   |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201 | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation **Satisfies the State of Missouri government requirement. | 6                                 |                                     | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150 | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1805 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation 38 tisfies the State of Missouri government requirement. | 6                 |
|   |   |                                   | ioral and Soc                       |   |  |                   |
|   |   | rom at least t                    | wo specific dis                     | sciplines to include HISTO  |  |                   |
| HUM 26103*  | Western Civ II: 1500 to the Present*  *Satisfies the State of Missouri Government requirement.  | 3                                 |                                     | HISTORY 1200*   | Modern Western Civilization*  *Satisfies the State of Missouri Government requirement.   | 3                 |
| PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language                            | Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language "Satisfies the State of Missouri government requirement.  | 3                                 |                                     | PHILOS 1105 or<br><b>POL SCI 1200*</b> or<br>PSYCH 1101 or<br>ECON 1100 or<br>ECON 1200 or<br>Foreign Language                                | Self and World: Intro to Philosophy 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<br>Group 1 Core Requirements<br>To   | 3i<br>29<br>Otal Hours 6          | 9                                   |   | Group 2 Major Requirements Group 1 Core Requirements Total Hours  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.  | 34<br>26<br>s* 60 |

|                                   | Geological Engin  | eerin         | g Grou                                | p 2 Major Re   | equirements   |    |
|-----------------------------------|---|---------------|---------------------------------------|--|---|----|
| N                                 | orthwest Missouri State University  |               | Semester                              |  | Missouri S&T  |    |
|                                   | Technical Writing   | 3             |                                       | ENGLISH 3560   | Technical Writing   | 3  |
| ENGL 10315<br>CHEM 24114, 24115   | General Chemistry I and Lab   | 4             |                                       | CHEM 1310, 1319  | Applies to degree as Gen Ed Communication requirement.  General Chemistry I and Lab   | 5  |
| CSIS 44141 or                     | Computer Programming I or   | ·             |                                       |  |   |    |
| CSIS 44241                        | Computer Programming II   | 3             |                                       | COMP SCI 1500  | Computational Problem Solving   | 3  |
| GEOL 27110, 27111                 | General Geology and Lab   | 4             |                                       | GEO ENG 1150<br>(GEOLOGY 1110)   | Physical and Environmental Geology  | 3  |
| PHYS 25322                        | Statics   | 3             |                                       | CIV ENG 2200   | Engineering Mechanics-Statics   | 3  |
| PHYS 25325                        | Classical Mechanics I   | 3             |                                       | MECH ENG 2350  | Engineering Mechanics-Dynamics  | 2  |
|                                   | From the opti<br>6 hours Human  | ons listed ir | n each group be<br>ne Arts from at le | eneral Education Require<br>slow, select 15 hours to incluse<br>east two specific disciplines a<br>n at least two specific discipl | ude<br>and  |    |
|                                   | *At least one course must be selected from HISTOR   |               |                                       | •  | ate of Missouri government requirement.   |    |
|                                   | Colo  |               | nanities and F                        |  |   |    |
| ENGL 10318 or                     | British Literature to the 18th Century or   | ct 6 nours 11 | om at least two                       | specific disciplines.<br>ENGLISH 1211 or   | British Literature I: The Beginnings to 1800 or   |    |
| ENGL 10319 or                     | British Literature Since the 18th Century or  |               |                                       | ENGLISH 1212 or  | British Literature II: 1800 to Present  |    |
| ENGL 10306 or                     | U.S. Literature to 1865 or  |               |                                       | ENGLISH 1221 or  | American Literature: 1600 to 1865 or  |    |
| ENGL 10307 or                     | U.S. Literature: 1865 to Present or   |               |                                       | ENGLISH 1222 or  | American Literature: 1865 to Present or   |    |
| HIST 33155* or                    | The United States to 1877* or   | 6             |                                       | HISTORY 1300* or   | American History to 1877* or  | 6  |
| HIST 33156* or                    | The United States since 1877* or  |               |                                       | HISTORY 1310* or   | American History Since 1877* or   |    |
| ART 13102 or<br>MUS 19201         | Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.     |               |                                       | ART 1180 or<br>MUSIC 1150  | Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                 |    |
|                                   | · · · · · · · · · · · · · · · · · · ·   |               | oral and Socia                        |  | Sausites the State of Missouri government requirement.  |    |
| HUM 26102 or                      |   |               | om at least two                       | specific disciplines.  | Fash Masters Chillington community  |    |
| HUM 26102 or<br>HUM 26103* or     | Western Civ I: The Ancient World to 1500 MOTR WCIV 101 C<br>Western Civ II: 1500 to the Present* or | OT .          |                                       | HISTORY 1100 or<br>HISTORY 1200* or  | Early Western Civilization MOTR WCIV 101 Or  Modern Western Civilization* or  |    |
| GEOG 32101 or                     | Intro to Geography MOTR GEOG 101 or   |               |                                       | HISTORY 2110 or  | World Regional Geography MOTR GEOG 101 or   |    |
| GEOG 32102 or                     | People and Cultures of the World MOTR GEOG 101 or   |               |                                       | PHILOS 1105 or   | Self and World: Intro to Philosophy or  |    |
| PHIL 39171 or                     | Intro to Philosophy or  |               |                                       | POL SCI 1200* or   | American Government*or  |    |
| POLS 34102* or                    | Intro to American Government and Politics* or   | 6             |                                       | PSYCH 1101 or  | General Psychology or   | 6  |
| PSYC 08103 or                     | General Psychology or   |               |                                       | ECON 1100 or   | Principles of Microeconomics or   |    |
| ECON 52151 or                     | General Economics II or   |               |                                       | ECON 1200 or   | Principles of Macroeconomics or   |    |
| ECON 52150 or<br>Foreign Language | General Economics I or<br>Elementary or Intermediate Foreign Language                               |               |                                       | Foreign Language   | Elementary or Intermediate Foreign Language  *Satisfies the State of Missouri government requirement.                             |    |
|                                   | *Satisfies the State of Missouri government requirement.  | Lumanitia     | a Arta and S                          | noial Sciences   |   |    |
|                                   |   | riumamile     | Select 3 hou                          | ocial Sciences   |   |    |
|                                   | Humanities, Arts, Social Sciences Elective: Any history,  | art,          |                                       |  | Humanities, Arts, Social Sciences Elective: Any history, art,   |    |
| HASS Elective                     | music, theater, English and technical communication,  | 3             |                                       | HASS Elective  | music, theater, English and technical communication,  | 3  |
| Three Elective                    | philosophy, political science, psychology, economics, etymology, or foreign language.               |               |                                       | TWO LIGHT  | philosophy, political science, psychology, economics,<br>etymology, or foreign language.  |    |
|                                   | No free electives applied to the degree.  | 0             |                                       |  | Maximum Free Electives  | 0  |
|                                   | Group 2 Major Requirements  | 35            |                                       |  | Group 2 Major Requirements  | 34 |
|                                   | Group 1 Core Requirements   | 29            |                                       |  | Group 1 Core Requirements   | 26 |
|                                   | I ota   | ll Hours 64   | ·                                     |  | Total Hours*  "S&T advisor permission is required to transfer more than 65 credits toward the S&T  Geological Engineering degree. | 60 |

|   | Mechanical Eng  | ineeri                          | ng Groι                                 | ıp 2 Major F  | Requirements  |                     |
|---|---|---------------------------------|---|---|---|---------------------|
|   | Northwest Missouri State University   |                                 | Semester                                |   | Missouri S&T  |                     |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   | :                               | 3                                       | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.  | 3                   |
| CHEM 24114, 24115   | General Chemistry I and Lab   |                                 | 4                                       | CHEM 1310*, 1319  | General Chemistry I and Lab *CHEM 1310 will be substituted for CHEM 1305.   | 5                   |
| PHYS 25322<br>PHYS 25325  | Statics<br>Classical Mechanics I  |                                 | 3                                       | CIV ENG 2200<br>MECH ENG 2360   | Engineering Mechanics-Statics<br>Dynamics   | 3                   |
| MATH 17311  | Linear Algebra  |                                 | 3                                       | MATH 3108   | Linear Algebra I Satisfies the Advanced Math/Statistics elective requirement.   | 3                   |
|   | Humanities. Ar  | ts. and Soc                     | ial Sciences G                          | eneral Education Regu   |   |                     |
|   | From the op<br>6 hours Hum  | ptions listed<br>nanities and F | in each group be<br>ine Arts from at le | elow, select 15 hours to in<br>east two specific discipline<br>of at least two specific disc  | actude<br>es and  |                     |
|   | *At least one course must be selected from HISTO  | DRY 1200, 13                    | 00, 1310, or POI                        | SCI 1200 to satisfy the   | State of Missouri government requirement.   |                     |
|   | Se  |                                 | manities and F                          | ine Arts<br>o specific disciplines.   |   |                     |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation  *Satisfies the State of Missouri government requirement.   |                                 | 6                                       | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1221 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150                     | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                              | 6                   |
|   | Se  |                                 | vioral and Social                       | al Sciences<br>o specific disciplines.  |   |                     |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV 10  Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language 'Satisfies the State of Missouri government requirement. |                                 | 6                                       | HISTORY 1100 or<br>HISTORY 1200* or<br>HISTORY 2110 or<br>PHILOS 1105 or<br>POL SCI 1200* or<br>PSYCH 1101 or<br>ECON 1100 or<br>ECON 1200 or<br>Foreign Language | Early Western Civilization MOTR WCIV 101 OF Modern Western Civilization* or World Regional Geography MOTR GEOG 101 OF Self and World: Intro to Philosophy 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                   |
|   |   | Humaniti                        | es, Arts, and Select 3 hour             |   |   |                     |
| HASS Elective   | Humanities, Arts, Social Sciences Elective: Any histor 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.<br>Group 2 Major Requirements<br>Group 1 Core Requirements   | 3                               | 0<br>81<br>99<br>60                     |   | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.   | 0<br>32<br>26<br>58 |

|   | Metallurgical En   | gineerir  | ıg Gro  | up 2 Major F  | Requirements   |                |
|---|--|---|---|---|--|----------------|
|   | Northwest Missouri State University  |   | Semester  |   | Missouri S&T   |                |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking  | 3   |   | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.   | 3              |
| PHYS 25322  | Statics  | 3   |   | CIV ENG 2200  | Engineering Mechanics-Statics  | 3              |
| CHEM 24114, 24115   | General Chemistry I and Lab  | 4   |   | CHEM 1310, 1319   | General Chemistry I and Lab  | 5              |
| CHEM 24116  | 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              |
| CHEM 24342  | Organic Chemistry I  | 3   |   | CHEM 2210   | Organic Chemistry I  Not specifically required for the degree but will satisfy out-of-department technical elective requirement  | 3              |
|   | From the 6 hours Hu  | options listed in<br>umanities and Fine<br>navioral and Socia | each group be<br>Arts from at le<br>I Sciences from | neral Education Require<br>low, select 15 hours to include the sast two specific disciplines at least two specific disciplines at least two specific disciplines. | ude<br>and<br>ines.  |                |
|   | At least one source must be selected from the  |   | anities and F                                       | •   | and of missouri government requirement.  |                |
|   |  | Select 6 hours fro  | m at least two                                      | specific disciplines.   |  |                |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.   | 6   |   | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150                     | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                             | 6              |
|   |  | Behavio   | ral and Socia                                       | l Sciences  |  |                |
|   |  |   | m at least two                                      | specific disciplines.   |  |                |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 6   |   | HISTORY 1100 or<br>HISTORY 1200* or<br>HISTORY 2110 or<br>PHILOS 1105 or<br>POL SCI 1200* or<br>PSYCH 1101 or<br>ECON 1100 or<br>ECON 1200 or<br>Foreign Language | Early Western Civilization MOTE WOIV 101 OF Modern Western Civilization* or World Regional Geography MOTE GEOG 101 OF Self and World: Intro to Philosophy 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 So<br>Select 3 hour                     | ocial Sciences  |  |                |
| HASS Elective   | Humanities, Arts, Social Sciences Elective: Any hist music, theater, English and technical communication philosophy, political science, psychology, economics etymology, or foreign language.  | ١, ء  | Colour o Hour                                       | 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<br>Group 1 Core Requirements  | 35<br>29<br>Total Hours 64                                    |   |   | Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T  Metallurgical Engineering degree.   | 35<br>26<br>61 |

|   | Mining Engir  | neering | j G            | iroup 2 Major Rec   | quirements  |                |
|---|---|---------|----------------|---|---|----------------|
|   | Northwest Missouri State University   |         |                | Semester  | Missouri S&T  |                |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   |         | 3              | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.  | 3              |
| CHEM 24114, 24115   | General Chemistry I and Lab   |         | 4              | CHEM 1310, 1319   | General Chemistry I and Lab   | 5              |
| PHYS 25322  | Statics   |         | 3              | CIV ENG 2200  | Engineering Mechanics-Statics   | 3              |
| PHYS 25325  | Classical Mechanics I   |         | 3              | MECH ENG 2350   | Engineering Mechanics-Dynamics  | 2              |
| GEOL 27110, 27111   | General Geology and Lab   |         | 4              | GEOLOGY 1110<br>(GEO ENG 1150)  | Physical and Environmental Geology  | 3              |
|   |   |         |                | Sciences General Education Requi  |   |                |
|   |   |         |                | ach group below, select 12 hours to inc   |   |                |
|   |   |         |                | Arts from at least two specific disciplines<br>Sciences from at least two specific discip   |   |                |
|   | *At least one course must be selected from HIS  |         |                | ·   |   |                |
|   | 71.10001 0110 0001100 111011 20 00100100 110111 1110  |         |                | nities and Fine Arts  | or missouri government roquitement.   |                |
|   |   |         |                | at least two specific disciplines.  |   |                |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature: 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation statisfies the State of Missouri government requirement.  |         | 6              | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150   | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                              | 6              |
|   |   |         |                | al and Social Sciences  |   |                |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WOR  Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. |         | from           | n at least two specific disciplines.  HISTORY 1100 or  HISTORY 2200* or  HISTORY 2110 or  PHILOS 1105 or  POL SCI 1200* or  PSYCH 1101 or  ECON 1100 or  ECON 1200 or  Foreign Language | Early Western Civilization MOTR WCIV 101 Or  Modern Western Civilization* or World Regional Geography MOTR GEOG 101 Or Self and World: Intro to Philosophy 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<br>Group 1 Core Requirements   |         | 29<br>29<br>58 |   | Group 2 Major Requirements Group 1 Core Requirements Total Hours*  *S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.   | 28<br>26<br>54 |

|   | Nuclear Engin  | eering G  | Group 2 Major Re   | equirements   |                        |
|---|--|---|--|---|------------------------|
|   | Northwest Missouri State University  |   | Semester   | Missouri S&T  |                        |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking  | 3   | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185  | Writing and Research or Technical Writing or Principles of Speech Apples to degree as Gen Ed Communication requirement.   | 3                      |
| CHEM 24114, 24115<br>MATH 17311   | General Chemistry I and Lab<br>Linear Algebra  | 4 3   | CHEM 1310, 1319<br>MATH 3108   | General Chemistry I and Lab<br>Linear Algebra   | 5<br>3                 |
| PHYS 25322  | Statics  | 3   | CIV ENG 2200   | Engineering Mechanics-Statics   | 3                      |
|   | From the op<br>6 hours Hum   | otions listed in ea<br>nanities and Fine A<br>vioral and Social S | iciences General Education Requich group below, select 15 hours to it with from at least two specific disciplination in the second of the seco | nclude<br>es and<br>ciplines.   |                        |
|   |  |   | ities and Fine Arts  |   |                        |
| ENGL 10318 or<br>ENGL 10319 or  | Sel British Literature to the 18th Century or British Literature Since the 18th Century or   | lect 6 hours from   | at least two specific disciplines.  ENGLISH 1211 or  ENGLISH 1212 or   | British Literature I: The Beginnings to 1800 or<br>British Literature II: 1800 to Present   |                        |
| ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation **Satisfies the State of Missouri government requirement.  | 6   | ENGLISH 1221 or<br>ENGLISH 1222 or<br>ENGLISH 1222 or<br>HISTORY 1300* or<br>HISTORY 1310* or<br>ART 1180 or<br>MUSIC 1150   | American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.   | 6                      |
|   | cationics are state or imposaring over minority requirement.   | Behaviora   | I and Social Sciences  | Cational the Catio of Miscoull government requirements  |                        |
|   | Sel  | lect 6 hours from   | at least two specific disciplines.   |   |                        |
| ECON 52151 or<br>ECON 52150   | General Economics II or<br>General Economics I   | 3   | ECON 1100 or<br>ECON 1200  | Principles of Microeconomics or<br>Principles of Macroeconomics   | 3                      |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WCIV 10: Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Psychology or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 3   | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or PHILOS 1115 or POL SCI 1200* or PSYCH 1101 or Foreign Language   | Early Western Civilization or  Modern Western Civilization* or  World Regional Geography or  Self and World: Intro to Philosophy or  Logic and Reasoning: An Introduction or  American Government* or  General Psychology or  Elementary or Intermediate Foreign Language  *Satisfies the State of Missouri government requirement. | 3                      |
|   |  |   | Arts, and Social Sciences select 3 hours.  |   |                        |
| HASS Elective   | Humanities, Arts, Social Sciences Elective: Any histor<br>music, theater, English and technical communication,<br>philosophy, political science, psychology, economics,<br>etymology, or foreign language.   | y, art,<br>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<br>Group 2 Major Requirements<br>Group 1 Core Requirements<br>To  | 0<br>28<br>29<br>otal Hours 57                                    |  | Maximum Free Electives Group 2 Major Requirements Group 1 Core Requirements  Total Hours  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree.   | 0<br>29<br>26<br>s* 55 |

|   | Petroleum Engin   | eering   | J Grou  | p 2 Major R   | equirements  |                |
|---|---|--|---|---|--|----------------|
|   | Northwest Missouri State University   |  | Semester  | •   | Missouri S&T   |                |
| ENGL 10112 or<br>ENGL 10315 or<br>COM 29230   | Composition II: Writing as Engagement or<br>Technical Writing or<br>Public Speaking   | 3  |   | ENGLISH 1160 or<br>ENGLISH 3560 or<br>SPMS 1185   | Writing and Research or Technical Writing or Principles of Speech Applies to degree as Gen Ed Communication requirement.   | 3              |
| CHEM 24114, 24115   | General Chemistry I and Lab   | 4  |   | CHEM 1310, 1319   | General Chemistry I and Lab  | 5              |
| CSIS 44141 or<br>CSIS 44241   | Computer Programming I or<br>Computer Programming II  | 3  |   | COMP SCI 1500   | Computational Problem Solving  | 3              |
| GEOL 27110, 27111   | General Geology and Lab   | 4  |   | GEOLOGY 1110<br>(GEO ENG 1150)  | Physical and Environmental Geology   | 3              |
| PHYS 25322  | Statics   | 3  |   | CIV ENG 2200  | Engineering Mechanics-Statics  | 3              |
| PHYS 25325  | Classical Mechanics I   | 3  |   | MECH ENG 2350   | Engineering Mechanics-Dynamics   | 2              |
|   | From the option 6 hours Human   | ons listed in e<br>nities and Fine<br>ral and Social<br>Y 1200, 1300 | each group be<br>Arts from at le<br>Sciences fron<br>1310, or POL |   | clude<br>s and<br>olines.  |                |
|   | Selec   |  | nities and F  | o specific disciplines.   |  |                |
| ENGL 10318 or<br>ENGL 10319 or<br>ENGL 10306 or<br>ENGL 10307 or<br>HIST 33155* or<br>HIST 33156* or<br>ART 13102 or<br>MUS 19201   | British Literature to the 18th Century or British Literature Since the 18th Century or U.S. Literature to 1865 or U.S. Literature: 1865 to Present or The United States to 1877* or The United States since 1877* or Art Appreciation or Music Appreciation *Satisfies the State of Missouri government requirement.  | 6  | m at least (we  | ENGLISH 1211 or<br>ENGLISH 1212 or<br>ENGLISH 1221 or<br>ENGLISH 1222 or<br>HISTORY 1300° or<br>HISTORY 1310° or<br>ART 1180 or<br>MUSIC 1150                     | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or American History to 1877* or American History Since 1877* or Art Appreciation or Music Understanding and Appreciation *Satisfies the State of Missouri government requirement.                             | 6              |
|   |   |  | ral and Socia   |   |  |                |
| HUM 26102 or<br>HUM 26103* or<br>GEOG 32101 or<br>GEOG 32102 or<br>PHIL 39171 or<br>POLS 34102* or<br>PSYC 08103 or<br>ECON 52151 or<br>ECON 52150 or<br>Foreign Language | Western Civ I: The Ancient World to 1500 MOTR WOIV 101 O Western Civ II: 1500 to the Present* or Intro to Geography MOTR GEOG 101 or People and Cultures of the World MOTR GEOG 101 or Intro to Philosophy or Intro to American Government and Politics* or General Psychology or General Economics II or General Economics I or Elementary or Intermediate Foreign Language *Satisfies the State of Missouri government requirement. | 6  |   | o specific disciplines. HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHILOS 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization MOTR WCIV 101 OR Modern Western Civilization* or World Regional Geography MOTR GEOG 101 OR Self and World: Intro to Philosophy 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 Select 3 hour   | ocial Sciences<br>rs.   |  |                |
| HASS Elective   | Humanities, Arts, Social Sciences Elective: Any history, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language.   | art,<br>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<br>Group 1 Core Requirements<br>Tota   | 35<br>29<br>I Hours 64   |   |   | Group 2 Major Requirements Group 1 Core Requirements  Total Hours*  *S&T advisor permission is required to transfer more than 69 credits toward the S&T Petroleum Engineering degree.  | 34<br>26<br>60 |