

Ozarks Technical Community College — Missouri S&T

General Engineering

Transfer Guide Effective as of Fall 2026

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

Students are not required to complete all courses on this guide before transferring to Missouri S&T.

Group 1 - Core Requirements: All Majors Take All Courses

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

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|---|---|-----------------|-------------------------|--|----|
| MTH 140 | Analytic Geometry and Calculus I | 5 | MATH 1214 | Calculus I | 4 |
| MTH 141 | Analytic Geometry and Calculus II | 5 | MATH 1215 | Calculus II | 4 |
| MTH 240 | Analytic Geometry and Calculus III | 3 | MATH 2222 | Calculus III | 4 |
| MTH 241 | Differential Equations | 3 | MATH 3304 | Elementary Differential Equations | 3 |
| PHY 220 | Physics for Engineers and Scientists I | 5 | PHYSICS 1135 | Engineering Physics I | 4 |
| PHY 222 | Physics for Engineers and Scientists II | 5 | PHYSICS 2135 | Engineering Physics II | 4 |
| EGR 100 | Study and Careers in Engineering | 1 | FR ENG 1100 | Study and Careers in Engineering and Computing | 1 |
| ENG 101 | Composition I | 3 | ENGLISH 1120 | Exposition and Argumentation | 3 |
| Total Hours | | 30 | Total Hours | | 27 |

Group 2 - Major Requirements: Take All Courses for Major of Choice

Engineering students take all Group 1 - Core Requirements (above) and Group 2 - Major Requirements for chosen major from list below. See course requirements on following pages.

Aerospace Engineering
Architectural Engineering
Biomedical Engineering - Biomanufacturing
Biomedical Engineering - Biomaterials
Ceramic Engineering
Chemical Engineering and Biochemistry Emphasis
Civil Engineering
Computer Engineering
Electrical Engineering

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

Engineering Major Requirements are detailed on the following pages.

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

Aerospace Engineering Group 2 Major Requirements

| | <u>Ozarks Technical Community College</u> | <u>Semester</u> | | <u>Missouri S&T</u> | |
|--|---|-----------------|--|--|----|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310*, 1319 | General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> | 5 |
| CSC 140 | C++ Programming I | 3 | COMP SCI 1971, 1981 | Intro to Programming Method and Lab (C++) | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| MTH 230 or MTH 229 | Linear Algebra or Statistics for Engineering and Scientists | 3 | MATH 3108 or STAT 3115* | Linear Algebra I or Engineering Statistics* pending approval for substitution <small>Satisfies the Advanced Math/Stat elective requirement. *STAT 3115 will be substituted for STAT 3113.</small> | 3 |
| PHL 105 | Intro to Ethics <small>or other engineering, business, bio, social ethics approved by advisor</small> | 3 | PHILOS 1130 | How Should I Live? An Introduction to Ethics <small>or other engineering, business, bio, social ethics approved by advisor</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements | | | | | |
| From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. | | | | | |
| *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences | | | | | |
| Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| | | 0 | | | 0 |
| | | 39 | | | 38 |
| | | 30 | | | 27 |
| Total Hours | | 69 | | | 65 |
| <small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.</small> | | | | | |

Architectural Engineering Group 2 Major Requirements

| Architectural Engineering Group 2 Major Requirements | | | | | |
|--|--|-----------------|---|---|----|
| | <u>Ozarks Technical Community College</u> | <u>Semester</u> | | <u>Missouri S&T</u> | |
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310*, 1319 | General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> | 5 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| EGR 205 | Engineering Dynamics | 3 | MECH ENG 2350 | Engineering Mechanics-Dynamics | 2 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3113.</small> | 3 |
| PHY 110 | Intro to Geology | 4 | GEOLOGY 1110 (GEO ENG 1150) | Physical and Environmental Geology | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 3 hours Humanities and Fine Arts and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 3 hours. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 3 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or MUSIC 1150 or THEATRE 1190 or Literature | 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 World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 3 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines, to include HISTORY 1200. | | | | | |
| HST 106* | Modern World History* <small>*Satisfies the State of Missouri Government requirement.</small> | 3 | HISTORY 1200* | Modern Western Civilization* <small>*Satisfies the State of Missouri Government requirement.</small> | 3 |
| PHIL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 | PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or 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 <small>*Satisfies the State of Missouri government requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| <i>No free electives applied to the degree.</i> | | | | | |
| | | 0 | | Maximum Free Electives | 0 |
| | Group 2 Major Requirements | 37 | | Group 2 Major Requirements | 34 |
| | Group 1 Core Requirements | 30 | | Group 1 Core Requirements | 27 |
| | Total Hours | 67 | | Total Hours* | 61 |

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

Biomedical Engineering-Biomanufacturing Group 2 Major Requirements

| Biomedical Engineering-Biomanufacturing Group 2 Major Requirements | | | | | |
|---|---|-----------|--|--|-----------|
| Ozarks Technical Community College | | Semester | Missouri S&T | | |
| COM 105 | Public Speaking | 3 | SP&MS 1185 | Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CHM 170, 171 | General Chemistry II and Lab | 5 | CHEM 1320 | General Chemistry II | 3 |
| CHM 242 | Organic Chemistry I | 6 | CHEM 2210, 2219 | Organic Chemistry I and Lab | 4 |
| CHM 243 or BIO 101 or BIO 160 or BIO 250 | Organic Chemistry II (6) or Life Science (4) or General Biology I (4) or Genetics (4) | 4 | CHEM 2220, 2229 or BIO SCI 1113, 1219 or BIO SCI 2223 | Organic Chemistry II and Lab or General Biology and Lab or General Genetics <small>Applies to degree as Track Elective.</small> | 4 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 3 hours. | | | | | |
| HST 105 or HST 106* or GRY 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences ENGLISH 3560 required. | | | | | |
| ENG150 | Technical Writing | 3 | ENGLISH 3560 | Technical Writing | 3 |
| <i>No free electives applied to the degree.</i> | | | | | |
| | Group 2 Major Requirements | 38 | | Maximum Free Electives | 0 |
| | Group 1 Core Requirements | 30 | | Group 2 Major Requirements | 34 |
| | Total Hours | 68 | | Group 1 Core Requirements | 27 |
| | | | | Total Hours* | 61 |

*S&T advisor permission is required to transfer more than 69 credit hours toward the degree.

Biomedical Engineering-Biomaterials Group 2 Major Requirements

| Ozarks Technical Community College | | Semester | Missouri S&T | | |
|---|---|----------|--|--|----|
| COM 105 | Public Speaking | 3 | SP&MS 1185 | Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CHM 170, 171 | General Chemistry I and Lab | 5 | CHEM 1320 | General Chemistry II | 3 |
| CHM 242 | Organic Chemistry I | 6 | CHEM 2210, 2219* | Organic Chemistry I and Lab* <small>*CHEM 2219 Lab applies to the degree as a Track Elective (non-engineering).</small> | 4 |
| CHM 243 | Organic Chemistry II | 6 | CHEM 2220, 2229* | Organic Chemistry II and Lab* <small>CHEM 2229 Lab applies to the degree as a Track Elective (non-engineering).</small> | 4 |
| BIO 101 or BIO 160 | Life Science or General Biology I | 4 | BIO SCI 1113*, 1219* | General Biology* and Lab* <small>*Applies to degree as Track Elective (Non-engineering).</small> | 4 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 3 hours. | | | | | |
| HST 105 or HST 106* or GRY 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences ENGLISH 3560 required. | | | | | |
| ENG150 | Technical Writing | 3 | ENGLISH 3560 | Technical Writing | 3 |
| <i>No free electives applied to the degree.</i> | | | | | |
| | Group 2 Major Requirements | 47 | | Maximum Free Electives | 0 |
| | Group 1 Core Requirements | 30 | | Group 2 Major Requirements | 41 |
| | Total Hours | 77 | | Group 1 Core Requirements | 27 |
| | | | | Total Hours* | 68 |

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

Ceramic Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | <u>Semester</u> | <u>Missouri S&T</u> |
|---|-----------------|--|
| DDT 200 Production Design Drafting | 4 | MECH ENG 1720 Intro to Engineering Design |
| ENG 102 or ENG 150 or COM 105 Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> |
| EGR 201 Engineering Statics | 3 | CIV ENG 2200 Engineering Mechanics-Statics |
| CHM 160, 161 General Chemistry I and Lab | 5 | CHEM 1310, 1319 General Chemistry I and Lab |
| CHM 170 General Chemistry II | 4 | CHEM 1320 General Chemistry II |
| CSC 160 or CSC 210 or CSC 140* Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) <small>*Will be substituted for COMP SCI 1500.</small> |
| MTH 229 Statistics for Engineering and Scientists | 3 | STAT 3115 Engineering Statistics* <small>or any statistics course 3000-level or higher. Satisfies statistics elective requirement. *STAT 3115 will be substituted for this requirement.</small> |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> |
| Humanities, Arts, and Social Sciences Select 3 hours. | | |
| HASS Elective | 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. |
| <i>No free electives applied to the degree.</i> | 0 | Maximum Free Electives |
| Group 2 Major Requirements | 40 | Group 2 Major Requirements |
| Group 1 Core Requirements | 30 | Group 1 Core Requirements |
| Total Hours | 70 | Total Hours* 65 |

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

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

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|--|---|-----------------|--|--|----|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| COM 105 | Public Speaking | 3 | SP&MS 1185 | Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CHM 170, 171 | General Chemistry II and Lab | 5 | CHEM 1320 | General Chemistry II | 3 |
| CHM 242 | Organic Chemistry I | 6 | CHEM 2210, 2219* | Organic Chemistry I and Lab* <small>*CHEM 2210 is a degree requirement. CHEM 2219 applies to the degree as 1 of 9 required science elective credits See note below.</small> | 4 |
| CHM 243 | Organic Chemistry II | 6 | CHEM 2220, 2229* | Organic Chemistry II (4) and Lab* (1) <small>*CHEM 2229 is not a degree requirement, transfers as general elective credit.</small> | 8 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3113.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements | | | | | |
| From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. | | | | | |
| *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences | | | | | |
| ENGLISH 3560 required. | | | | | |
| ENG150 | Technical Writing | 3 | ENGLISH 3560 | Technical Writing | 3 |
| <i>No free electives applied to the degree.</i> | | 0 | Maximum Free Electives | | 0 |
| Group 2 Major Requirements | | 50 | Group 2 Major Requirements | | 47 |
| Group 1 Core Requirements | | 30 | Group 1 Core Requirements | | 27 |
| Total Hours | | 80 | Total Hours* | | 74 |

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

Civil Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | <u>Semester</u> | <u>Missouri S&T</u> |
|---|-----------------|--|
| DDT 200 Production Design Drafting | 4 | MECH ENG 1720 Intro to Engineering Design |
| ENG 102 or ENG 150 or COM 105 Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> |
| CHM 160, 161 General Chemistry I and Lab | 5 | CHEM 1310*, 1319 General Chemistry I and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> |
| PHY 110 Intro to Geology | 4 | GEOLOGY 1110 (GEO ENG 1150) Physical and Environmental Geology |
| EGR 201 Engineering Statics | 3 | CIV ENG 2200 Engineering Mechanics-Statics |
| EGR 205 Engineering Dynamics | 3 | MECH ENG 2350 Engineering Mechanics-Dynamics |
| MTH 229 Statistics for Engineering and Scientists | 3 | STAT 3115 Engineering Statistics <small>Will be substituted for STAT 3113.</small> |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> |
| Humanities, Arts, and Social Sciences Select 3 hours. | | |
| HASS Elective | 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. |
| <i>No free electives applied to the degree.</i> | 0 | Maximum Free Electives |
| Group 2 Major Requirements | 40 | Group 2 Major Requirements |
| Group 1 Core Requirements | 30 | Group 1 Core Requirements |
| Total Hours | 70 | Total Hours* 70 |

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

Computer Engineering Group 2 Major Requirements

| Ozarks Technical Community College | | Semester | Missouri S&T | | |
|---|---|-----------------|--|--|----|
| COM 105 | Public Speaking | 3 | SPMS 1185 | Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310*, 1319 | General Chemistry I* and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> | 5 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| EGR 204 or CHM 242 or BIO 250 | Statics and Dynamics (3) or Organic Chemistry I (5) or Genetics (3) | 3 | MECH 2340 or CHEM 2210 or BIO SCI 2223 | Statics and Dynamics (3) or Organic Chemistry I (4) or General Genetics (3) | 3 |
| MTH 230 or MTH 215 | Linear Algebra or Algebraic Structures | 3 | MATH 3108 or MATH 3109 | Linear Algebra or Foundations of Mathematics <small>Satisfies a required math elective.</small> | 3 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3117.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| ENG 102 or ENG 150 | Composition II or Technical Writing | 3 | ENGLISH 1160 or ENGLISH 3560 | Writing and Research or Technical Writing | 3 |
| Electives | Maximum Free Electives | 3 | Electives | Maximum Free Electives | 3 |
| | Group 2 Major Requirements | 38 | | Group 2 Major Requirements | 38 |
| | Group 1 Core Requirements | 30 | | Group 1 Core Requirements | 27 |
| | Total Hours | 68 | | Total Hours* | 65 |

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

Electrical Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | <u>Semester</u> | <u>Missouri S&T</u> |
|---|--|--|
| DDT 200 | Production Design Drafting | MECH ENG 1720 |
| COM 105 | Public Speaking | SPMS 1185 |
| CHM 160, 161 | General Chemistry I and Lab | CHEM 1310*, 1319 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | COMP SCI 1500 or COMP SCI 1971, 1981* |
| EGR 204 or CHM 242 or BIO 250 | Statics and Dynamics (3) or Organic Chemistry I (5) or Genetics (3) | MECH ENG 2340 or CHEM 2210 or BIO SCI 2223 |
| MTH 230 | Linear Algebra | MATH 3108 |
| MTH 229 | Statistics for Engineering and Scientists | STAT 3115 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature |
| | 6 | 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 World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> |
| | | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language |
| | 6 | Early Western Civilization or Modern Western Civilization* or World Regional Geography 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 <small>*Satisfies the State of Missouri government requirement.</small> |
| | | 6 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | |
| ENG 102 or ENG 150 | Composition II or Technical Writing | ENGLISH 1160 or ENGLISH 3560 |
| | 3 | Writing and Research or Technical Writing |
| | | 3 |
| Electives | Maximum Free Electives | Electives |
| | 6 | Maximum Free Electives |
| | 45 | Group 2 Major Requirements |
| | 30 | Group 1 Core Requirements |
| | 75 | Total Hours* |
| | | 71 |

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

Engineering Management Group 2 Major Requirements

| Ozarks Technical Community College | | Semester | Missouri S&T | | |
|--|---|-----------------|--|--|----|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| COM 105 | Public Speaking | 3 | SPMS 1185 | Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CSC 140 | C++ Programming I | 3 | COMP SCI1971, 1981 | Intro to Programming Method and Lab (C++) | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| EGR 205 | Engineering Dynamics | 3 | MECH ENG 2350 | Engineering Mechanics-Dynamics | 2 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for the STAT 3117/3113 requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements | | | | | |
| From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. | | | | | |
| *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences | | | | | |
| Select 6 hours from at least two specific disciplines to include PSYCH 1101. | | | | | |
| PSY 110 | Intro to Psychology | 3 | PSYCH 1101 | General Psychology Required | 3 |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences | | | | | |
| Select 3 hours. | | | | | |
| ENG 102 or ENG 150 | Composition II or Technical Writing | 3 | ENGLISH 1160 or ENGLISH 3560 | Writing and Research or Technical Writing | 3 |
| | | 0 | Electives | Maximum Free Electives | 0 |
| | | 39 | | Group 2 Major Requirements | 37 |
| | | 30 | | Group 1 Core Requirements | 27 |
| Total Hours | | 69 | | Total Hours* | 61 |
| <small>*S&T advisor permission is required to transfer more than 61 credits toward the S&T Engineering Management degree.</small> | | | | | |

Environmental Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | <u>Semester</u> | <u>Missouri S&T</u> | |
|--|-----------------|--|----|
| DDT 200 | 4 | MECH ENG 1720 | 3 |
| ENG 102 or ENG 150 or COM 105 | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | 3 |
| PHY 110 | 4 | GEOLOGY 1110 (GEO ENG 1150) | 3 |
| CHM 160, 161 | 5 | CHEM 1310, 1319 | 5 |
| CHM 170 | 4 | CHEM 1320 | 3 |
| BIO 100 or BIO 160 | 4 | BIO SCI 1113, 1219* | 3 |
| EGR 201 | 3 | CIV ENG 2200 | 3 |
| EGR 205 | 3 | MECH ENG 2350 | 2 |
| MTH 229 | 3 | STAT 3115 | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements | | | |
| From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. | | | |
| *At least one course must be selected from HISTORY 1200, 1300, or 1310 to satisfy the State of Missouri government requirement and a degree-specific gen ed requirement. | | | |
| Humanities and Fine Arts | | | |
| Select 6 hours from at least two specific disciplines. At least one course in either the HFA or the BSS (below) section must be selected from HISTORY 1200, 1300, or 1310. | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | 6 |
| Behavioral and Social Sciences | | | |
| Select 6 hours from at least two specific disciplines.. At least one course in either the HFA (above) or the BSS section must be selected from HISTORY 1200, 1300, or 1310. | | | |
| HST 106* or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | 6 | HISTORY 1200* or PHILOS 1105 or PHILOS 1115 or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | 6 |
| *Satisfies the State of Missouri government requirement and a degree-specific gen ed requirement. | | | |
| <i>No free electives applied to the degree.</i> | | | |
| | 0 | Maximum Free Electives | 0 |
| | 45 | Group 2 Major Requirements | 40 |
| | 30 | Group 1 Core Requirements | 27 |
| Total Hours | 75 | Total Hours* | 67 |
| *S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree. | | | |

Geological Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|--|---|-----------------|--|--|---------------------|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 150 | Technical Writing | 3 | ENGLISH 3560 | Technical Writing <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310*, 1319 | General Chemistry I* and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> | 5 |
| PHY 110 | Intro to Geology | 4 | GEO ENG 1150 (GEOLOGY 1110) | Physical and Environmental Geology | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| EGR 205 | Engineering Dynamics | 3 | MECH ENG 2350 | Engineering Mechanics-Dynamics | 2 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3113.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements | | | | | |
| From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. | | | | | |
| *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences | | | | | |
| Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences | | | | | |
| Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| <i>No free electives applied to the degree.</i> | | | | | |
| | | 0 | | | 0 |
| | | 40 | | | 37 |
| | | 30 | | | 27 |
| | | 70 | | | 64 |
| | | | | | Total Hours* |

*S&T advisor permission is required to transfer more than 65 credits toward the S&T Geological Engineering degree.

Mechanical Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|---|---|-----------------|--|--|----|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310*, 1319 | General Chemistry I* and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> | 5 |
| CSC 140 | C++ Programming | 4 | COMP SCI 1971, 1981 | Intro to Programming Method and Lab (C++) | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| MTH 230 or MTH 229 | Linear Algebra or Statistics for Engineering and Scientists | 3 | MATH 3108 or STAT 3115* | Linear Algebra I or Engineering Statistics* pending approval for substitution <small>Satisfies the Advanced Math/Stat elective requirement. *STAT 3115 will be substituted for STAT 3113.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| | | 0 | | | 0 |
| | | 37 | | | 35 |
| | | 30 | | | 27 |
| | | 67 | | | 62 |
| <small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.</small> | | | | | |

Metallurgical Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|---|---|-----------------|--|--|-----------------|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* (C++) <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3113.</small> | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CHM 170 | General Chemistry II | 4 | CHEM 1320 | General Chemistry II | 3 |
| CHM 242 | Organic Chemistry I | 5 | CHEM 2210, 2219* | Organic Chemistry I and Lab* <small>*The lab is not an S&T degree requirement, transfers as general electric credit.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, 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 |
| | | 3 | | | 0 |
| | | 48 | | | 41 |
| | | 30 | | | 27 |
| | | Total Hours 78 | | | Total Hours* 68 |
| <small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.</small> | | | | | |

Mining Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | <u>Semester</u> | <u>Missouri S&T</u> | |
|---|---|--|--|
| DDT 200 | Production Design Drafting | MECH ENG 1720 | Intro to Engineering Design |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> |
| MTH 229 | Statistics for Engineering and Scientists | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3113.</small> |
| CHM 160, 161 | General Chemistry I and Lab | CHEM 1310, 1319 | General Chemistry I and Lab |
| EGR 201 | Engineering Statics | CIV ENG 2200 | Engineering Mechanics-Statics |
| EGR 205 | Engineering Dynamics | MECH ENG 2350 | Engineering Mechanics-Dynamics |
| PHY 110 | Intro to Geology | GEOLOGY 1110 (GEO ENG 1150) | Physical and Environmental Geology |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 12 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> |
| <i>No free electives applied to the degree.</i> | 0 | Maximum Free Electives | 0 |
| Group 2 Major Requirements | 37 | Group 2 Major Requirements | 34 |
| Group 1 Core Requirements | 30 | Group 1 Core Requirements | 27 |
| Total Hours | 67 | Total Hours* | 61 |
| <small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.</small> | | | |

Nuclear Engineering Group 2 Major Requirements

| Ozarks Technical Community College | | Semester | Missouri S&T | | |
|---|---|-----------------|--|--|-----------------|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CSC 140 | C++ Programming | 4 | COMP SCI 1971, 1981 | Intro to Programming Method and Lab (C++) | 3 |
| MTH 230 or MTH 215 | Linear Algebra or Algebraic Structures | 3 | MATH 3108 or MATH 3109 | Linear Algebra or Foundations of Mathematics | 3 |
| EGR 201 | Engineering Statics | 3 | CIV ENG 2200 | Engineering Mechanics-Statics | 3 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for the statistics requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines to include either ECON 1100 or 1200. | | | | | |
| ECO 275 or ECO 270 | Principles of Microeconomics or Principles of Macroeconomics | 3 | ECON 1100 or ECON 1200 | Principles of Microeconomics or Principles of Macroeconomics | 3 |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 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 American Government* or General Psychology or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 3 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| Maximum Free Electives | | 0 | Maximum Free Electives | | 0 |
| Group 2 Major Requirements | | 40 | Group 2 Major Requirements | | 38 |
| Group 1 Core Requirements | | 30 | Group 1 Core Requirements | | 27 |
| Total Hours | | 70 | | | Total Hours* 65 |
| *S&T advisor permission is required to transfer more than 69 credits toward the S&T Nuclear Engineering degree. | | | | | |

Petroleum Engineering Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | <u>Semester</u> | <u>Missouri S&T</u> |
|---|---|--|
| ENG 102 or ENG 150 | Composition II or Technical Writing 3 | ENGLISH 1160 or ENGLISH 3560 Writing and Research or Technical Writing <small>Applies to degree as Gen Ed Communication requirement.</small> 3 |
| CHM 160, 161 | General Chemistry I and Lab 5 | CHEM 1310*, 1319 General Chemistry I* and Lab <small>*CHEM 1310 will be substituted for CHEM 1305.</small> 5 |
| CSC 160 or CSC 210 | Python Programming I (3) or Data Structures (4) 3 | COMP SCI 1500 Computational Problem Solving 3 |
| PHY 110 | Intro to Geology 4 | GEOLOGY 1110 (GEO ENG 1150) Physical and Environmental Geology 3 |
| EGR 201 | Engineering Statics 3 | CIV ENG 2200 Engineering Mechanics-Statics 3 |
| EGR 205 | Engineering Dynamics 3 | MECH ENG 2350 Engineering Mechanics-Dynamics 2 |
| MTH 229 | Statistics for Engineering and Scientists 3 | STAT 3115 Engineering Statistics <small>Will be substituted for the statistics requirement.</small> 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> |
| Humanities, Arts, and Social Sciences Select 3 hours. | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. 3 | HASS Elective Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. 3 |
| <i>No free electives applied to the degree.</i> | | |
| Group 2 Major Requirements | | Maximum Free Electives |
| Group 1 Core Requirements | | Group 2 Major Requirements |
| Total Hours | | Group 1 Core Requirements |
| 69 | | Total Hours* 64 |

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

Semiconductor Engineering-Device Engineering Emphasis Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|---|--|-----------------|--|--|----|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CHM 170 | General Chemistry II | 4 | CHEM 1320 | General Chemistry II (3) | 3 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3117.</small> | 3 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| | | 3 | | | 3 |
| | | 40 | | | 38 |
| | | 30 | | | 27 |
| | | 70 | | | 65 |
| <small>*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.</small> | | | | | |

Semiconductor Engineering-Process Engineering Emphasis Group 2 Major Requirements

| <u>Ozarks Technical Community College</u> | | <u>Semester</u> | <u>Missouri S&T</u> | | |
|---|---|-----------------|--|--|----|
| DDT 200 | Production Design Drafting | 4 | MECH ENG 1720 | Intro to Engineering Design | 3 |
| ENG 102 or ENG 150 or COM 105 | Composition II or Technical Writing or Public Speaking | 3 | ENGLISH 1160 or ENGLISH 3560 or SPMS 1185 | Writing and Research or Technical Writing or Principles of Speech <small>Applies to degree as Gen Ed Communication requirement.</small> | 3 |
| CHM 160, 161 | General Chemistry I and Lab | 5 | CHEM 1310, 1319 | General Chemistry I and Lab | 5 |
| CHM 170 | General Chemistry II | 4 | CHEM 1320 | General Chemistry II (3) | 3 |
| MTH 229 | Statistics for Engineering and Scientists | 3 | STAT 3115 | Engineering Statistics <small>Will be substituted for STAT 3113.</small> | 3 |
| CSC 160 or CSC 210 or CSC 140* | Python Programming I (3) or Data Structures (4) or C++ Programming I (4) | 3 | COMP SCI 1500 or COMP SCI 1971,1981* | Computational Problem Solving or Intro to Programming Methodology and Lab* <small>*Will be substituted for COMP SCI 1500.</small> | 3 |
| Humanities, Arts, and Social Sciences General Education Requirements From the options listed in each group below, select 15 hours to include 6 hours Humanities and Fine Arts from at least two specific disciplines and 6 hours Behavioral and Social Sciences from at least two specific disciplines. *At least one course must be selected from HISTORY 1200, 1300, 1310, or POL SCI 1200 to satisfy the State of Missouri government requirement. | | | | | |
| Humanities and Fine Arts Select 6 hours from at least two specific disciplines. | | | | | |
| ENG 240 or ENG 241 or ENG 270 or ENG 271 or ENG 260 or HST 120* or HST 130* or ART 100 or MUS 105 or THR 101 or Literature | Survey of English Literature I or Survey of English Literature II or Survey of American Literature I or Survey of American Literature II or Survey of World Literature I or US History I: to 1865* or US History II: 1865-Present* or Art and Experience or Western Music Appreciation or Intro to Theater or Any literature with prerequisite of no more than English Composition I. <small>*Satisfies the State of Missouri government requirement.</small> | 6 | ENGLISH 1211 or ENGLISH 1212 or ENGLISH 1221 or ENGLISH 1222 or ENGLISH 1231 or HISTORY 1300* or HISTORY 1310* or ART 1180 or MUSIC 1150 or THEATRE 1190 or Literature | British Literature I: The Beginnings to 1800 or British Literature II: 1800 to Present American Literature: 1600 to 1865 or American Literature: 1865 to Present or World Literature I: Beginnings to the Renaissance or American History to 1877* or American History Since 1877* or Art Appreciation or Music Appreciation or Theatre via Video or Any literature with prerequisite of no more than ENGLISH 1120. <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Behavioral and Social Sciences Select 6 hours from at least two specific disciplines. | | | | | |
| HST 105 or HST 106* or GRY 101 or PHL 101 or PLS 101* or PSY 110 or ECO 275 or ECO 270 or Foreign Language | Ancient and Medieval World History or Modern World History* or World Geography or Intro to Philosophy or American Government and Politics* or Intro to Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 | HISTORY 1100 or HISTORY 1200* or HISTORY 2110 or PHIL 1105 or POL SCI 1200* or PSYCH 1101 or ECON 1100 or ECON 1200 or Foreign Language | Early Western Civilization or Modern Western Civilization* or World Regional Geography or Self and World: Intro to Philosophy or American Government* or General Psychology or Principles of Microeconomics or Principles of Macroeconomics or Elementary or Intermediate Foreign Language <small>*Satisfies the State of Missouri government requirement.</small> | 6 |
| Humanities, Arts, and Social Sciences Select 3 hours. | | | | | |
| HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 | HASS Elective | Humanities, Arts, Social Sciences Elective: Any history, art, music, theater, English and technical communication, philosophy, political science, psychology, economics, etymology, or foreign language. | 3 |
| | | 3 | | | 3 |
| | | 40 | | | 38 |
| | | 30 | | | 27 |
| Total Hours | | 70 | Total Hours* | | 65 |

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