

Name:

Key:

| |
|---------------------------------|
| Done |
| In Progress |
| Possible based on prerequisites |

2017-2018 Architectural Engineering Curriculum

This chart was prepared by Freshman Engineering using the 2017-2018 catalog. It is designed to assist in advising and course selection; refer to the student's catalog requirement year for official requirements and to the student's degree audit for official progress.

| | | | | | | | | |
|---------------|-----|--|-----------------|--------------|---|--|---|--|
| Prerequisites | FEP | | Math | 1103 | Fundamentals of Algebra | Prerequisite: Entrance requirements. | 3 | |
| | FEP | | Math | 1120 | College Algebra | Prerequisite: By placement examination. | 5 | |
| | FEP | | Math | 1140 | College Algebra | Prerequisite: By placement examination. | 3 | |
| | FEP | | Math | 1160 | Trigonometry | Prerequisite: Math 1120 or 1140 with a grade of "C" or better; or by placement exam. | 2 | |
| Semester 1 | FEP | | Chem | 1100 | Introduction to Laboratory Safety & Hazardous Materials | | 1 | |
| | FEP | | Fr Eng | 1100 | Study & Careers in Engineering | | 1 | |
| | FEP | | Math | 1214 | Calculus for Engineers I | Prerequisites: A grade of "C" or better in both Math 1160 and one of Math 1120 or Math 1140; or by placement exam. | 4 | |
| | FEP | <i>Hum/Soc Sci Requirement-English</i> | English | 1120 | Exposition and Argumentation | | 3 | |
| | FEP | <i>Hum/Soc Sci Elective - History</i> | History/Pol Sci | one of these | 1. History 1200 Modern Western Civilization (preferred) 2. History 1300 American History to 1877 3. History 1310 American History Since 1877 4. Pol Sci 1200 American Government | | 3 | |
| | FEP | | Chem | 1310 | General Chemistry I | Prerequisite: Entrance requirements. | 4 | |
| | FEP | | Chem | 1319 | General Chemistry Laboratory | Prerequisite: Preceded or accompanied by both Chem 1310 and Chem 1100. | 1 | |
| Semester 2 | FEP | | Math | 1215 | Calculus for Engineers II | Prerequisites: Math 1160 and either Math 1208 or Math 1214 both with a grade of "C" or better; or by placement exam. | 4 | |
| | FEP | <i>Hum/Soc Sci Elective - Econ</i> | Econ | one of these | 1. Econ 1100 Principles of Microeconomics 2. Econ 1200 Principles of Macroeconomics | | 3 | |
| | FEP | | Mech Eng | 1720 | Introduction to Engineering Design | | 3 | |
| | FEP | | Physics | 1135 | Engineering Physics I | Prerequisite: Math 1208 or 1214 | 4 | |

| | | | | | | | |
|------------|--|----------|------|---|--|---|--|
| Semester 3 | | Civ Eng | 2200 | Statics | Prerequisites: Physics 1135 or Physics 1111 with a grade of "C" or better; Math 1215 or Math 1221 with a grade of "C" or better; preceded or accompanied by Math 2222. | 3 | |
| | | Math | 2222 | Calculus with Analytic Geometry III | Prerequisites: Math 1215 or Math 1221 with a grade of "C" or better. | 4 | |
| | | Physics | 2135 | Engineering Physics II | Prerequisites: Physics 1135 or Physics 1111, Math 1221 or Math 1215. | 4 | |
| | | Civ Eng | 2401 | Fundamentals of Surveying | Prerequisite: Preceded or accompanied by Math 1214 (or 1208). | 3 | |
| | | Arch Eng | 2003 | Engineering Communications and Computations | (Co-listed with Civ Eng 2003) | 3 | |

17

| | | | | | | | | |
|------------|--|--------------------------------------|----------|---|--|---|---|--|
| Semester 4 | | Stat | 3113 | Applied Engineering Statistics | Prerequisite: Math 1215 or 1221 with a grade of "C" or better. | 3 | | |
| | | Civ Eng | 2210 | Mechanics of Materials | Prerequisite: Civ Eng 2200 with grade of "C" or better. | 3 | | |
| | | Civ Eng | 2211 | Materials Testing | Prerequisite: Preceded or accompanied by Civ Eng 2210. | 1 | | |
| | | Arch Eng | 2103 | Architectural Materials and Methods of Construction | Prerequisites: Chem 1310, Chem 1319 and Sophomore standing. | 3 | | |
| | | <i>Hum/Soc Sci Requirement - Art</i> | Art | 3203 | Architectural Design I | Prerequisite: Sophomore standing. | 3 | |
| | | | Math | 3304 | Elementary Differential Equations | Prerequisite: Math 2222 with a grade of "C" or better. | 3 | |
| | | | Mech Eng | 2350 | Engineering Mechanics - Dynamics | Prerequisites: A grade of "C" or better in each of Civ Eng 2200 and Math 2222 | 2 | |

18

| | | | | | | | |
|------------|--|----------|------|--|--|---|--|
| Semester 5 | | Arch Eng | 3201 | Structural Analysis I | Prerequisites: Civ Eng 2200, Civ Eng 2210 each with a grade of "C" or better. (Co-listed with Civ Eng 3201). | 3 | |
| | | Civ Eng | 3330 | Engineering Fluid Mechanics | Prerequisites: Mech Eng 2350 or Mech Eng 2340, and MATH 3304, each with a grade of "C" or better. | 3 | |
| | | Mech Eng | 2527 | Thermal Analysis | Prerequisites: Math 1215 (or 1221), Physics 1135. | 3 | |
| | | Arch Eng | 3803 | Building Electrical Systems | Prerequisites: Math 3304 and Physics 2135. | 3 | |
| | | Arch Eng | 3804 | Architectural Design II | Prerequisite: Art 3203. | 3 | |
| | | Civ Eng | 3715 | Fundamentals of Geotechnical Engineering | Prerequisite: Geo Eng 1150 or Arch Eng 2103; Civ Eng 2210; and preceded or accompanied by Civ Eng 3330. | 3 | |

18

| | | | | | | | | |
|------------|--|--|---------|--|---|---|---|--|
| Semester 6 | | Arch Eng | 3805 | Building Lighting Systems | Prerequisites: Arch Eng 3803 and Arch Eng 3804. | 3 | | |
| | | Arch Eng | 5872 | Environmental Controls | Prerequisites: Mech Eng 3521 and accompanied or preceded by Mech Eng 3525; or Mech Eng 2527 and Civ Eng 3330. (Co-listed with Mech Eng 5571). | 3 | | |
| | | Civ Eng | 3116 | Construction Materials, Properties and Testing | Prerequisites: Civ Eng 2211 or Min Eng 3812; Civ Eng 3715 or both Geo Eng 1150 and Min Eng 3412. | 3 | | |
| | | <i>Hum/Soc Sci Requirement - History</i> | History | 2510 | History of Technology | Prerequisite: History 1100 or 1200 or 1300 or 1310. | 3 | |
| | | Arch Eng | 3220 | Reinforced Concrete Design | Prerequisite: Arch Eng 3201 with grade of "C" or better. (Co-listed with Civ Eng 3220). | 3 | | |

15

| | | | | | | | | |
|------------|--|---|---------|--|--|---|---|--|
| Semester 7 | | Arch Eng | 4010 | Senior Seminar: Engineering in a Global Society | Prerequisite: Senior standing. (Co-listed with Civ Eng and Env Eng 4010). | 1 | | |
| | | Arch Eng | 3210 | Structural Design in Metals | Prerequisite: Arch Eng 3201 with grade of "C" or better. (Co-listed with Cv Eng 3210). | 3 | | |
| | | Arch Eng | 4448 | Fundamentals of Contracts and Construction Engineering | Prerequisite: Senior Standing. (Co-listed with Civ Eng 4448). | 3 | | |
| | | <i>Hum/Soc Sci Requirement - History</i> | History | 4550 | Architecture, Technology, & Society; 1750 to Present | Prerequisites: History 1100 or 1200 or 1300 or 1310 or Pol Sci 1200. Recommended: Junior or Senior Standing. Recommended for Arch Eng majors: Art 3203 taken prior to course. | 3 | |
| | | <i>Technical Elective - Emphasis Area</i> | various | one of these | Choose technical electives from approved lists under Emphasis Areas for Architectural Engineering Students. A maximum of 3 credits of independent study (ARCH ENG 5000 or ARCH ENG 4099) may be used as a technical elective. Additional independent study course may be taken but will not count towards the B.S. Architectural Engineering degree. | Prerequisites vary. | 3 | |
| | | | Eng Mgt | 1210 | Economic Analysis of Engineering Projects | Prerequisites: Math 1214. | 2 | |

15

| | | | | | | | | |
|------------|-------------------------------|---|--------------|---|--|-----------------------------|---|--|
| Semester 8 | | Arch Eng | 4097 | Senior Design Project | Prerequisite: Arch Eng 4448 or Civ Eng 4448. (Co-listed with Civ Eng 4097 and Env Eng 4097). | 3 | | |
| | | <i>Technical Elective - Emphasis Area</i> | various | one of these | Choose technical electives from approved lists under Emphasis Areas for Architectural Engineering Students. A maximum of 3 credits of independent study (ARCH ENG 5000 or ARCH ENG 4099) may be used as a technical elective. Additional independent study course may be taken but will not count towards the B.S. Architectural Engineering degree. | Prerequisites vary. | 3 | |
| | | | Civ Eng | 4729 | Foundation Engineering | Prerequisite: Civ Eng 3715. | 3 | |
| | | <i>Hum/Soc Sci Elective</i> | various | one of these | Course chosen from Requirements for Humanities and Social Sciences Courses for Engineering Degrees at ugs.mst.edu. | Prerequisites vary. | 3 | |
| | <i>Basic Science Elective</i> | various | one of these | <ol style="list-style-type: none"> 1. Chem 1301 General Chemistry for Non-Science Majors 2. Geology 1111 Introduction to Physical Geology 3. Geology 2610 Mineralogy and Crystallography 4. Bio Sci 1213 Principles of Biology 5. Bio Sci 1943 Introduction to Human Anatomy and Physiology I 6. Physics 1505 Introductory Astronomy 7. Physics 2305 Introduction to Modern Physics | <p>Each student is required to take three hours of basic science electives in consultation with his/her academic advisor.</p> <ol style="list-style-type: none"> 1. Prerequisite: Entrance requirements. 2. Prerequisite: Entrance requirements. 3. Prerequisites: Chem 1310 and Chem 1319. 4. Prerequisite: Entrance requirements. 5. Prerequisite: Any high school or college Biology course. 6. 7. Prerequisites: Math 2222 and Physics 2135 or 2111. | 3 | | |

15

Total = 129