



ASSOCIATE OF SCIENCE

**PRE-ENGINEERING – ELECTRICAL  
ENGINEERING**

2021 Catalog

Effective Summer 2020

**4102**

*The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.*

Engineering Technologies Division

Engineering Technology Department

**ARTICULATING TO A BS IN ELECTRICAL ENGINEERING  
WITH THE UNIVERSITY OF AKRON**

| Course Number                           | Course Title   | Credits   | Pre- and Co-Requisites                                       | Completed Sem./Year |
|---|--|-----------|--|---------------------|
| <b>FRESHMAN EXPERIENCE</b>              |  |           |  |                     |
| SSC101                                  | Student Success Seminar <sup>^^</sup>  | 1         | Take first semester  |                     |
| <b>WRITTEN &amp; ORAL COMMUNICATION</b> |  |           |  |                     |
| ENG124                                  | College Composition <sup>^</sup>   | 3         | Co-ENG024 or Co-ENG011 or Proficiency                        |                     |
| <b>SOCIAL &amp; BEHAVIORAL SCIENCES</b> |  |           |  |                     |
| BUS221                                  | Microeconomics <sup>^</sup>  | 3         | IDS102 or Proficiency  |                     |
| SOC225                                  | Cultural Diversity   | 3         |  |                     |
| <b>ARTS &amp; HUMANITIES</b>            |  |           |  |                     |
| HIS122                                  | U.S. History II from 1877  | 3         |  |                     |
| PHL122                                  | Ethics   | 3         |  |                     |
| <b>SCIENCES &amp; MATHEMATICS</b>       |  |           |  |                     |
| CHM141                                  | General Chemistry I (lab) <sup>^</sup> ▲   | 5         | (CHM101 or Proficiency) or (MTH024 or MTH025 or Proficiency) |                     |
| MTH135                                  | Precalculus <sup>^</sup> – A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement. | 5         | MTH025 or Proficiency  |                     |
| MTH223                                  | Analytical Geometry and Calculus I <sup>^*</sup>   | 4         | MTH135 or (MTH125 and MTH130) or Proficiency                 |                     |
| MTH224                                  | Analytical Geometry and Calculus II  | 4         | MTH223   |                     |
| MTH227                                  | Ordinary Differential Equations  | 3         | MTH224   |                     |
| <b>CONCENTRATION CORE</b>               |  |           |  |                     |
| MTH225                                  | Analytical Geometry and Calculus III   | 4         | MTH224   |                     |
| PHY221                                  | General Physics I w/Calculus (lab)   | 5         | MTH223 and MTH224  |                     |
| EET120                                  | DC Circuit Analysis  | 4         | Pre-Co-MTH125 or Pre-Co-MTH135                               |                     |
| EET122                                  | AC Circuit Analysis  | 4         | (Pre-Co-MTH130 or Pre-Co-MTH135) and EET120                  |                     |
| CSE122                                  | Programming Logic and Problem Solving <sup>^</sup>   | 3         | (IDS102 or Proficiency) and (ITD100 or Proficiency)          |                     |
| CST121                                  | Modeling and Simulation  | 3         | MTH221 or MTH223   |                     |
| MET124                                  | Statics and Strength of Materials  | 4         | Pre-Co-PHY121 or Pre-Co-PHY221                               |                     |
| <b>TOTAL CREDIT HOURS</b>               |  | <b>64</b> |  |                     |

<sup>^</sup>Based on SSC placement scores

<sup>^^</sup>To promote student success, this course should be taken in the first semester

▲ Because of the strong emphasis on science in this major, applicants must have successfully completed Chemistry and Biology in high school. Students who did not complete the courses in high school, and those who prefer to refresh their knowledge of the material, should complete the listed pre-requisites.

\*Students who test directly into Analytical Geometry and Calculus I should contact the Math Department Chair for the possibility of receiving

credit for Precalculus.

## FULL-TIME STUDENT ADVISING NOTES

### Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

### Course Sequence

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in two years.

### Elective Additional Credit

Bridge courses that can be taken at Stark State College, prior to attending the University of Akron, that apply towards the University of Akron BS Degree: COM121, ENG221, PHY222, MTH227 and CSE233. If you plan on taking additional courses at Stark State College beyond this list, we recommend you verify transferability with a University of Akron advisor prior to taking the course. Self-selection of courses and not following the approved degree program could adversely affect graduation, transfer to a 4-year institution, and financial aid. Visit Transferology at <http://www.transferology.com> to assist in developing a plan for transferring to another college or university. Students should select Ohio Transfer Module approved and TAG approved courses.

### Bachelor's Degree

Bachelor's degree requirements and course transferability are controlled by the institution to which the student plans to transfer. Contact the University of Akron's Transfer Student Services Center (330-972-7009) during the first semester to discuss junior year Stark State College Associate of Science pre-engineering transition strategies to the University of Akron's Engineering BS programs.

| <u>First Semester</u>  |  | <u>Credit Hours</u> | <u>Pre- or Co-requisites</u>  |
|------------------------|--|---------------------|---|
| SSC101                 | Student Success Seminar^^  | 1                   | <i>Take first semester</i>  |
| CHM141                 | General Chemistry I (lab)^▲  | 5                   | (CHM101 <b>or</b> Proficiency) <b>or</b><br>(MTH024 <b>or</b> MTH025 <b>or</b> Proficiency) |
| ENG124                 | College Composition^   | 3                   | Co-ENG024 <b>or</b> Co-ENG011 <b>or</b><br>Proficiency                                      |
| MTH135                 | Precalculus^ – A student may take MTH125<br>(College Algebra) and MTH130 (Trigonometry)<br>over two semesters to satisfy this requirement. | 5                   | MTH025 <b>or</b> Proficiency  |
| EET120                 | DC Circuit Analysis  | 4                   | Pre-Co-MTH125<br><b>or</b> Pre-Co-MTH135  |
|                        |  | <b>18</b>           |   |
| <u>Second Semester</u> |  |                     |   |
| SOC225                 | Cultural Diversity   | 3                   |   |
| MTH223                 | Analytical Geometry and Calculus I^*   | 4                   | MTH135 <b>or</b> (MTH125 and MTH130) <b>or</b><br>Proficiency                               |
| EET122                 | AC Circuit Analysis  | 4                   | (Pre-Co-MTH130 <b>or</b><br>Pre-Co-MTH135) <b>and</b> EET120                                |
| PHL122                 | Ethics   | 3                   |   |
|                        |  | <b>14</b>           |   |
| <u>Summer Semester</u> |  |                     |   |
| MTH224                 | Analytical Geometry and Calculus II  | 4                   | MTH223  |
| <u>Third Semester</u>  |  |                     |   |
| PHY221                 | General Physics I w/Calculus (lab)   | 5                   | MTH223 <b>and</b> MTH224  |
| MTH225                 | Analytical Geometry and Calculus III   | 4                   | MTH224  |
| MET124                 | Statics and Strength of Materials  | 4                   | Pre-Co-PHY121 <b>or</b> Pre-Co-PHY221   |
|                        |  | <b>13</b>           |   |
| <u>Fourth Semester</u> |  |                     |   |
| CSE122                 | Programming Logic and Problem Solving^   | 3                   | (IDS102 <b>or</b> Proficiency)<br><b>and</b> (ITD100 <b>or</b> Proficiency)                 |
| MTH227                 | Ordinary Differential Equations  | 3                   | MTH224  |
| BUS221                 | Microeconomics^  | 3                   | IDS102 <b>or</b> Proficiency  |
| CST121                 | Modeling and Simulation  | 3                   | MTH221 <b>or</b> MTH223   |
| HIS122                 | U.S. History II from 1877  | 3                   |   |
|                        |  | <b>15</b>           |   |
|                        | <b>TOTAL CREDITS</b>   | <b>64</b>           |   |

^Based on SSC placement scores

^^To promote student success, this course should be taken in the first semester

▲ Because of the strong emphasis on science in this major, applicants must have successfully completed Chemistry and Biology in high school. Students who did not

complete the courses in high school, and those who prefer to refresh their knowledge of the material, should complete the listed pre-requisites.

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