



**Pre Engineering (Pre-Calculus Start)**  
**Associate in Applied Science**  
**Five Semester Pathway Academic Year 2025-2026**

| Semester 1 (Fall)   | Requirement                                        | Recommended                                                                 | Prerequisites                  | Corequisites            | Credits | My Plan |
|---------------------|----------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------|-------------------------|---------|---------|
| ENGR 100            | Introduction to Engineering                        |                                                                             | ENGL 080 or ENGL 101           |                         | 2       |         |
| ENGL 100            | English Composition                                |                                                                             | ENGL 080                       |                         | 3       |         |
| ENGL 110            | Oral Communications                                |                                                                             | ENGL 080 or ENGL 101           |                         | 3       |         |
| MATH 190            | Precalculus                                        |                                                                             | MATH 140, MATH 146             |                         | 3       |         |
| MATH 225            | Discrete Mathematics                               | If pursuing Computer or Electrical Engineering Option                       | MATH 140, ENGL 080 or ENGL 101 |                         | 3       |         |
| Semester 2 (Spring) | Requirement                                        | Recommended                                                                 | Prerequisites                  | Corequisites            | Credits | My Plan |
| COMM 201            | Technical Writing/Communications                   |                                                                             | ENGL 100 or ENGL 101           |                         | 3       |         |
| CSCI 110            | Principles of Computer Science                     |                                                                             | MATH 040                       |                         | 4       |         |
| MATH 260            | Calculus I                                         |                                                                             | MATH 190                       |                         | 4       |         |
| PHYS 200            | Physics for Engineers I with Lab                   |                                                                             | MATH 190                       | MATH 260                | 4       |         |
| Semester 3 (Fall)   | Requirement                                        | Recommended                                                                 | Prerequisites                  | Corequisites            | Credits | My Plan |
| ENGR 200            | Engineering Statics                                | If pursuing Mechanical Engineering Option                                   | ENGR 100, PHYS 200, MATH 260   |                         | 3       |         |
| CHEM 131            | Chemistry for Engineers with Lab                   | Offered Fall only                                                           | MATH 190                       |                         | 4       |         |
| MATH 270            | Calculus II                                        |                                                                             | MATH 260                       |                         | 4       |         |
| PHYS 250            | Physics for Engineers II with Lab                  |                                                                             | PHYS 200, MATH 260             |                         | 4       |         |
| Semester 4 (Spring) | Requirement                                        | Recommended                                                                 | Prerequisites                  | Corequisites            | Credits | My Plan |
| ENGR 216            | Circuits I: Steady State Analysis                  | Offered Spring only                                                         |                                | MATH 270, PHYS 250      | 3       |         |
| ENGR 250            | Strength of Materials                              | If pursuing Mechanical Engineering Option - Offered Spring only             | ENGR 200, MATH 270             |                         | 3       |         |
| ENGR 172            | Digital Logic                                      | If pursuing Computer or Electrical Engineering Option - Offered Spring only | MATH 225                       |                         | 4       |         |
| MATH 280            | Calculus III                                       | If pursuing Mechanical Engineering Option                                   | MATH 270                       |                         | 4       |         |
| ENGL 115            | Introduction to Literature                         |                                                                             | ENGL 100 or ENGL 101           |                         | 3       |         |
|                     | Social Science Elective                            |                                                                             | See course prerequisites       | See course corequisites | 3       |         |
| Semester 5 (Fall)   | Requirement                                        | Recommended                                                                 | Prerequisites                  | Corequisites            | Credits | My Plan |
| MATH 275            | Intro to Differential Equations and Linear Algebra | Offered Fall Only                                                           | MATH 270                       |                         | 4       |         |
| ENGR 230            | Thermodynamics I: Laws & Properties                | If pursuing Mechanical Engineering Option - Offered Fall only               | MATH 270, PHYS 200             |                         | 3       |         |
| Semester 6 (Summer) | Requirement                                        | Recommended                                                                 | Prerequisites                  | Corequisites            | Credits | My Plan |
| ENGR 217            | Circuits II: System Dynamics with Lab              | If pursuing Computer or Electrical Engineering Option - Offered Summer only | ENGR 216                       | COMM 201, MATH 275      | 4       |         |

[Advice on Choosing Electives](#)



## Pre Engineering

| <b>General Education Requirements</b> |                                                            |                                |                    |         |     |
|---------------------------------------|------------------------------------------------------------|--------------------------------|--------------------|---------|-----|
| COURSE CODE                           | COURSE TITLE                                               | PREREQUISITES                  | COREQUISITES       | CREDITS | MET |
| ENGL 100                              | English Composition                                        | ENGL 080                       |                    | 3       |     |
| ENGL 115                              | Introduction to Literature                                 | ENGL 100 or ENGL 101           |                    | 3       |     |
| MATH 140                              | College Algebra*                                           | MATH 040                       |                    | 3       |     |
| MATH 146                              | Introduction to Trigonometry*                              | MATH 040                       | MATH 140           | 1       |     |
| MATH 190                              | Precalculus                                                | MATH 140, MATH 146             |                    | 3       |     |
| CHEM 131                              | Chemistry for Engineers with Lab                           | MATH 190                       |                    | 4       |     |
| ENGL 110                              | Oral Communications                                        | ENGL 080 or ENGL 101           |                    | 3       |     |
|                                       | Social Science Electives                                   |                                |                    | 3       |     |
| <b>Major Required Courses</b>         |                                                            |                                |                    |         |     |
| COURSE CODE                           | COURSE TITLE                                               | PREREQUISITES                  | COREQUISITES       | CREDITS | MET |
| COMM 201                              | Technical Writing                                          | ENGL 100 or ENGL 101           |                    | 3       |     |
| ENGR 100                              | Introduction to Engineering                                | ENGL 080 or ENGL 101           |                    | 2       |     |
| ENGR 216                              | Circuits I: Steady-State Analysis                          |                                | MATH 270, PHYS 250 | 3       |     |
| MATH 260                              | Calculus I                                                 | MATH 190                       |                    | 4       |     |
| MATH 270                              | Calculus II                                                | MATH 260                       |                    | 4       |     |
| MATH 275                              | Introduction to Differential Equations with Linear Algebra | MATH 270                       |                    | 4       |     |
| PHYS 200                              | Physics for Engineers I with Lab                           | MATH 190                       | MATH 260           | 4       |     |
| PHYS 250                              | Physics for Engineers II with Lab                          | PHYS 200, MATH 260             |                    | 4       |     |
| <b>Computer Engineering Option</b>    |                                                            |                                |                    |         |     |
| CSCI 110                              | Principles of Computer Science                             | MATH 040                       |                    | 4       |     |
| ENGR 172                              | Digital Logic                                              | MATH 225                       |                    | 4       |     |
| ENGR 217                              | Circuits II: System Dynamics                               | ENGR 216                       | COMM 201, MATH 275 | 4       |     |
| MATH 225                              | Discrete Mathematics                                       | MATH 140, ENGL 080 or ENGL 101 |                    | 3       |     |
| <b>Electrical Engineering Option</b>  |                                                            |                                |                    |         |     |
| ENGR 172                              | Digital Logic                                              | MATH 225                       |                    | 4       |     |
| ENGR 217                              | Circuits II: System Dynamics                               | ENGR 216                       | COMM 201, MATH 275 | 4       |     |
| MATH 225                              | Discrete Mathematics                                       | MATH 140, ENGL 080 or ENGL 101 |                    | 3       |     |
| <b>Mechanical Engineering Option</b>  |                                                            |                                |                    |         |     |
| ENGR 200                              | Engineering Statics                                        | ENGR 100, PHYS 200, MATH 260   |                    | 3       |     |
| ENGR 230                              | Thermodynamics I: Laws & Properties                        | MATH 270, PHYS 200             |                    | 3       |     |
| ENGR 250                              | Strength of Materials                                      | ENGR 200, MATH 270             |                    | 3       |     |
| MATH 280                              | Calculus III                                               | MATH 270                       |                    | 4       |     |

\*For students starting at a more advanced level in math based on placement testing, they can substitute either CSCI 110 (Electrical/Mechanical Engineering) or CSCI 160 (Computer Engineering) in the place of MATH 140 & MATH 146.