

# DURHAM TECHNICAL COMMUNITY COLLEGE

## PLAN OF STUDY AND ADVISING GUIDE

Revised Fall 2022

### BUILDING, ENGINEERING, AND SKILLED TRADES

Catalog/Academic Year 2023-2024

#### Associate in Engineering Degree (A10500)

For more information, please see these links:

- [Uniform Articulation Agreement](http://www.nccommunitycolleges.edu/academic-programs-college-transferarticulation-agreements) (Associate of Engineering), which explains policies regarding transfer of credits (www.nccommunitycolleges.edu/academic-programs-college-transferarticulation-agreements)
- [Baccalaureate Degree Plans](http://www.northcarolina.edu/Transfer-Students/NC-Community-College-Transfer), which show a four-year course plan suggested by the four-year universities (www.northcarolina.edu/Transfer-Students/NC-Community-College-Transfer)
- [Course Substitution Policies](http://durhamtech.edu/policies-and-procedures/course-waiver) (durhamtech.edu/policies-and-procedures/course-waiver)

*Developmental courses may be required based on college placement and course requisites.*

#### FIRST SEMESTER

| Session A | Session B | 16 Weeks | Course                                                        | Credit Hours |
|-----------|-----------|----------|---------------------------------------------------------------|--------------|
|           | X         |          | ACA 122 College Transfer Success                              | 1            |
| X         | X         |          | EGR 150 Intro to Engineering                                  | 2            |
| X         |           |          | ENG 111 Writing and Inquiry                                   | 3            |
|           |           | X        | MAT 271 Calculus I                                            | 4            |
|           | X         |          | Communications and Humanities/Fine Arts (COM 231 Recommended) | 3            |
| X         |           |          | Other General Education (HUM 110 Recommended)                 | 3            |
|           |           |          | TOTAL CREDIT HOURS                                            | 16           |

#### SECOND SEMESTER

| Session A | Session B | 16 Weeks | Course                                      | Credit Hours |
|-----------|-----------|----------|---------------------------------------------|--------------|
|           |           | X        | CHM 151 General Chemistry I                 | 4            |
| X         |           |          | ENG 112 Writing/Research in the Disciplines | 3            |
|           |           | X        | MAT 272 Calculus II                         | 4            |
|           |           | X        | PHY 251 General Physics I                   | 4            |
|           |           |          | TOTAL CREDIT HOURS                          | 15           |

#### THIRD SEMESTER

| Session A | Session B | 16 Weeks | Course                                   | Credit Hours |
|-----------|-----------|----------|------------------------------------------|--------------|
|           |           | X        | MAT 273 Calculus III                     | 4            |
|           |           | X        | PHY 252 General Physics II               | 4            |
| X         | X         |          | Pre-Major Elective (DFT 170 Recommended) | 3            |
|           | X         | X        | Pre-Major Elective (MAT 280 Recommended) | 3            |
|           |           |          | TOTAL CREDIT HOURS                       | 14           |

#### FOURTH SEMESTER

| Session A | Session B | 16 Weeks | Course                                                        | Credit Hours |
|-----------|-----------|----------|---------------------------------------------------------------|--------------|
|           | X         |          | ECO 251 Prin of Microeconomics                                | 3            |
|           | X         |          | Communications and Humanities/Fine Arts (PHI 240 Recommended) | 3            |
|           |           | X        | Pre-Major Elective (EGR 220 Recommended)                      | 3            |
| X         |           | X        | Pre-Major Elective (MAT 285 Recommended)                      | 3            |
| X         |           |          | Social/Behavioral Sciences (PSY 150 Recommended)              | 3            |
|           |           |          | TOTAL CREDIT HOURS                                            | 15           |

MINIMUM SEMESTER HOURS REQUIRED FOR AE DEGREE

60

Use the guide below to select and track courses for the plan of study.

## General Education: 45-46 SHC

### Universal General Education Transfer Component (UGETC): 38 SHC

(All UGETC will transfer for equivalency credit)

| English Composition (6 SHC)                                      | SHC | SEM | Grade |
|------------------------------------------------------------------|-----|-----|-------|
| ENG 111 Writing and Inquiry<br>(Prereq: ENG 002 Tier 1)          | 3   |     |       |
| ENG 112 Writing/Research in the Disciplines<br>(Prereq: ENG 111) | 3   |     |       |

| Communications and Humanities/Fine Arts (6 SHC)                                                                                                                                                    | SHC | SEM | Grade |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------|
| Choose from ART 111, <b>COM 231</b><br>(Prereq: ENG 002 Tier 1)                                                                                                                                    | 3   |     |       |
| Choose from ENG 231, ENG 232, ENG 241, ENG 242, PHI 215, <b>PHI 240</b> , REL 110 (See <b>Notes</b> regarding REL 110)<br>(Prereq: All ENG – ENG 112; All PHI – ENG 111; REL 110 – ENG 002 Tier 1) | 3   |     |       |

| Social/Behavioral Sciences (6 SHC)                                                                            | SHC | SEM | Grade |
|---------------------------------------------------------------------------------------------------------------|-----|-----|-------|
| ECO 251 Principles of Microeconomics<br>(Prereq: ENG 002 Tier 1 and MAT 003 Tier 1)                           | 3   |     |       |
| Choose from HIS 111, HIS 112, HIS 131, HIS 132, POL 120, <b>PSY 150</b> , SOC 210<br>(Prereq: ENG 002 Tier 1) | 3   |     |       |

Calculus I is the lowest level math course that will be accepted by the engineering programs for transfer as a math credit.

Students who are not calculus-ready will need to take additional math courses.

| Mathematics (12 SHC)                                                           | SHC | SEM | Grade |
|--------------------------------------------------------------------------------|-----|-----|-------|
| MAT 271 Calculus I<br>(Prereq: MAT 172)                                        | 4   |     |       |
| MAT 272 Calculus II<br>(Prereq: MAT 271)                                       | 4   |     |       |
| MAT 273 Calculus III (See <b>Notes</b> regarding MAT 273)<br>(Prereq: MAT 272) | 4   |     |       |

| Natural Sciences (12 SHC)                                                         | SHC | SEM | Grade |
|-----------------------------------------------------------------------------------|-----|-----|-------|
| CHM 151 General Chemistry I<br>(Prereq: ENG 002 Tier 1 and MAT 003 Tier 2)        | 4   |     |       |
| PHY 251 General Physics I<br>(Prereq: ENG 002 Tier 1 and MAT 271; Coreq: MAT 272) | 4   |     |       |
| PHY 252 General Physics II<br>(Prereq: MAT 272 and PHY 251)                       | 4   |     |       |

| Other General Education (3-4 SHC)                                                                                                                                          | SHC | SEM | Grade |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------|
| Choose from BIO 111, CHM 152, COM 231, GEL 111, <b>HUM 110</b> , PHI 240<br>(Prerequisites vary – consult with advisor or check course description on Durham Tech website) | 3-4 |     |       |

Total UGETC SHC Completed: \_\_\_\_\_

## Other Required Hours (14-15 SHC)

(Student should consult with his or her advisor to complete, based on the requirements of the selected receiving institution and the student's intended major.)

| Course               | Comments                                                                                                                                                                                                                                                                                       | SHC   | SEM | Grade |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------|
| Academic Transition  | ACA 122 College Transfer Success<br>(Prereq: None. <b>This course should be taken in the student's first semester.</b> )                                                                                                                                                                       | 1     |     |       |
| Pre-major Elective   | EGR 150 Introduction to Engineering<br>(Prereq: ENG 002 Tier 1 and MAT 003 Tier 2)                                                                                                                                                                                                             | 2     |     |       |
| Additional Course(s) | Choose from BIO 111, CHM 152, CHM 251, CHM 252, COM 231, CSC 134, CSC 151; <b>DFT 170, EGR 220, HUM 110, MAT 280, MAT 285, PED 110, WBL 111, WBL 121</b><br>(See <b>Notes</b> regarding WBL)<br>(Prerequisites vary – consult with advisor or check course description on Durham Tech website) | 11-12 |     |       |
| Additional Course    |                                                                                                                                                                                                                                                                                                |       |     |       |
| Additional Course    |                                                                                                                                                                                                                                                                                                |       |     |       |
| Additional Course    |                                                                                                                                                                                                                                                                                                |       |     |       |
| Additional Course    |                                                                                                                                                                                                                                                                                                |       |     |       |

**Notes:** REL 110 is not a UGETC course, but it will transfer for equivalency credit to the engineering programs at all five UNC institutions that offer undergraduate engineering programs. It may not transfer with equivalency to other programs. MAT 273 is not a UGETC course, but it is required for the AE degree. WBL 111 and 121 are not transferable courses; therefore, students who elect to take WBL will need to graduate with more than 60 hours.

**Total Associate in Engineering SHC Completed (Minimum 60 SHC): \_\_\_\_\_**

**Additional Recommendation:** Take the Continuing Education course CSC 3110Y Python for STEM. This course will not count for curriculum credit and is not eligible for financial aid. It is not required for completion of the degree, although it is strongly recommended.