

## Suggested Transfer Pathway Montgomery College A.S. in Electrical Engineering to Capitol Tech. B.S. in Electrical Engineering Catalog Year: 2017-2018



1927

| 0 - 35 Credits – Montgomery College             |    |  |  |  |
|---|----|--|--|--|
|   | Cr |  |  |  |
| ENGL101 College Writing (if needed for ENGL102) | 3  |  |  |  |
| ENES100 Intro to Engineering Design             | 3  |  |  |  |
| ENEE140 Intro to Programming Concepts           | 2  |  |  |  |
| MATH181 Calculus I                              | 4  |  |  |  |
| CHEM132 or CHEM135                              | 4  |  |  |  |
| <br>Total Credits                               | 16 |  |  |  |

(Courses may be taken in any order)

|  | Cr |
|--|----|
| ENGL102 Critical Reading, Writing and Research | З  |
| ENEE150 Intermediate Programming Concepts      | З  |
| ENEE244 Digital Logic Design                   | 3  |
| MATH182 Calculus II                            | 4  |
| PHYS161 General Physics I: Mechanics and Heat  | 3  |
| Behavioral and Social Sciences Distribution *  | 3  |
| Total Credits                                  | 19 |

### 36 - 69 Credits – Montgomery College

|  | Cr |  |  | Cr |  |  |
|--|----|--|--|----|--|--|
| ENEE222 Elements of Discrete Signal Analysis   | 4  |  | ENEE207 Electric Circuits                          | 4  |  |  |
| MATH280 Multivariable Calculus   | 4  |  | ENEE245 Digital Circuits and Systems Laboratory    | 2  |  |  |
| PHYS262 Physics II: Electricity and Magnetism  | 4  |  | MATH282 Differential Equations                     | 3  |  |  |
| Arts Distribution  | 3  |  | PHYS263 Physics III: Waves, Optics, Modern Physics | 4  |  |  |
| Humanities Distribution  | 3  |  | Behavioral and Social Sciences Distribution *      | 3  |  |  |
| Total Credits  | 18 |  | Total Credits                                      | 16 |  |  |
| Apply to graduate from Montgomery College with an Accessing of Science in Electrical Engineering |    |  |  |    |  |  |

Apply to graduate from Montgomery College with an Associate of Science in <u>Electrical Engineering</u>

\* Behavioral and Social Science Destruction courses must come from different disciplines

### Year Three – Capitol Technology University

| Fall Semester                          | Cr |  |  |  |
|--|----|--|--|--|
| EL-200 Electronic Devices/Circuits     | 3  |  |  |  |
| EL-262 Microprocessors/Microassembly   | 3  |  |  |  |
| EE-304 Digital Design I                |    |  |  |  |
| MA-345 Probability/Stats for Engineers | 3  |  |  |  |
| SS-351 Ethics                          | 3  |  |  |  |
| EN-102 English Communications II       | 3  |  |  |  |
| <br>Total Credits                      | 18 |  |  |  |

| Spring Semester                      | Cr |
|--------------------------------------|----|
| EL-250 Advanced Analog Circuits      | 3  |
| EL-261 Intro/Commun Circuits/Systems | 3  |
| EE-362 Microcontroller System Design | 3  |
| EE-309 Circuit Design and Simulation | 3  |
| BUS-301 Project Management           | 3  |
| Total Credits                        | 15 |

### Year Four - Capitol Technology University

| Fall Semester                        | Cr |
|--------------------------------------|----|
| EN-408 Writing Sem in Tech Research  | 3  |
| EE-359 High Frequency Circuit Design | 3  |
| EE-406 Signals and Systems           | 3  |
| EE-453 Control I                     | 3  |
| HU-331 OR HU-332 Arts and Ideas      | 3  |
| Total Credits                        | 15 |

| Spring Semester                  | Cr |
|----------------------------------|----|
| EE-456 Digital Signal Processing | 3  |
| EE-458 Senior Project            | 3  |
| EE-460 Electromagnetic Fields    | 3  |
| EE-461 Communications Theory     | 3  |
| Total Credits                    | 12 |

# MC A.S. in Electrical Engineering to Capitol B.S. in Electrical Engineering

| Name:   | Date:   | ID# |       |
|---|---------|-----|-------|
| General Education Courses   | COURSE  | HRS | GRADE |
| English Foundation (ENGL102)  | ENGL102 | 3   |       |
| Math Foundation (Calculus I)  | MATH181 | 4   |       |
| Distribution Courses  | COURSE  | HRS | GRADE |
| General Physics I: Mechanics and Heat                               | PHYS161 | 3   |       |
| General Physics II: Electricity and Magnetism                       | PHYS262 | 4   |       |
| Arts Distribution   |         | 3   |       |
| Behavioral and Social Sciences Distribution                         |         | 3   |       |
| Behavioral and Social Sciences Distribution                         |         | 3   |       |
| Humanities Distribution   |         |     |       |
| Program Requirements  | COURSE  | HRS | GRADE |
| ENGL101 (if needed for ENGL102/ENGL103, general elective if not)    |         | (3) |       |
| CHEM135 General Chem for Engineers or CHEM132 Principles of Chem II | CHEM100 | 3   |       |
| Intro to Programming Concepts for Engineers                         | ENEE140 | 2   |       |
| Intermediate Programming Concepts for Engineers                     | ENEE150 | 3   |       |
| Electric Circuits   | ENEE207 | 4   |       |
| Elements of Discrete Signal Analysis                                | ENEE222 | 4   |       |
| Digital Logic Design  | ENEE244 | 3   |       |
| Digital Circuits and Systems Laboratory                             | ENEE245 | 2   |       |
| Calculus II   | MATH182 | 4   |       |
| Multivariable Calculus  | MATH280 | 4   |       |
| Differential Equations  | MATH282 | 3   |       |
| General Physics III: Waves, Optics and Modern Physics               | PHYS263 | 4   |       |
| General Education Electives   | COURSE  | HRS | GRADE |
| ENES100 Intro to Engineering Design                                 | ENES100 | 3   |       |

Total Credits: 66, Catalog Year 2017-2018

www.capitol-college.edu/main/academics/undergraduate-academics/bachelor-degree-programs/electricalengineering

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#### TRANSFER SCHOLARSHIPS

Eligibility requires completion of your degree (A.S./A.A.S) at the community college. Students are eligible for additional scholarships for which they qualify as well as federal grants and loans.

# REACH HIGHER. GO FURTHER. TRANSFER TO CAPITOL TECHNOLOGY UNIVERSITY.

You've been working hard toward building the foundation for a bachelor's degree. Capitol Technology University is ready to take you the rest of the way.

We have small class sizes, professors who are industry experts and a hands-on approach to education. And, we've led the field with transfer scholarships up to \$10,000 per year and agreements with community colleges just like yours!

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- Beautiful 52-acre campus in the Washington, D.C. suburb of Laurel, MD
- Local and regional partnerships with more than 56 corporations, government agencies and contractors
- Job guarantee for all qualified undergraduates

# See if you qualify for a Capitol 🔹 🔬 Technology University Merit Scholarship

| Credits GPA | AA or Higher | 60+CR    | 48+CR    | 36+CR   | 24+CR   | 12+CR   |
|-------------|--------------|----------|----------|---------|---------|---------|
| 4.0         | \$10,000     | \$10,000 | \$10,000 | \$9,500 | \$9,000 | \$8,500 |
| 3.9         | \$10,000     | \$10,000 | \$9,500  | \$9,000 | \$8,500 | \$8,000 |
| 3.8         | \$10,000     | \$9,500  | \$9,000  | \$8,500 | \$8,000 | \$7,500 |
| 3.7         | \$9,500      | \$9,000  | \$8,500  | \$8,000 | \$7,500 | \$7,000 |
| 3.6         | \$9,000      | \$8,500  | \$8,000  | \$7,500 | \$7,000 | \$6,500 |
| 3.5         | \$8,500      | \$8,000  | \$7,500  | \$7,000 | \$6,500 | \$6,000 |
| 3.4         | \$8,000      | \$7,500  | \$7,000  | \$6,500 | \$6,000 | \$5,500 |
| 3.3         | \$7,500      | \$7,000  | \$6,500  | \$6,000 | \$5,500 | \$5,000 |
| 3.2         | \$7,000      | \$6,500  | \$6,000  | \$5,500 | \$5,000 | \$5,000 |
| 3.1         | \$6,500      | \$6,000  | \$5,500  | \$5,000 | \$5,000 | \$4,500 |
| 3.0         | \$6,000      | \$5,500  | \$5,000  | \$5,000 | \$4,500 | \$4,000 |

\*Grid is based on credits earned, not on credits accepted into Capitol Technology University. \*Scholarship amounts for Business majors are half that of any grid calculations above. \*Actual scholarship amounts may increase when subject to a complete applicant review.

\*Award amounts are for full-time laurel campus applicants. Satellite campus awards vary according to per credit tuition costs.

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### Articulation Agreement A. A. S. in Electrical Engineering at Montgomery College Community College and B.S. in Electrical Engineering at Capitol Technology University

Students graduating from Montgomery College with an A. A. S. degree in Electrical Engineering may transfer up to 60 approved credit hours, with a minimum grade of 'C' required in each course transferred, towards the B. S. in Electrical Engineering at CAPITOL. This table specifies Montgomery College A. A. S. in Electrical Engineering course equivalencies up to 66 credits. Additional credits from 4-year institutions will be evaluated on a case-by-case basis.

| COURSE NUMBER, TITLE and NUMBER of CREDITS |   |                                |   | COURSE NUMBER, TITLE and NUBMER of CREDITS             |                                |  |  |
|--|---|--------------------------------|---|--|--------------------------------|--|--|
| Eng  | ineering 60 Credits                       | Transformed course             | Math/Science 33 Credits   |  |                                |  |  |
|  | EL 100 Introduction to DC/AC Circuits (3) | ENEE 207 (1)<br>+ ENEE 150 (2) |   | MA-261 Calculus I (4)                                  | MATH 181                       |  |  |
|  | EL 150 DC/AC Circuits and Analysis (3)    | ENEE 207 (3)                   |   | MA-262 Calculus II (4)                                 | MATH 182                       |  |  |
|  | EL-200 Electronic Devices/Circuits (3)    |                                |   | MA-263 Calculus III (4)                                | MATH 280                       |  |  |
|  | EL-204 Digital Electronics (3)            | ENEE 244                       |   | MA-340 Ordinary Differential Equations (3)             | MATH 282                       |  |  |
|  | EL-250 Advanced Analog Circuits (3)       |                                |   | MA-345 Probability/Stats for Engineers (3)             |                                |  |  |
|  | EL-261 Intro/Commun Circuits/Systems (3)  |                                |   | PH-261 Engineering Physics I (4)                       | PHYS 161 (3)<br>+ ENEE 150 (1) |  |  |
|  | EL-262 Microprocessors/Microassembly (3)  |                                |   | PH-262 Engineering Physics II (4)                      | PHYS 262                       |  |  |
|  | CS-150 Intro/Programming Using C (3)      | ENEE 140                       |   | PH-263 Engineering Physics III (4)                     | PHYS 263                       |  |  |
|  | EE-304 Digital Design I (3)               |                                |   | CH-120 Chemistry (3)                                   | CHEM 135 or<br>CHEM 132        |  |  |
|  | EE-309 Circuit Design and Simulation (3)  |                                |   |  |                                |  |  |
|  | EE-359 High Frequency Circuit Design (3)  |                                |   |  |                                |  |  |
|  | EE-362 Microcontroller System Design (3)  |                                | Hu  | nanities/Social Sciences                               | 18 Credits                     |  |  |
|  | EE-406 Signals and Systems (3)            |                                |   | BUS-301 Project Management (3)                         |                                |  |  |
|  | EE-409 Network Analysis and Synthesis (3) | ENEE 222                       |   | HU-331 OR HU-332 Arts and Ideas (3)                    | Note 1                         |  |  |
|  | EE-453 Control I (3)                      |                                |   | SS-351 Ethics (3)                                      | Note 2                         |  |  |
|  | EE-456 Digital Signal Processing (3)      |                                |   | Social Science Elective (3)                            | Note 3                         |  |  |
|  | EE-458 Senior Project (3)                 |                                |   | Humanities Elective (3)                                | Note 4                         |  |  |
|  | EE-460 Electromagnetic Fields (3)         |                                |   | Humanities Elective (3)                                | Note 4                         |  |  |
|  | EE-461 Communications Theory (3)          |                                |   |  |                                |  |  |
|  | Engineering Elective (3)                  | ENES 100                       |   |  |                                |  |  |
|  |   |                                | Eng   | lish Communications                                    | 9 Credits                      |  |  |
|  |   |                                |   | EN-101 English Communications I (3)                    | Note 5                         |  |  |
|  |   |                                |   | EN-102 English Communications II (3)                   | ENGL-102                       |  |  |
|  |   |                                |   | EN-408 Writing Sem in Tech Research (3)                |                                |  |  |
| Eval                                       | uated by:                                 | Date:                          | Sch   | bools transferred in from: $T_1 =$                     | $T_2 =$                        |  |  |
| 1.   |   |                                |   | T3=  | $T_4 =$                        |  |  |
| 2.   |   |                                | Not   | es   |                                |  |  |
| 3.   |   |                                | <b>Note 1</b> : Students may transfer ARTT-127, ARTT-200, ARTT-201,   |  |                                |  |  |
| Stud                                       | ent First Name:                           | MI:                            | 280, ARTT-278, or ARTT-280 for HU-331/332                             |  |                                |  |  |
| Last                                       | Name:                                     |                                | Note 2: Students may transfer PHIL-140 for SS-351<br>Note 3: Any BSSD |  |                                |  |  |
|  |   |                                |   | Note 4: Any ARTD or HUMD                               |                                |  |  |
|  |   |                                |   | e 5: Students may transfer ENGL-101 or 101A i program. | f required for their           |  |  |