

Sample Pathway to Concurrent Bachelor of Science in Engineering: Electrical and Computer Engineering (141 credits) **Fall 2023**

| SEMESTER 1 | SEMESTER 2 | NOTES |
|---|---|--|
| <input type="checkbox"/> ENGR 100 + ENGR 100L (3) <i>Intro to Engr</i> (MATH 105* or higher) <input type="checkbox"/> CHEM 134 + CHEM 134L (4) <i>Chemistry I</i> (MATH 105* or higher, H.S. chemistry) <input type="checkbox"/> MATH 115 (4) <i>Calculus I</i> (MATH 105 'C-' or placement by exam) s DDC GECT <input type="checkbox"/> DDC course (3) GEHA <input type="checkbox"/> DDC course (3) GESB | <input type="checkbox"/> ECE 273 + ECE 273R + ECE 273L (4) <i>Digital Systems</i> (Math 115*) <input type="checkbox"/> MATH 116 (4) <i>Calculus II</i> (MATH 115 'C-') <input type="checkbox"/> PHYS 150 + PHYS 150L (4) <i>Physics I</i> (Math 115*: recommended as prereq) s DDC GENS <input type="checkbox"/> COMP 105 (3) <i>Composition I</i> (COMP 099 or placement by exam) DDC GEWO <input type="checkbox"/> DDC course (3) GEHA | <ul style="list-style-type: none"> The sample pathways were created with Fall and Winter semester enrollment in mind. Summer semesters can be used to lessen the workload, and/or participate in co-op or research. For DDC requirements, please see the University's guidelines A course may fulfill multiple requirements; however, credit is only applied once. Using one course to fulfill multiple requirements may result in a deficiency in total credits. |
| SEMESTER 3 | SEMESTER 4 | NOTES |
| <input type="checkbox"/> MATH 215 (4) <i>Calculus III</i> (MATH 116 'C-') <input type="checkbox"/> PHYS 151 + PHYS 151L (4) <i>Physics II</i> (PHYS 150, MATH 116*) <input type="checkbox"/> ECE 270 + ECE 270R (4) <i>Computer Methods</i> (ENGR 100, Math 115*) <input type="checkbox"/> COMP 270 (3) <i>Technical Writing</i> (COMP 105 or placement by exam, 35 completed credits) DDC GEWO <input type="checkbox"/> DDC course (3) GEIN | <input type="checkbox"/> ECE 210 + ECE 210R + ECE 210L (4) <i>Circuits</i> (MATH 116 'C-', PHYS 151*) <input type="checkbox"/> MATH 228 (4) <i>Diff Equ w/ Linear Algebra</i> (Math 116 'C-') <input type="checkbox"/> IMSE 317 (3) <i>Engineering Prob & Stats</i> (Math 116 'C-') <input type="checkbox"/> ECON 201 or 202 (3) <i>Macroeconomics or Microeconomics</i> (MATH 105) DDC GESB <input type="checkbox"/> ECE / MATH 276 (4) <i>Discrete Math</i> (MATH 116 'C-') | <ul style="list-style-type: none"> Each student's pathway is unique and may differ slightly from this one Check design/tech courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes. |

* denotes a corequisite course

Courses listed in parentheses () are prerequisites for the listed course

| SEMESTER 5 | SEMESTER 6 | EECE ELECTIVES |
|---|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> ECE 3731 (4) <i>Microprocessors & Embedded Systems</i> (ECE 273, ECE 270) <input type="checkbox"/> ECE 311 + ECE 311L (4) <i>Electronic Circuits I</i> (ECE 210, CHEM 134, COMP 270*) <input type="checkbox"/> ECE 385 (3) <i>Elec Materials & Devices</i> (CHEM 134, ECE 311*) <input type="checkbox"/> ECE 3171 (4) <i>Analog & Discrete Signals & Systems</i> (MATH 228, ECE 311*) <input type="checkbox"/> DDC course (3) GESB | <ul style="list-style-type: none"> <input type="checkbox"/> ECE 450 (4) <i>Analog & Dig Comm Sys</i> (IMSE 317, ECE 3171) <input type="checkbox"/> ECE 460 + ECE 460L (4) <i>Automatic Control Systems</i> (ECE 3171) <input type="checkbox"/> ECE 370 (4) <i>Adv Soft Techniques in Computer Engr</i> (ECE 270, ECE 273*) <input type="checkbox"/> ENT 400 (3) <i>Entrepreneurial Thinking & Beh.</i> (Junior standing) s DDC GEIN <input type="checkbox"/> Professional Elective (3) (See Notes for List) | <p>TOTAL REQUIRED 6</p> <p>PROFESSIONAL ELECTIVES Choose 3-4 credit hours from the following:</p> <p>ECE 319, ECE 414, ECE 415, ECE 4361, ECE 435, ECE 4432, ENGR 492, ENGR 493 (1-3)</p> <p>APPROVED ELECTIVES Choose 3-4 credit hours from the following:</p> <p>ECE 413, ECE 4881, ENGR 399, ENGR 492, ENGR 493</p> |
| SEMESTER 7 | SEMESTER 8 | |
| <ul style="list-style-type: none"> <input type="checkbox"/> ECE 471 (4) <i>Comp Networks / Data Comm</i> (ECE 3731, IMSE 317) <input type="checkbox"/> ECE 375 (4) <i>Intro to Comp Architecture</i> (ECE 270, ECE 273, ECE 276*, ECE 3731*) <input type="checkbox"/> ECE 4951 (3) <i>System Design & Micro.</i> (ECE 311, ECE 3731) <input type="checkbox"/> ECE 473 (4) <i>Embedded Systems</i> (ECE 3731) <input type="checkbox"/> ECE 4981/4982 (2) <i>Senior Design I</i> ECE 4981: (ECE 3731, ECE 3171, Senior Standing, & at least one of the following: ECE 414, 415, 450, 460, 480, 4951) DDC GECE, GEWI ECE 4982: (ECE 3731, ECE 375, Senior standing, & at least one of the following: ECE 471, 473, 475, 478) | <ul style="list-style-type: none"> <input type="checkbox"/> ECE 475 (4) <i>Comp Hardware Org / Design</i> (ECE 375) <input type="checkbox"/> ECE 478 (4) <i>Operating Systems</i> (ECE 370, IMSE 317) <input type="checkbox"/> ECE 480 + ECE 480L (4) <i>Intro to Digital Signal Processing</i> (ECE 3171, MATH 228) <input type="checkbox"/> Approved Elective (3) (See Notes for List) <input type="checkbox"/> ECE 4983/4984 (2) <i>Senior Design II</i> ECE 4983: (ECE 4981) s DDC GECE, GEWI ECE 4984: (ECE 4982) s DDC GECE, GEWI | |

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Courses listed in parentheses () are prerequisites for the listed course