COLLEGE OF ENGINEERING & COMPUTER SCIENCE
DEARBORN | UNIVERSITY OF MICHIGAN-DEARBORN

Sample Pathway to Bachelor of Science in Engineering: Electrical Engineering (125 credits) **Fall 2023**

SEMESTER 1	SEMESTER 2	Notes
☐ **CHEM 134 + CHEM 134L** (4) *Chemistry I* (MATH 105* or higher, H.S. chemistry) ☐ **ENGR 100 + ENGR 100L** (3) *Intro to Engr* (MATH 105* or higher) ☐ **MATH 115** (4) *Calculus I* (MATH 105 'C-' or placement by exam) DDC GECT ☐ **DDC course** (3) GEHA See DDC master list for options	☐ **ECE 273, ECE 273R + ECE 273L** (4) *Digital Systems* (Math 115*) ☐ **MATH 116** (4) *Calculus II* (MATH 115 'C-') ☐ **PHYS 150 + PHYS 150L** (4) *Physics I* (Math 115*: recommended as pre-req) DDC GENS ☐ **COMP 105** (3) *Composition I* (COMP 099 or placement by exam) DDC GEWO ☐ **DDC course** (3) GEHA See DDC master list for options	• 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
SEMESTER 3	**SEMESTER 4**	**Notes**
☐ **MATH 215** (4) *Calculus III* (MATH 116 'C-') ☐ **PHYS 151 + PHYS 151L** (4) *Physics II* (PHYS 150, MATH 116*) ☐ **ECE 270 & ECE 270R** (4) (ENGR 100, Math 115*) ☐ **DDC course** (3) GESB See DDC master list for options ☐ **ECON 201** or **202** (3) *Macroeconomics* or *Microeconomics* (MATH 105) DDC GESB	☐ **ECE 210, ECE 210 R + ECE 210L** (4) *Circuits* (MATH 116 'C-', PHYS 151*) ☐ **Math 228** (4) *Diff Equ w/ Linear Algebra* (Math 116 'C-') ☐ **IMSE 317** (3) *Engr. Prob & Stats* (Math 116 'C-') ☐ **COMP 270** (3) *Tech Writing for Engineering* (COMP 105 or placement by exam, 35 completed credits) DDC GEWO ☐ **DDC course** (3) GESB See DDC master list for options	• Each student's pathway is unique and may differ slightly from this one • Please note that 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

* denotes a corequisite course
Courses listed in parentheses () are prerequisites for the listed course

SEMESTER 5	SEMESTER 6	EE Professional/Technical Electives
☐ **ECE 3731** (4) *Microprocessors & Embedded Systems* (ECE 273, ECE 270) ☐ **ECE 311 + ECE 311L** (4) *Electronic Circuits I* (ECE 210, CHEM 134, COMP 270*) ☐ **ECE 385** (3) *Elec Materials & Devices* (CHEM 134, ECE 311*) ☐ **ECE 3171** (4) *Analog & Discrete Signals & Systems* (MATH 228, ECE 311*) ☐ **DDC course** (3) GEIN See DDC master list for options	☐ **ECE 450** (4) *Analog & Digital Comm Sys* (IMSE 317, ECE 3171) ☐ **ECE 460 + ECE 460L** (4) *Control Systems* (ECE 3171) ☐ **Professional Elective** (4) ENEP* (check individual courses for pre-reqs) ☐ **Technical Elective** (3) ENET* (check individual courses for pre-reqs)	* Professional (ENEP) and Technical (ENET) Electives must total at least **15 credits** *At **least two** of your electives must be professional electives *EE Professional Elective Courses:* ECE 319, ECE 413, ECE 414, ECE 415, ECE 435, ECE 4361, ECE 4432, ECE 4881, ENGR 492, ENGR 493

SEMESTER 7	SEMESTER 8	EE Professional/Technical Electives
☐ **ECE 480 + ECE 480L** (4) *Intro to Digital Signal Processing* (ECE 3171, MATH 228) ☐ **ECE 4951** (3) *System Design & Micro.* (ECE 311, ECE 3731) ☐ **Approved Upper-Level PHYS** (3) (check individual courses for pre-reqs) **or ECE/MATH 276** (4) *Discrete Math* (MATH 116 'C-') ☐ **ECE 4981** (2) EE *Engineering Design I* (ECE 3731, ECE 3171, Senior Standing, & at least one of the following: ECE 414, 415, 450, 460, 480, 4951) DDC GECE	☐ **ENT 400** (3) *Entrepreneurial Thinking & Behavior* (Junior Standing) DDC GEIN ☐ **Professional Elective** (4) ENEP* (check individual courses for pre-reqs) ☐ **Technical Elective** (4) ENET* (check individual courses for pre-reqs) ☐ **ECE 4983** (2) EE *Engineering Design II* (ECE 4981) DDC GECE	*EE Technical Elective Courses:* ECE 319, ECE 321, ECE 370, ECE 375, ECE 413, ECE 414, ECE 415, ECE 428, ECE 433, ECE 435, ECE 4361, ECE 438, ECE 443, ECE 4432, ECE 446, ECE 446, ECE 454, ECE 471, ECE 473, ECE 475, ECE 478, ECE 4881, ME 230, ME 260, ME 265, ENGR 350, ENGR 399, ENGR 492, ENGR 493, IMSE 421 *Check design/tech courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes