

Sample Pathway to Bachelor of Science in Engineering: Robotic Engineering (125 credits) Fall 2024

SEMESTER 1	SEMESTER 2	Notes
<input type="checkbox"/> CHEM 134 + CHEM 134L (4) <i>Chemistry I</i> (MATH 105* or higher, H.S. chemistry) <input type="checkbox"/> ENGR 100 + ENGR 100L (3) <i>Intro to Engr</i> (MATH 105* or higher) <input type="checkbox"/> MATH 115 (4) <i>Calculus I</i> (MATH 105 'C-' or placement by exam) DDC GECT <input type="checkbox"/> DDC course (3) GEHA	<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) DDC GENS <input type="checkbox"/> COMP 105 (3) <i>Composition I</i> (COMP 099 or placement by exam) DDC GEWO	<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. Please see your advisor.
SEMESTER 3	SEMESTER 4	RE Tech Electives
<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*; fulfills GENS) <input type="checkbox"/> ECE 270 + ECE 270R (4) <i>Computer Methods</i> (ENGR 100, Math 115*) <input type="checkbox"/> IMSE 317 (3) <i>Engr. Prob & Stats</i> (Math 116 'C-') <input type="checkbox"/> COMP 270 (3) <i>Technical Writing</i> (COMP 105 or placement by exam, 35 completed credits) DDC GEWO	<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"/> ECE 276 (4) <i>Discrete Math</i> (Math 116 'C-') <input type="checkbox"/> ECE 3731 (4) <i>Microprocessors & Embedded Systems</i> (ECE 273, ECE 270) DDC GECT	TECHNICAL ELECTIVES (11) PROFESSIONAL ELECTIVES Choose 6 to 8 credits from the following: CIS/ECE 479, ECE 434, ECE 471, ECE 473, ECE 480, ECE 4881, ECE 4951, ECE 491, IMSE 489, ME 3601, ME 472, ENGR 492, ENGR 493

SEMESTER 5	SEMESTER 6	
<input type="checkbox"/> ECE 3171 (4) <i>Analog & Discrete Signals & Systems</i> (MATH 228) <input type="checkbox"/> ECE 370 (4) <i>Advance SW Techniques in CE</i> (ECE 270, ECE 273*) <input type="checkbox"/> ECE 311 + ECE 311L (4) <i>Electronic Circuits</i> (ECE 210, CHEM 134, COMP 270*) <input type="checkbox"/> ECE 3641 (4) <i>Robotic Manipulation</i> (ECE 3731)	<input type="checkbox"/> ECE 347 (4) <i>Applied Dynamics</i> (MATH 228) <input type="checkbox"/> IMSE 381 (4) <i>Industrial Robots</i> (MATH 115 'C-', Junior or Senior standing) <input type="checkbox"/> ECE 4641 (4) <i>Mobile Robots</i> (ECE 3731, IMSE 317) <input type="checkbox"/> Professional Elective (4) ENEP	<p>APPROVED ELECTIVES</p> <p>Choose remaining credit from the following</p> <p>ECE 319, ECE 375, ECE 385, ECE 414, ECE 41 ECE 428, ECE 433, ECE 434, ECE 435, ECE 4361, ECE 438 ECE 4432, ECE 450, ECE 475, ENGR 350, ENGR 399, ENGR 492 , ENGR 493, IMSE 3005, IMSE 421, IMSE 4545, ME 230, ME 260 OR ME 265</p> <ul style="list-style-type: none"> • Check the RE elective courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes.
SEMESTER 7	SEMESTER 8	
<input type="checkbox"/> ECE 460 (4) <i>Automatic Control Systems</i> (ECE 3171) OR ME 442 (4) <i>Cont. Sys. Ana & Des</i> (ECE 305 & ME 345) <input type="checkbox"/> ECE 4987 (2) <i>Robotic ENGR Capstone Design I</i> (ECE 311, ECE 3171, ECE 3731, ECE 3641, ECE 460 or 4641) fulfills DDC GECE <input type="checkbox"/> Professional Elective (4) ENEP <input type="checkbox"/> ECON 201 or 202 (3) <i>Macroeconomics or Microeconomics</i> (MATH 105) DDC GESB <input type="checkbox"/> DDC course (3) GESB	<input type="checkbox"/> ENT 400 (3) <i>Entrepreneurial Thinking & Behavior</i> (Junior standing) DDC GEIN <input type="checkbox"/> Approved Elective (3) <input type="checkbox"/> ECE 4988 (2) <i>Robotic ENGR Capstone Design II</i> (ECE 4987) DDC GECE <input type="checkbox"/> DDC course (3) GESB/GEIN <input type="checkbox"/> DDC course (3) GEHA	