

Student Name: _____ ID#: _____

Sample Pathway to Concurrent BSE in Mechanical and Manufacturing Engineering (143 credits) **Fall 2023**

Semester 1	Semester 2	Semester 3
<p><input type="checkbox"/> CHEM 134 + CHEM 134L (4) <i>Chemistry I</i> (MATH 105* or higher, H.S. chemistry) DDC GENS</p> <p><input type="checkbox"/> ENGR 126 + ENGR 126L (2) <i>Engineering Computer Graphics</i> (MATH 090* or higher)</p> <p><input type="checkbox"/> MATH 115 (4) <i>Calculus I</i> (MATH 105 'C-' or placement) DDC GECT</p> <p><input type="checkbox"/> DDC course (3) GESB</p> <p><input type="checkbox"/> COMP 105 (3) <i>Writing & Rhetoric I</i> (COMP 099 or placement) DDC GEWO</p>	<p><input type="checkbox"/> CHEM 136 + CHEM 136L (4) <i>Chemistry II</i> (CHEM 134) DDC GENS</p> <p><input type="checkbox"/> ENGR 100 + ENGR 100L (3) <i>Intro. To Engineering</i> (MATH 105* or higher)</p> <p><input type="checkbox"/> MATH 116 (4) <i>Calculus II</i> (MATH 115 'C-')</p> <p><input type="checkbox"/> ECON 201 or 202 (3) <i>Macroeconomics or Microeconomics</i> (MATH 105) DDC GESB</p> <p><input type="checkbox"/> DDC course (3) GEHA</p>	<p><input type="checkbox"/> MATH 215 (4) <i>Calculus III</i> (MATH 116 'C-')</p> <p><input type="checkbox"/> PHYS 150 + PHYS 150L (4) <i>Physics I</i> (Math 115*: recommended as pre-req)</p> <p><input type="checkbox"/> ENGR 250 + ENGR 250R (3) <i>Engineering Materials</i> (CHEM 134, Math 115*, CHEM 136*)</p> <p><input type="checkbox"/> DDC course (3) GEHA</p> <p><input type="checkbox"/> DDC course (3) GESB</p>
Semester 4	Semester 5	Semester 6
<p><input type="checkbox"/> MATH 228 (4) <i>Diff Eq w/ Linear Algebra</i> (Math 116 'C-')</p> <p><input type="checkbox"/> PHYS 151 + PHYS 151L (4) <i>Physics II</i> (PHYS 150, MATH 116*) fulfills DDC GENS</p> <p><input type="checkbox"/> ENGR 216 (2) <i>Computer Methods</i> (ENGR 100, ENGR 126*, Math 228*)</p> <p><input type="checkbox"/> ME 260 + ME 260R (4) <i>Design Stress Analysis</i> (PHYS 150, ENGR 250*, MATH 215*)</p> <p><input type="checkbox"/> COMP 270 (3) <i>Technical Writing</i> (COMP 105, 35 completed credits) DDC GEWO</p>	<p><input type="checkbox"/> ME 230 + ME 230R (4) <i>Thermodynamics</i> (PHYS 150, Math 116, CHEM 134)</p> <p><input type="checkbox"/> ME 345 (4) <i>Engineering Dynamics</i> (MATH 228, ME 260 'C', ENGR 216*)</p> <p><input type="checkbox"/> ECE 305 + ECE 305L (4) <i>Intro. To Electrical Engineering</i> (PHYS 151, Math 215, MATH 228*)</p> <p><input type="checkbox"/> ME 364 (3) <i>Probability, Statistics, & Reliability in Machine Design</i> (ENGR 216, ME 260, Math 228)</p>	<p><input type="checkbox"/> ME 325 (4) <i>Thermal Fluid Sciences I</i> (ME 230 'C', ME 260, ENGR 216)</p> <p><input type="checkbox"/> ME 3601 (4) <i>Design & Analysis of Machine Elements</i> (ME 260, ENGR 216)</p> <p><input type="checkbox"/> IMSE 440 (3) <i>Applied Statistical Models in ENGR.</i> - Winter only (IMSE 364)</p> <p><input type="checkbox"/> ME 381 + ME 381L (4) <i>Mfg. Processes I</i> (ENGR 250 'C', ME 260) OR IMSE 382 + IMSE 382L (4) <i>Mfg Processes I</i> (ENGR 250, ME 260 or ME 265)</p>

* denotes a corequisite course

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

Semester 7	Semester 8	Semester 9
<p><input type="checkbox"/> IMSE 421 (3) Engr. Economy & Decision Analysis (Jr. or Sr. status required) DDC GEIN</p> <p><input type="checkbox"/> IMSE 4425 (4) Human Factors & Ergonomics - Fall only (ME 364)</p> <p><input type="checkbox"/> IMSE 4835 (4) CAS Process Design - Fall only (IMSE 382 or ME 381)</p> <p><input type="checkbox"/> ME 375 (4) Thermal Fluid Sciences I (ME 325, ECE 305*)</p>	<p><input type="checkbox"/> ME 379 (3) Thermal Fluids Lab (ME 325, ME 349, COMP 270, ME 375*)</p> <p><input type="checkbox"/> IMSE 4675 (4) Six Sigma & Statistical Process Improvement - Winter only (ME 364)</p> <p><input type="checkbox"/> IMSE 4795 (4) Production, Inventory Control, Lean Manufacturing - Winter only (ME 364)</p> <p><input type="checkbox"/> MFGE elective (3-4) (see next panel for options)</p>	<p><input type="checkbox"/> ME 442 + ME 442L (4) Control Systems Analysis (ECE 305, ME 345)</p> <p><input type="checkbox"/> ME Design elective (3-4) (see next panel for options)</p> <p><input type="checkbox"/> ME 349 + ME 349L (3) Instrumentation & Measurement Systems (ECE 305, ME 345)</p> <p><input type="checkbox"/> ME 4671(4) Senior Design -not offered in Summer (ME 345, ME 3601, ME 375, ME 379*) DDC GEIN, GECE, GEWI</p> <p><input type="checkbox"/> IMSE 4953 (1) Senior Design Project in MFGE</p>
NOTES	Upper-Level ME Design Elective Courses	MFGE Elective Courses
<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 Each student's pathway is unique and may differ slightly from this one See DDC master list for GESB/GEHA options Check the ME/MFGE elective courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes. 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. 	<p>Choose one course</p> <p>ME 4191 (4), ME 423 (4), ME 4361 (4), ME 440 (3), ME 445 (4), ME 4471 (4), ME 4500 (3), ME 460 (4), ME 472 (4), ME 483 (3), ME 493 (3), ME 490 or ENGR 493 (1-3) (permission required), ME 469 (1-4) (permission required) - check schedule for terms offered</p>	<p>Choose one course</p> <p>ENGR 350(4), IMSE 381 (4), ME 4191 (4), ME 460 (3), IMSE 488 (3), ME 4910 (3), ME 4950 (3) - check schedule for terms offered</p> <p>General Electives - however many needed to reach 143</p> <ul style="list-style-type: none"> ENGR 399 (1), ENGR 492 (1-3) taken to fulfill CECS Experiential Honors Program may count here Any other courses not on the no credit list

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