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

Student Name: _____ ID#:_____

Sample Pathway to BSE in Manufacturing Engineering (128 credits) **Fall 2025**

Semester 1	Semester 2	NOTES
☐ **CHEM134 + CHEM 134L** (4) *Chemistry I* (MATH 105* or higher, H.S. chemistry) ☐ **ENGR 100 + ENGR 100L** (3) *Intro To Engineering* (MATH 105*or higher) ☐ **MATH 115** (4) *Calculus I* (MATH 105 'C-' or placement by exam) ☐ **DDC Course** (3) (GESB) ☐ **COMP 105** (3) *Writing Rhetoric* DDC GEWO	☐ **CHEM 136 + CHEM 136L** (4) *Chemistry II* (CHEM 134) ☐ **ENGR 126 + ENGR 126L** (2) *Engineering Computer Graphics* ☐ **MATH 116** (4) *Calculus II* (MATH 115 'C-') ☐ **ECON 201 or 202** (3) *Macroeconomics or Microeconomics* (MATH 105 recommended) DDC GESB ☐ **DDC Course** (3) *GEHA*	• 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
Semester 3	**Semester 4**	**NOTES**
☐ **MATH 215** (4) *Calculus III* (MATH 116 'C-') ❑ **PHYS150 + PHYS 150L** (4) *Physics I* (MATH 115*: recommended as pre-req) DDC GENS ❑ **ENGR 250** (3) *Engineering Materials* (MATH 115*, CHEM 136*) ❑ **IMSE 255** (3) *C Programming* (MATH 105, ENGR 100*) ❑ **IMSE 317** (3) *Engr. Probability Statistics* (MATH 116 'C-')	☐ **MATH 228** (4) Diff. Equations w/ Linear Algebra (MATH 116 'C-') ☐ **PHYS 151 + PHYS 151L** (4) Physics II (PHYS 150, MATH 116*) DDC GENS ☐ **COMP 270** (3) Technical Writing (COMP 105, 35 completed credits) DDC GEWO ☐ **ME 260** (4) Design Stress Analysis (PHYS 150, ENGR 250*, MATH 215*) **OR** **ME 265** (4) Applied Mechanics (PHYS 150, MATH 215*)	• MFGE Focus Area Electives must total to 11-12 credits • General Elective credit can be applied if student is below 128 credits. • General Electives can be anything as long as it is not on the no credit list • 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	Focus Area Elective Courses
☐ **IMSE 4425** (4) *Human Factors & Ergonomics* (IMSE 317) - **Fall only** ❑ **ME 230 + ME 230R** (4) *Thermodynamics* (PHYS 150, MATH 116, CHEM 134) ❑ **IMSE 382 + IMSE 382L** (4)*Manufacturing Processes I* (ENGR 250, ME 260 'C'or ME 265) ☐ **DDC course** (3) *GEHA* ☐ **IMSE 421** (3) *Engr. Economy & Decision Analysis* (Junior or Senior) DDC GEIN	☐ **IMSE 4675** (4) *Six Sigma & Statistical Process Improvement* (IMSE 317) - **Winter only** ❑ **ECE 305 + ECE 305L** (4) *Intro. To Electrical Engineering* (PHYS 151, MATH 215, MATH 228*) ❑ **IMSE 440** (3) *Applied Statistical Models Engr.* (IMSE 317) - **Winter only** ☐ **IMSE 4795** (4) *Production, Inventory Control, Lean Manufac.* (IMSE 317) - **Winter only**	IMSE 3005 (4), IMSE 381 (4), IMSE 4555 (4), IMSE 4585 (4), IMSE 4745 (4), IMSE 477 (4), IMSE 488 (3), ME 345 (4), ME 3601 (4), ME 4191 (4), ENGR 350 (4) ENGR 360 (4), ENGR 400 (3), ENGR 399 (1), ENGR 492 (1), and ENGR 493 (1-3) by permission only, ME 4500, ME 4910, ME 4950 Check focus area courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes.
Semester 7	**Semester 8**	**Manufacturing Process Course Options**
☐ **IMSE 4825** (4) *Industrial Controls* (ME 265, ECE 305*) - **Fall only** **OR** **ME 442 + ME 442L** (4) Ctrl Sys. Analysis & Data (ECE 305, ME 265) ☐ **MFGE Focus Area Elective** (3-4) (check individual courses for pre-reqs) ☐ **MFGE Focus Area Elective** (3-4) (check individual courses for pre-reqs) ☐ **Manufacturing Process Course** *see course options to the right* ☐ **IMSE 4951** (2) *Senior Design I* IMSE 421 and (IMSE 4795 or IMSE 4585 or IMSE 4835), and COMP 270 or equivalent	☐ **IMSE 4835** (4) *CAD Process Design* (IMSE 382) - **Winter only** ☐ **IMSE 4952** (2) *Senior Design II* (IMSE 4951, IMSE 4425*, IMSE 440*, and IMSE 4675*) DDC GEWI, GECE ☐ **MFGE Focus Area Elective** (3-4) ☐ **General elective** (3) (If program course requirements are all met but total credits applied from those courses does not equal the program credit requirements (min.) General Elective credit may be required.) ☐ **DDC course** (3) *GESB*	ENGR 350, IMSE 381, IMSE 488, ME 460, ME 4191, ME 4910, ME 4950 Check manufacturing process courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes.

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