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

Student Name: _____ ID#:_____

Sample Pathway to BSE in Human Centered Engineering Design (128 credits) **Fall 2023**

Semester 1	Semester 2	NOTES
❑ **ENGR 100 + ENGR 100L** (3) *Intro to Engineering and Computers* (MATH 105 placement or higher) ❑ **MATH 115** (4) *Calculus I* (MATH 105 'C-' or placement) DDC GECT ❑ **BIOL 103 + BIOL 103L** (4) *Anatomy & Physiology* **-Fall only** ❑ **COMP 105** (3) *Composition I* (by placement) DDC GEWO	❑ **CHEM 134 + CHEM 134L** (4) *Chemistry I* (MATH 105* or higher) DDC GENS ❑ **HCED 220** (2) *Engineering Design Communication* (COMP 105) ❑ **ARTH** (3) -choose one from list (DDC GEHA) ❑ **ENGR 360** (4) *Design Thinking* DDC GEIN ❑ **MATH 116** (4) *Calculus II* (MATH 115 'C-')	• 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 • **ARTH course - Choose one:** ARTH101, ARTH102, ARTH103, ARTH106, ARTH221, ARTH241, ARTH305, ARTH327, ARTH333, ARTH334, ARTH335, ARTH343, ARTH352, ARTH362, ARTH363, ARTH367, ARTH368
Semester 3	**Semester 4**	**CONCENTRATIONS NOTES**
❑ **MATH 228** (4) *Diff Equ w/ Linear Algebra* (MATH 116 'C-') ❑ **PHYS 150 + PHYS 150L** (4) *Physics I* (MATH 115*: recommended as pre-req) ❑ **ENGR 250 + ENGR 250R** (3) *Engineering Materials* (CHEM 134, MATH 115, CHEM 136*) ❑ **IMSE 317** (3) *Probability & Statistics for Engineers* (MATH 116) ❑ **Programming Course (depending on concentration)** (2-4) (IMSE 255 or CIS 150 or CIS 1501 or ECE 270 or ENGR 216) (MATH 115*)	❑ **PHYS 151 + PHYS 151L** (4) *Physics II* (PHYS 150, MATH 116*) DDC GENS ❑ **HCED 380** (4) *Product Prototyping: Tools and Techniques* (ENGR 360, programming course), HCED 370*) **-Winter only** ❑ **HCED 370** (3) *Needfinding & Research Methods in Design* (ENGR 360) **-Winter only** ❑ **ECE 210** (4) *Circuits* (MATH 116, PHYS 151 *) ❑ **COMP 270** (3) *Technical Writing* (COMP 105) DDC GEWO	**A student pursuing a concentration (1), (2), (3), or (4)-below, must complete a minimum four courses from that specific Concentration.** **INDIVIDUALIZED CONCENTRATION: Complete at least three courses from concentrations (1) through (4) -below, plus one additional course.** **When choosing concentration/elective courses, make sure you reach 128 total credits.** ****Check 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	CONCENTRATIONS NOTES
❑ **IMSE 4425** (4) *Human Factors & Ergonomics* (IMSE 317) **-Fall only** ❑ **ME 265 or ME 260** (4) *Applied Mechanics/Design Stress* (check Concentration requirements and Pre-reqs) ❑ **ART 210** (3) *Intro to Digital Art* DDC GECC ❑ **ANTH 101** (3) *Intro to Anthropology* DDC GESB	❑ **HCED 450** (4) *Product Realization: Design & Making* (HCED 380, ENGR 250, one of: ME 260 or 265, ECE 210, programming course) **-Winter only** ❑ **IMSE 421** (3) *Engr. Economy & Decision Making* DDC GEIN ❑ **IMSE 382** (4) *Manufacturing Processes* (ENGR 250, one of: ME 260 or 265) ❑ **ART 410** (3) *Advanced Digital Art* DDC GEHA ❑ **DDC course** (3) GESB See DDC master list for options	**1. Mechanical Engineering Design Concentration**: ME 345 (4), ME 3601 (4), ME 4191 (4), ME 460 (3), ME 4981 (4), ENGR 350 (4) **2. Elect and Computer Engineering Design:** ECE 273 (4), ECE 311 (4), ECE 329 (4), ECE 413 (3), ECE 3731 (4), ECE 471 (4), ECE 450 (4), ECE 460 (4), ECE 473 (4), ECE 4951 (3) **3. Software Engineering and UX Design:** CIS 200 (4) or CIS 2001 (4), CIS 285 (3), CIS 350 or CIS 3501, CIS 375 (4), CIS 435 (3), CIS 436 (3), CIS 411 (3), CIS 479 (3)
Semester 7	**Semester 8**	**CONCENTRATIONS NOTES**
❑ **HCED 4951** (2) *Senior Design I* See DDC master list for options (HCED 450) **-Fall only** ❑ **DDC course** (3) GESB ❑ **Business Elective** (3) Choose one of: MKT 352, MKT 382, OB 354, ENT 400, BA 320 ☐ **Concentration course** (3-4) (check Concentrations for courses and pre-reqs) ☐ **Concentration course** (3-4) (check Concentrations for courses and pre-reqs)	❑ **HCED 4952** (2) *Senior Design II* (HCED 4951) **-Winter only** ❑ **General Elective(s)** -as required for total 128 credits for degree ❑ **Business Elective** (3) Choose second class: MKT 352, MKT 382, OB 354, ENT 400, BA 320 ☐ **Concentration course** (3-4) (check Concentrations for courses and pre-reqs) ☐ **Concentration course** (3-4) (check Concentrations for courses and pre-reqs)	**4. Systems Engineering Design Concentration**: IMSE 3005, IMSE 440 (3), IMSE 4795 (4), IMSE 477 (3), IMSE 4835 (4), BA 320 (3), IMSE 4585 (4) **Other Tech. Electives**: COMM 300 (3), ESCI 275 (3),COMM 340 (3), ENST 340 (3), ESCI 490B (3), ANTH 460 (3), ANTH 470 (3) • 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