

Student Name: _____ ID#: _____

Sample Pathway to BSE in Mechanical Engineering (128 credits) **Fall 2024**

| Semester 1 | Semester 2 | Semester 3 |
|---|---|---|
| <input type="checkbox"/> CHEM 134 + CHEM 134L (4) <i>Chemistry I</i> (MATH 105* or higher, H.S. chemistry) DDC GENS <input type="checkbox"/> ENGR 126 + ENGR 126L (2) <i>Engineering Computer Graphics</i> (MATH 090* or higher) <input type="checkbox"/> MATH 115 (4) <i>Calculus I</i> (MATH 105 'C-' or placement) DDC GECT <input type="checkbox"/> DDC course (3) GEHA | <input type="checkbox"/> CHEM 136 + CHEM 136L (4) <i>Chemistry II</i> (CHEM 134) DDC GENS <input type="checkbox"/> ENGR 100 + ENGR 100L (3) <i>Intro. To Engineering</i> (MATH 105* or higher) <input type="checkbox"/> MATH 116 (4) <i>Calculus II</i> (MATH 115 'C-') <input type="checkbox"/> ECON 201 or 202 (3) <i>Macroeconomics or Microeconomics</i> DDC GESB <input type="checkbox"/> COMP 105 (3) <i>Writing & Rhetoric I</i> (COMP 099 or placement) DDC GEWO | <input type="checkbox"/> MATH 215 (4) <i>Calculus III</i> (MATH 116 'C-') <input type="checkbox"/> PHYS 150 + PHYS 150L (4) <i>Physics I</i> (Math 115*: recommended as prereq) <input type="checkbox"/> ENGR 250 + ENGR 250R (3) <i>Engineering Materials</i> (CHEM 134, Math 115*, CHEM 136*) <input type="checkbox"/> DDC course (3) GEHA <input type="checkbox"/> DDC course (3) GESB |
| Semester 4 | Semester 5 | Semester 6 |
| <input type="checkbox"/> MATH 228 (4) <i>Diff Eq w/ Linear Algebra</i> (Math 116 'C-') <input type="checkbox"/> PHYS 151 + PHYS 151L (4) <i>Physics II</i> (PHYS 150, MATH 116*) DDC GENS <input type="checkbox"/> ENGR 216 (2) <i>Computer Methods</i> (ENGR 100, ENGR 126*, Math 228*) <input type="checkbox"/> ME 260 + ME 260R (4) <i>Design Stress Analysis</i> (PHYS 150, ENGR 250*, MATH 215*) <input type="checkbox"/> COMP 270 (3) <i>Technical Writing (Comp 105 or placement, 35 credits complete)</i> DDC GEWO | <input type="checkbox"/> ME 230 + 230R (4) <i>Thermodynamics</i> (PHYS 150, MATH 116, CHEM 134) <input type="checkbox"/> ME 345 (4) <i>Engineering Dynamics</i> (MATH 228, ME 260 'C', ENGR 216*) <input type="checkbox"/> ECE 305 + ECE 305L (4) <i>Intro. To Electrical Engineering</i> (PHYS 151, Math 215, MATH 228*) <input type="checkbox"/> ME 364 (3) <i>Probability, Statistics & Reliability in Machine Design</i> (ENGR 216, ME 260, Math 228) | <input type="checkbox"/> ME 3601 (4) <i>Design & Analysis of Machine Elements</i> (ME 260, ENGR 216) <input type="checkbox"/> ME 349 + ME 349L (3) <i>Instrumentation & Measurement Systems</i> (ECE 305, ME 345) <input type="checkbox"/> ME 381 + ME 381L (4) <i>Manufacturing Processes I</i> (ENGR 250 'C', ME 260) <input type="checkbox"/> ME 325 (4) <i>Thermal Fluid Sciences I</i> (ME 230 'C', ME 260, ENGR 216) <input type="checkbox"/> DDC course (3) GESB |

* denotes a corequisite course

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

| Semester 7 | Semester 8 | NOTES |
|---|---|---|
| <input type="checkbox"/> ME 375 (4) Thermal Fluid Sciences II (ME 325, ECE 305*) <input type="checkbox"/> ME 442 + ME 442L (4) Control Systems Analysis (ECE 305, ME 345) <input type="checkbox"/> ME design/tech elective (3-4), ENMD/ENMT (see Notes section for list of design/tech classes) <input type="checkbox"/> ME design/tech elective (3-4), ENMD/ENMT (see Notes section for list of design/tech classes) | <input type="checkbox"/> ME 4671 (4) Senior Design (ME 345, ME 3601, ME 375, ME 379*) DDC GEIN, GECE; not offered in Summer <input type="checkbox"/> ME 379 (3) Thermal-Fluids Lab (ME 325, COMP 270, ME 349, ME 375*) fulfills DDC GEIN, GEWI <input type="checkbox"/> ME design / tech elective (3-4), ENMD/ENMT (check individual courses for pre-reqs), see Notes Section <input type="checkbox"/> ME design / tech elective (3-4), ENMD/ENMT (check individual courses for pre-reqs), See Notes Section <input type="checkbox"/> General Elective (3-4) | <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 |
| NOTES | ME Design/Tech Electives and General Elective | Possible Tracks/Certificates |
| <ul style="list-style-type: none"> Check the ME elective courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes. Please note the opportunity to earn an accelerated MSE through the 4 + 1 program Admitted 4+1 students can double-count up to 9 credits of 500-level or above Mechanical Engineering elective, core, or cognate courses taken during their junior or senior years. | <p>16 credits total - Design (ENMD), Tech (ENMT), Gen Electives</p> <p>DESIGN ELECTIVES (3-4 credits in min. 1 course): ME 4191 (4), ME 4202 (4), ME 423 (3), ME 4361 (4), ME 440 (3), ME 445 (3), ME 4461 (4), ME 4471 (4), ME 4500 (3) ME 452 (3), ME 460 (3), ME 469 (1-4), ME 472 (4), ME 483 (3), ME 493 (3), ME 490 (1-3), BENG 370 (4), BENG 426 (3) BENG 451 (3) BENG 470 (3), BENG 481 (3), ENGR 360 (4), ENGR 493(1-3)</p> <p>UPPER-LEVEL TECH COURSES - ENMT (8-10 credits in min. 2 courses) ME 410 (3), ME 4301 (3), ME 481 (3), ME 491 (1-3), ME 492 (1-3), ME 496 (2-3), ME 4981 (4), ENGR 350 (4), ENGR 399 (1), ENGR 492 (1-3), IMSE 421 (3), IMSE 381 (3), BENG 375 (4), BENG 425 (3), BENG 381 (4), ME 4640 (3), ME 4910, ME 4950, ME 4550 (3)</p> <p>General Elective (Up to 4 credit hrs if needed to bring total Electives to 16, total degree to 128) CECS, CASL, or COB courses may be used here. ENT 400 (3) or ENGR 360 (4) or ENGR 400 (3) may be taken to fulfill CECS experiential Honors program</p> | <p>Min. 9 credit hours as part of Design/Tech course choices.</p> <p>Energy and Sustainability ME 4202, ME 423, ME 4301, ME 4361, ME 4471, ME 452, ME 493, ME 496</p> <p>Engineering Design ME 410, ME 4191, ME 4202, ME 423, ME 4301, ME 4361, ME 4471, ME 452, ME 460, ME 469, ME 472, ME 483, ME 493, ME 490, ENGR 360, BENG 451, ME 440, ME 445, ME 4461, BENG 470, BENG 481, ME 4500, ME 4550</p> <p>Engineering Mechanics ME 410, ME 4191, ME 440, ME 445, ME 4461, BENG 370, BENG 470, ME 4550</p> <p>Materials and Manufacturing ME 460, ME 481, ME 483, ENGR 350, BENG 375, ME 4950, ME 4910, ME 4550</p> <p>Vehicles and Mobility ME 410, ME 472, ME 493, ME 496, ME 4981, ME 4910, ME 4500, ME 4550</p> <p>Mechatronics and Robotics ME 440, ME 445, ME 4461, ME 472, IMSE 381, ME 4640</p> |

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