RECOMMENDED MECHANICAL ENGINEERING CURRICULUM FLOW CHART

Effective for Students Entering ME September 2021 or Later

Semesters							
I	II	III	IV	V	VI	VII	VIII
MATH 221 Calculus I — 5	**MATH 222** Calculus II (Math 221) — 4	**MATH 234** Calculus III (Math 222) — 4	**MATH 320** Linear Alg/ Diff Eqns (Math 222) — 3	**ME 331** Geometric Modeling (CS 200/220/300 Math 320, ME 306 or con reg, ME 231) — 3	**ME 342** Machine Elements (ME 306, ME 331 or con reg) — 3	H **ME 351** Design Projects I (ME 331) — 3	H **ME 352** Design Projects II (ME 351) — 3
A **CHEM 109** Advanced General Chemistry — 5 OR A **CHEM 103** General Chemistry I — 4		**CS 220** Intro to Data Programming — 4		I **ME 361** Thermo (Chem 103, EMA 201) — 3	**ME 363** Fluids (Math 320, ME 361) — 3	**ME 364** Heat Transfer (ME 361, ME 363 or con reg) — 3	
	I **EMA 201** Statics (Math 222 or con reg) — 3	G I **ME 306** Mechanics of Materials (EMA 201, Math 222) — 3	I **ME 240** Dynamics (EMA 201, Math 222) — 3	**ME 340** Dynamic Systems (Math 320, ME 240) — 3	**InterEGR 397** Technical Comm — 3	**ME 368** Measure Lab (ME 306, ME 361, ME 340, ECE 376) — 4	**ME 370** Energy Lab (ME 363, ME 364 or con reg, ME 368 or con reg) — 3
B **ME 201** Intro to Mechanical Engineering — 3	F **Comm-A** — 3	G **ME 307** Mechanics of Materials Lab (ME 306 or con reg) — 1	J **Math/ Science Elective** — 3	**PHYSICS 202** General Physics (EMA 201, Math 221) — 5	**ECE 376** Circuits (Physics 202, Math 222) — 3	**ME 346** Controls (Fall Only) (ME 240, Math 320) — 3 OR **ECE 377** Power (Spring Only) (Math 234, Physics 202, ECE 376) — 3	D **Liberal Studies Elective** — 3
	ME 231 Intro to Engineering Graphics — 3		**MS&E 350** Intro to Materials Science (Chem 103) — 3	**ME 310** Mfg Processes (MS&E 350) — 3	**ME 311** Mfg Fundamentals (ME 310) — 3		E **Technical Elective** — 3
D **Liberal Studies Elective** — 3	D **Liberal Studies Elective** — 3	D **Liberal Studies Elective** — 3	**STAT 324** Statistics (Math 221) — 3		D **Liberal Studies Elective** — 3	E **Technical Elective** — 3	E **Technical Elective** — 3
15-16	16	15	15	17	18	16	15

Letters appearing in upper-left corner refer to notes on page 2.

Pre-requisites are listed in parentheses.

FLOW CHART SUBSCRIPTS

A. CHEMISTRY. There are two options for the chemistry requirement:

1. CHEM 103 (4 credits). Note: if CHEM 103 is taken, students may need free-elective credits to meet the minimum number of credits required for graduation (128). (See note C)
2. CHEM 109 (5 credits).

B. INTRODUCTION TO ENGINEERING. ME 201 (3 credits) satisfies the Mechanical Engineering requirement for introduction to engineering.

C. TOTAL CREDITS REQUIRED. Students fulfilling their course requirements with fewer than 128 credits must take additional free-elective credits to comply with the 128-credit minimum graduation requirement.

D. LIBERAL STUDIES Requirements. Students must take 15 credits that carry H, S, L, or Z breadth designators. These credits must fulfill the following subrequirements:

1. A minimum of 2 courses from the same department or program. At least 1 of these 2 courses must be designated as above the elementary level (I, A, or D).
2. A minimum of 6 credits designated as humanities (H, L, or Z), and an additional minimum of 3 credits designated as social studies (S or Z). Foreign Language courses count as H credits. Retroactive credits for language courses may not be used to meet this Liberal Studies requirement.
3. At least 3 credits in courses designated as ethnic studies (lower case "e"). These courses may help satisfy requirements D1 and D2 as well, but they only count once toward the total required.

Note: Some courses may have "e" designation but not have H, S, L, or Z designation; these courses do not count toward the liberal studies requirement.

E. TECHNICAL ELECTIVES.

The Mechanical Engineering curriculum requires a total of 9 credits of technical electives. A minimum of 6 of these 9 credits must come from formal courses. A formal course is defined as a course that meets regularly in a lecture format to study a selected topic. The educational mission is assisted with homework and exams. Formal courses include those in an online format but do not include seminar, survey, or other similar courses.

1. Formal ME. A minimum of 3 (of the required 6) formal course credits must come from Mechanical Engineering courses with course numbers 400 or higher (ME 273 and ME 379 are also accepted).
2. Formal Non-ME. Up to 6 technical elective credits may be earned for formal courses outside the Mechanical Engineering department. These courses may be engineering, mathematics, physics, chemistry, statistics, biology, or computer science courses numbered 400 and above. Some courses numbered below 400 and specific EPD and InterEgr courses are also accepted as technical electives. These courses can be found at http://meundergrad.engr.wisc.edu under "Courses." Other courses may be accepted if approved by the Curriculum Committee in advance of taking the course.
3. Non-formal. Up to 3 technical elective credits may be obtained for non-formal courses such as independent study courses (ME 489, 491, 492, and other engineering independent study courses numbered 399 and higher); Cooperative Education (ME 001); and EPD 690, "Wisconsin Engineer Magazine."

F. COMMUNICATION-A REQUIREMENT. Any course designated as Comm-A satisfies this requirement. Students whose GER communications Part A is satisfied are exempt from this requirement. (See note C)

G. ME 306 and ME 307. ME 306 must be taken before or concurrently with ME 307.

H. ME 351 and ME 352. Students should plan to take ME 351 and ME 352 consecutively, preferably their last two semesters. This senior design sequence can be taken fall-spring or spring-fall.

I. EMA 201, ME 240, ME 306, and ME 361 each require a minimum grade of C.

J. MATH/SCIENCE ELECTIVE. The Mechanical Engineering curriculum requires 3 credits of math/science electives. Any formal biological science course numbered 100 or higher will satisfy this elective. Any formal course offered by an engineering department, or has either physical or natural science breadth designation, and is numbered 200 or higher will satisfy this elective. EPD and InterEgr courses will not satisfy the math/science elective.

SPECIAL NOTES

1. Students enrolled in fewer than 12 credits—including those in their last semester—must have Dean's permission to be in part-time status.
2. Questions concerning this curriculum should be directed to Student Services (1410 Engineering Dr., Suite 170) or to Academic Advisors.
3. The Mechanical Engineering department's website can be found at https://www.engr.wisc.edu/department/mechanical-engineering.