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**DEARBORN DISCOVERY CORE (DDC)
Requirements 24****WRITTEN AND ORAL COMM.** (6 credits)**Composition Placement Exam required**

COMP 105 (3) and

COMP 270 (3)

*Both required if not taken to fulfill DDC Written
and Oral Communication***HUMANITIES AND THE ARTS** (6 credits)

See DDC approved list in Degree Works or

<https://app.smartsheet.com/b/publish?EQBC>[T=DAFF687F800B4FE89910A9CEA66B1627](https://app.smartsheet.com/b/publish?EQBC)**SOCIAL AND BEH. ANALYSIS** (9 credits)

ECON 201 or ECON 202 (3 cr) is REQUIRED

*If not taken in fulfillment of DDC Soc. and
Beh. Analysis*Other (6 credits) must be chosen from DDC
approved list in Degree Works or<https://app.smartsheet.com/b/publish?EQBC>[T=DAFF687F800B4FE89910A9CEA66B1627](https://app.smartsheet.com/b/publish?EQBC)**INTERSECTIONS** (6 credits)IMSE 421 taken as 3 credits of Upper-level Tech
Electives fulfills one Intersections course (3 cr)Other (3 credits) must be chosen from DDC
approved list in Degree Works or<https://app.smartsheet.com/b/publish?EQBC>[T=DAFF687F800B4FE89910A9CEA66B1627](https://app.smartsheet.com/b/publish?EQBC)**Important DDC Notes:**

- DDC requirements apply to Freshmen admitted fall 2015 and later, and to Transfers admitted fall 2017 and later.
- Many DDC courses fulfill multiple categories. However, a single DDC course may be used for a **maximum of three** DDC categories
- ME students **MUST** graduate with a minimum **128 credits**

BASIC PREP Requirements 49**INTRO to ENGINEERING**

ENGR 100 (2)

ENGINEERING GRAPHICS

ENGR 126 (2)

MATHEMATICS – 5 courses (16)
(Fulfills DDC Quant. Thinking)MATH 115 (4) *Calculus I*MATH 116 (4) *Calculus II*MATH 205 or 215 (3) *Calculus III*MATH 216 (3) *Diff Equations*MATH 217 or 227 (2) *Matrix/Linear
Algebra***CHEMISTRY I and II**

CHEM 144 or 134 (4)

CHEM 146 or 136 (4)

PHYSICS I and II

(Fulfills DDC Natural Sciences)

PHYS 150 (4)

PHYS 151 (4)

ME BASIC COURSES (13 credits)ENGR 250 (3) *Engr Materials*ENGR 216 (2) *Computer Methods*ME 230 (4) *Thermodynamics*ME 260 (4) *Design Stress Analysis*

See separate curriculum sheet for
information on the optional concurrent
BSE degree in Mechanical and
Bioengineering. The concurrent
degree requires additional 15 credits.

PROFESSIONAL Requirements 55**EE & CONTROLS – 2 Courses** (8 credits)ECE 305 (4) *Intro Electrical Engr.*ME 442 (4) *Control Systems Analysis***ME CORE – 9 Courses** (33)ME 325 (4) *Thermal Fluid Sciences I*ME 345 (4) *Engineering Dynamics*ME 349 (3) *Instrumentation and
Measurement Systems*ME 3601 (4) *Design & Analysis of
Machine Elements*ME 364 (3) *Probability, Statistics, &
Reliability in Machine Design*ME 375 (4) *Thermal Fluid Sciences II*ME 379 (3) *Thermal-Fluids Lab*ME 381 (4) *Manufact Processes I*ME 4671 (4) *Senior Design I**(Fulfills DDC Upper-Level Writing; Critical
Thinking; & Capstone Experience)***ELECTIVES** (14 credits)**UPPER-LEVEL DESIGN COURSES** (3-4)

At least one course (3-4 credits) from:

ME 4191 (4) ME 4201 or ME 4202 (4),

ME 4361 (4) ME 4471 (4) ME 460 (3)

ME 469 (1-4) ME 472 (4) ME 483 (3)

ME 493 (3) ME 490 (1-3) BENG 451 (3)

BENG 370 (4)

OTHER UPPER-LEVEL TECH COURSES (6-7)

Two additional courses (6-7 credits) from

Upper-Level Design courses above and/or:

ME 410 (3) ME 4301 (3)

ME 4461 (4) ME 452 (4) or ME 4521 (3)

ME 481 (3) ME 484 (3) ME 491 (1-3)

ME 492 (1-3) ME 496 (2-3) ME 4981 (4)

ENGR 350 (4) IMSE 421 (3) BENG 375 (4)

BENG 425 (3) BENG 470 (3) BENG 381 (4)

(Upper-Level Design courses and Upper-level Tech
courses must total **at least 10 credits**)**GENERAL ELECTIVES** (4 credits)[Fewer than 4 credits of gen electives needed
if additional CECS credits were taken above.]CECS, CASL, or COB courses may be
used here. See note below ****New Program****OPTIONAL CONCURRENT DEGREE IN
MANUFACTURING (MFGE) FOR
ME MAJORS**

See Reverse Side for Requirements [OVER]

**** Beware NO-CREDIT courses. ****

NO-CREDIT listed at end of CECS Handbook:

<https://umich.app.box.com/s/6a5c4j9hwlcnpzy7o2xjmvrlrtumvoj>

B.S.E. in MECHANICAL ENGINEERING (128 credits)
FALL 2017 Catalog Year Curriculum Sheet (Side 2) [See also Side 1]

**OPTIONAL CONCURRENT DEGREE IN
MANUFACTURING (MFGE) FOR ME MAJORS**

ME majors who also want a concurrent (dual) degree in MFGE,
need to take at least **15 credits beyond** the 128 credits of the ME degree
and must satisfy the following MFGE requirements:

Take the following four courses. One course from this list can also be counted as an ME General Elective.

- IMSE 4425 (4) *Human Factors/Ergonomics*
- IMSE 4675 (4) *Six Sigma & Statistical Methods for Process Improvement*
- IMSE 4795 (4) *Production/Inventory Control & Lean Manufacturing*
- IMSE 4835 (4) *Comp-Aided Process Design & Manufacturing*

Take the following three courses:

- IMSE 421 (3) *Engineering Econ & Decision Analysis*
(IMSE 421 can also be counted as an ME Upper-Level Tech Course)
- ENGR 400 (3) *Applied Business Techniques*
- IMSE 4953 (1) *Senior Design Project in MFGE*

And take one upper course from the following list:

- IMSE 4815, ME 484, ENGR 350 or IMSE 488
(If ME 484 or ENGR 350 selected, can also count as ME Upper-Level Tech Course)

[See Reverse Side – OVER]