_____ **B.S.E. in ELECTRICAL ENGINEERING** (125 credits) Date _____

ID _____ **FALL 2017** Catalog Year Curriculum Sheet

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?EQBCT=DAFF687F800B4FE89910A9CEA66B1627

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?EQBCT=DAFF687F800B4FE89910A9CEA66B1627

INTERSECTIONS (6 credits)
ENGR 400 (3 cr) is REQUIRED

Other (3 credits) must be chosen from DDC approved list in Degree Works or
HTTPS://APP.SMARTSHEET.COM/B/PUBLISH?EQBCT=DAFF687F800B4FE89910A9CEA66B1627

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
- EE students MUST graduate with a minimum **125 credits**

**** Beware NO-CREDIT courses. ****
NO-CREDIT listed at end of CECS Handbook:
https://umich.app.box.com/s/6a5c4j9hwlctnppzy7o2xjmvlrtumvoj

BASIC PREP Requirements 36

INTRO to ENGINEERING
ENGR 100 (2)

MATHEMATICS (16 credits)
(***Fulfills DDC Quant. Thinking)***
MATH 115 (4) *Calculus I*
MATH 116 (4) *Calculus II*
MATH 205 (3) *Calculus III*
MATH 216 (3) *Diff Equations*
MATH 217 (2) *Matrix Algebra*

CHEMISTRY & PHYSICS (15)
(Fulfills DDC Natural Sciences)
CHEM 144 (4) *Chemistry I*
PHYS 150 (4) *Physics I*
PHYS 151 (4) *Physics II*
One Physics course (3) from:
PHYS 305 *Contemp. Physics (W, S)*
PHYS 314 *Computational Physics (W)*
PHYS 320 *Environmental Physics*
PHYS 403 *Electricity & Magnetism(W)*
PHYS 405 *Optics(Every 2 yrs)*
PHYS 406 *Thermal/Statistical Physics(F)*
PHYS 416 *Biological Physics (Every 2 yrs)*
Note: ECE/MATH 276 (4) replaces the 3rd physics for dual majors only

PROBABILITY & STATISTICS (3)
IMSE 317 (3) *Engr Prob & Stats*

See separate curriculum sheet for information on the optional concurrent BSE degree in Electrical and Computer Engineering. The concurrent degree requires additional 16 credits.

PROFESSIONAL Requirements 65

ECE CORE – 5 Courses (20 credits)
ECE 210 (4) *Circuits*
ECE 270 (4) *Computer Methods I*
ECE 273 (4) *Digital Systems*
ECE 311 (4) *Electronics I*
ECE 3731 (4) *Microprocessors and Embedded Systems*

EE CORE – 8 courses (27 credits)
ECE 3171 (4) Analog & Discrete Signals & Sys
ECE 3851 (4) *or* ECE 385 (3)* *Electrical Materials & Devices*
ECE 450 (4) *Communications*
ECE 460 (4) *Control Systems*
ECE 480 (4) *Digital Signal Processing*
ECE 4951 (3) *System Design w/ Microcontrollers*
ECE 4981 (2) *Electrical Engineering Design I*
ECE 4983 (2) *Electrical Engineering Design II*
(***Senior Design Courses fulfill DDC Upper-Level Writing And Capstone Experience)***

PROFESSIONAL ELECTIVES (7 or 8 credits)
Choose two courses from the following list
ECE 319 (4) *Electromagnetic Compatibility*
ECE 413 (3) *Introduction to VLSI Design*
ECE 414 (4) *Electronics II*
ECE 415 (4) *Power Electronics*
ECE 435 (4) *Mobile/Smart Devices & Tech*
ECE 4361 (4) [=436] *Electr Machines & Drives*
ECE 4432 (4) *or* 443 (3) *Renewable Electric Power Sys*
ECE 4881 (3) *Introduction to Robot Vision*

BUSINESS Techniques (3)
ENGR 400 (3) *Applied Business Techniques*
(Fulfills DDC Critical and Creative Thinking and 3 credits of Intersections)

APPROVED TECH ELECTIVES (7 or 8 credits)
A partial list of approved electives
ECE 319, ECE 321, ECE 370, ECE 375, ECE 414,
ECE 415, ECE 428, ECE 433, ECE 435, ECE 436,
ECE 438, ECE 443, ECE 446, ECE 454, ECE 471,
ECE 473, ECE 475, ECE 478, ECE 4881, ME 230 (4),
ME 260 (4), ME 265 (4), ENGR 350 (4),
or other CECS courses w/ advisor approval

Note: If ECE 3851 (4) is chosen in EE Core, 1 credit from course will apply to Approved Tech Electves.
Note: **Professional Electives and Approved Tech Electives must total at least 16 credits.**

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