

CECS DISTRIBUTION Requirements 24**ENGLISH COMPOSITION**

Composition Placement Exam required, and
Take both COMP 105 (3) & COMP 270 (3)

HUMANITIES AREA (See NOTE, *, & **)

Two courses, 100- to 400-level, 6 credits, from
AFRICAN/AFRICAN-AMER (AAAS)

239, 275, 385, 389, 469, 470

ART HISTORY (ARTH)

COMMUNICATIONS (COMM)

COMPARATIVE LITERATURE (COML)

ENGLISH (ENGL)

JOURNALISM & SCREEN STUDIES (JASS)

FOREIGN LANGUAGE

MUSIC HISTORY (MHIS)

PHILOSOPHY (PHIL)

SCIENCE/TECH STUDIES (STS)

300, 307, 312, 360, 403, 410, 485, 488

WOMEN/GEN STUDIES (WGST)

303, 385, 386, 387, 416, 425, 445, 487

BEHAVIORAL/SOCIAL SCIENCES (* & **)

Two courses, 100- to 400-level, 6 credits, from
AFRICAN/AFRICAN-AMER (AAAS)

106, 275, 316, 320, 322, 325, 345,

349, 368, 369, 371, 386, 387, 403, 404

ANTHROPOLOGY (ANTH)

ECONOMICS (ECON)

ECON 202, ECON 300-level only

GEOGRAPHY (GEOG)

GEOG 201, 205, GEOG 300-level only

HISTORY (HIST)

POLITICAL SCIENCE (POL)

PSYCHOLOGY (PSYC)

SCIENCE/TECH STUDIES (STS)

300, 308, 309, 321, 325, 340, 345,

349, 365, 374, 383, 385, 386, 409,

421, 430, 441, 442, 464

SOCIOLOGY (SOC)

WOMEN/GEN STUDIES (WGST)

303, 325, 326, 338, 362, 370,

405, 406, 407, 420

ECONOMICS (3 credits)

ECON 201 or ECON 202 (*Macro or Micro*)

*** SEQUENCE W/ UPPER-LEVEL COURSE:**

Two of the courses above, in Humanities Area

OR the Behavioral /Social Sciences Area,

OR ECON must be **in the same discipline**

AND at least one of them **300- or 400-level**.

ADDITIONAL COURSE (3 credits) **

One course, 100 to 400 level, from above

OR one ECE 400-level course

BASIC PREP Requirements 36**INTRO to ENGINEERING**

ENGR 100 (2)

MATHEMATICS (16 credits)

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)

CHEM 144 (4) *Chemistry I*

PHYS 150 (4) *Physics I*

PHYS 151 (4) *Physics II*

One Physics course (3) from:

PHYS 305 *Contemporary Physics*

PHYS 320 *Environmental Physics*

PHYS 370 *Mathematical Physics*

PHYS 405 *Optics*

PHYS 406 *Thermal/Statistical Phy*

PHYS 416 *Biological Physics*

Note: ECE/MATH 276 (4) replaces
the 3rd physics for dual majors only

PROBABILITY & STATISTICS (3)

IMSE 317 (3) *Engr Prob & Stats*

**OPTIONAL Concurrent Degree
Dual EE/CE requirements:**

EE majors who also want a concurrent
(dual) BSE degree in CE, need to take:

A) The following 17 credits in CE:

ECE/MATH 276 (4) *Discrete Math*

ECE 375 (4) *Computer Architecture*

ECE 473 (4) *Embedded Systems*

ECE 475 (4) *Computer Hardware*

ECE 471 (4) *Computer Networks*

ECE 478 (4) *Operating Systems*

Notes:

(i) One of the above courses counts
under APPROVED TECHNICAL
ELECTIVES in the EE degree's
requirements

(ii) ECE/MATH 276 (4) is required.

(iii) The 3rd physics course (3) in the
EE degree is NOT required for dual
EE/CE majors.

**B) ECE 370 (4) must be taken and
counts under APPROVED
TECHNICAL ELECTIVES in the
EE degree's requirements**

More detailed information about the
requirements leading to dual degrees in
EE and CE is available online:
[www.engin.umd.umich.edu/SRA/
circ_requir.php](http://www.engin.umd.umich.edu/SRA/circ_requir.php)

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 372 (4) *Microprocessors*

EE CORE – 8 courses (26 credits)

ECE 3171 (4) *Analog & Discrete Signals & Sys*

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*

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) *Intro Mobile/Smart Devi & Tech*

ECE 436 (4) *Electric Machines and Hybrid Drives*

ECE 443 (3) *Intro to Electric Power Systems*

ECE 4431 (4) *Vehicular Power Systems & Loads*

ECE 446 (4) *Electromechanical Energy Convers*

ECE 4881 (3) *Introduction to Robot Vision*

BUSINESS Techniques (3)

ENGR 400 (3) *Applied Business Techniques*

APPROVED TECH ELECTIVES (8 or 9 credits)**A partial list of approved electives**

ECE 319, ECE 321, ECE 370, ECE 375, ECE 414,

ECE 415, ECE 433, ECE 435, ECE 436, ECE 438,

ECE 443, ECE 446, 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: ECE 3801 will **not** count for the EE degree.

Note: **Professional Electives and Approved Tech**

Electives must total at least 16 credits.

**** Avoid NO-CREDIT courses.**

NO-CREDIT courses posted outside 2000

HPEC and listed at end of CECS Handbook:

www.engin.umd.umich.edu/SRA/pdf/

[Student_Handbook.pdf](#) <link>

NO-CREDIT courses DON'T count towards
the degree. NO-CREDIT courses include
ARTH 105, ECON 305, POL 300,
PSYC 381, SOC 383, and many others.
Check the List!!