Department of Electrical and Computer Engineering

Minor in Electrical Engineering (EEEM)

Credits required = 18*  *A minimum of 9 credits are required at the 3000-level or higher

**Required Courses** - 8 credits

_____ EE 2112 Electric Circuits II and Lab (4)
_____ EE 2174 Digital Logic and Lab (4) (pre-req: CS1111 or CS1121 or EET2241)

**Typical beginning course sequences:**
EE3010 –> EE2112
CS1111 (fall) –> EE2174

**EE Minor pre-requisites may include:**
MA2320/21, MA3520/21, MA3160, PH2200

Look up all course info online.

See Judy for registration waivers as needed.

**Elective Courses** – 10 credits minimum from a combination of EE Core and EE Focus course lists.

**EE Core Course List**

*Choose 3 to 7 credits from the list below:*

_____ EE 3010 Circuits and Instrumentation (3)
_____ EE 3090 Geometrical and Wave Optics (3)
_____ EE 3120 Electric Energy Systems (3)
_____ EE 3131 Electronics (4)
_____ EE 3140 Electromagnetics (3)
_____ EE 3160 Signals and Systems (3)
_____ EE 3171 Microcontroller Applications (4)
_____ EE 3180 Intro to Probability & Random Signal Analysis (3)

**EE Focus Course List**

*Choose 3 to 7 additional credits from the list below:*

_____ EE 3190 Optical Imaging and Sensing (3)
_____ EE 3250 Intro to Communications Theory (3)
_____ EE 3261 Control Systems (3)
_____ EE 3290 Photonic Material & Devices (4)
_____ EE 3373 Intro to Programmable Controllers (3)

Any EE course between EE4200 – EE4499

Students pursuing the minor in Electrical Engineering (EEEM) may choose to have a 'mini-focus area' in the field of electrical and computer engineering. Look up course pre/co-requisite info and semester offerings. May take up to four semesters, or three after completion of EE3010.

**Examples of course sequences:** Minimum 10 credits:

Controls: EE3160 – EE3261 – EE4262 + choice (EE4219, EE3373, EE4777, EE3010 ,EE3120)
Electric Machinery & Drives: EE3120 – EE4219&EE4220 + EE3010
Electronics: EE3131 – EE4231 - choice (EE4271, EE4240, EE4232, EE3010)
Microcontrollers: EE3171 – EE4271 + choice elective (EE3010)
Photonics – EE3190 + choice (EE3290, EE4490 ,EE3010)
Power/Energy: EE3120 – EE4221 – EE4222 and EE4226 (power grid technology)
Power Electronics: EE3120 – EE4227 + EE4228 + choice elective (EE3010)
Control & Automation: EE3160 – EE3261 + choices (EE3280, EE4235, EE4375, EE4262, EE 3373, EE3010)
Signal Processing: - EE3160 – EE4252+ EE4259 + choice (EE4253, EE3010)

**Contact:** Judy Burl, Academic Advisor, ERC 131, 487-2232, eceadvise@mtu.edu

Notes: Some prerequisite courses do not apply to the minor. At least 9 cr. 3000+ MTU coursework required.

4/20/2021 jmd