Look up course requirements and semester offerings in the online Course Descriptions and Schedule of Classes.

**BS EE**

**Electric Power Engineering Concentration**

**2019-2020**

**Catalog Term:** 201908

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**Sem. 1 - Fall**

1) **ENT1960**

**Sem. 2 - Spring**

Optional: Enterprise participation

**ENT2950**

**Sem. 3 - Fall**

**MA2160 (4)**

Calculus I

**EE1110 (3)**

Engr. Analysis

**EE1111 (1)**

Essential Math (track A)

**EE2110 (3)**

Electric Circuits I

**EE2121 (3)**

Electric Circuits II & Lab

**CS1111 (3)**

Intro C/C++ Programming

**PH1100 (1)**

Physics I Lab

**PH1200 (1)**

Physics II Lab

**PH2200 (3)**

Univ. Physics 2

**MA16061 (4/5)**

Calculus I

**MA16061b (c)**

Spatial Visualization Test

**CH1150/51 (4)**

& CH1153 (1) Univ Chem I

**MA16061c**

Intro to ECE (Track B)

**EE1111 (1)**

Intro to ECE (track A)

**EE2111 (3)**

Electric Circuits I

**EE2112 (4)**

Multi-Variable Calculus

**EE3120 (3)**

Power Anal. I

**EE3160 (3)**

Intro. Probability & Random Sig. Anal.

**EE3180 (3)**

Power Anal. II

**EE3261 (3)**

Control Systems

**EE3901 (2)**

Design Fund.

**EE4221 (3)**

Power Elective Lab

**EE4250 (3)**

Intro. Comm. Theory

**EE4222 (3)**

Power Elective

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**Sem. 7 - Fall**

**EE3131 (4)**

Electronics and Lab

**EE3901 (2)**

Design Fund.

**EE4910 (2)**

EE Design 1

**EE4901 (2)**

EE Design 2

**EE4901 (2)**

EE Design 2

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**Sem. 8 - Spring**

**ENT4950 (2)**

EE Design 2

**ENT4960 (2)**

EE Design 2

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**Choose at least 6 credits of 3000-4999 HASS**

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**Total 128**

plus 3 units co-curricular activities

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Undergraduate advisor:

EERC 131. Call 487-2550 to schedule appt. eceadvise@mtu.edu

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Attend Career Fairs early on:

Semester 5 or 6 is good time to co-op 220 Admin Building

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Study Abroad Office

200 Admin Building

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**Optional**:

Enterprise participation (calculus-ready students)

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ERCC 131

Call 487-2550 to schedule appt.
Choose correct courses each semester. Run and review your online Degree Audit each time you add, drop or switch courses and **before** each semester begins.

Lists of electives and required courses are included in your online degree audit report. It is **your responsibility** to choose correct courses.

1) **Choose one course from each list for General Education requirements:** **ALWAYS** check for allowable course choices in your degree audit after registration adds and changes!

   - **Critical & Creative Thinking list:** FA2330, FA2520, FA2720, FA2820, HU2130, HU2324, HU2501, HU2503, HU2538, HU2700, HU2820, HU2910, SS2300, TA2XX4
   - **Social responsibility & Ethical Reasoning list:** EC2001, ED2000, PSY2000, SS2100, SS2200, SS2400, SS2500, SS2501, SS2502, SS2503, SS2504, SS2505, SS2600, SS2610, SS2700, TA2XX8

   - **HASS lists:** at least 6 credits must be upper-level 3000-4999. UN1015 and UN1025 must be complete before taking upper-level HASS courses.
   - **HASS Composition/Communication:** HU2810, HU2830, HU3015, HU3120, HU3151, HU3693, HU3694, HU3832, HU4628, HU1XX5, HU2XX5, HU3XX5, HU4XX5
   - **HASS Social and Behavioral Science (EC/PSY/SS) choice:** ____________
   - **HASS Humanities and Fine Arts (HU/FA) choice:** _____________ Upper level if needed.
   - **HASS any list:** ________________ Upper level if needed.

2) **SELECT Approved Elective course list:** **choose one course** EE/EET3373, ENG2120, ENG3200, ENG4510, MEEM2110, MEEM2150, MEEM2201, MEEM2700, MSE2100, MSE4292, PH2300, PH2400, PH3300. (SELECT approved elective not required for biomedical or environmental applications concentrations)

3) Remaining **Approved Electives:** refer to your degree audit for list of valid courses. Ex: Engineering, Math, CS, Physics, Chem. Pass/fail courses do not count.

4) **EE Electives:** 15 credits (3-12 credits, varies w/ concentration) of EE lecture/lab coursework. Excludes research, pass/fail, project, co-op, or independent study credits. The purpose is to add skills and knowledge in new ECE topics, or more in-depth knowledge in an ECE area of specialization. May use for **“Focus Area(s)”**. Look for semester offerings in the online Schedule of Classes. Look for pre-requisite and other course information by clicking the CRN, or in the online Course Descriptions. EE elective courses are offered once per year, or in alternating years (ex. EE4240, EE5223, EE5250). Check online Course Descriptions and the Schedule of Classes for the most up-to-date course information and semester offerings.

5) **Engineering Design Requirements:** 4 – 6 credits

   - **Option 1:** “Senior Design”, 4 credits, is the year-long company sponsored project team. EE4901(2) and EE4910(2) (or BE4901/BE4910) taken in fall-spring, or MEEM4901(2) and MEEM4911(2) taken in spring-fall or fall-spring. May use EPS-European Project Semester for Design Option 1, which includes EE3901 credit.
   - **Option 2:** “Enterprise” – 6 credits, 4 semesters of project work beginning at the point in time when you have 4 semesters left on campus: ENT3950(1), ENT3960(1), ENT4950(2) and ENT4960(2). Reduces “Approved Electives” by 2 credits if applicable.

6) Free Elective: a good use of Free Elective: CH1153, MA1161 5th credit, Enterprise 2000-level project work, or excess transfer credits. Cannot use co-curricular activities.

**Concentration Electives:** See your Degree Audit Report in Banweb for list of valid electives with a concentration, or see the Degree Services .pdf audit for the BSEE with the concentration(s) you are interested in: [http://www.mtu.edu/registrar/students/major-degree/audit/engineering/](http://www.mtu.edu/registrar/students/major-degree/audit/engineering/) A concentration is not required.

Concentrations: Biomedical Applications, Electric Power Engineering, Enterprise, Environmental Applications, Photonics

✓ **GRADUATION:** Review degree audit for meeting all graduation requirements. Apply for graduation one semester before your last; DATE: _______________________. Schedule last semester courses, **review degree audit**, then meet with the advisor to review your last set of scheduled courses **before** your last semester begins.