# Michigan Technological University Bachelor of Science Degree Audit

Major Program: Electrical Engineering, Concentration: Electric Power Engineering

Program Code EEEW, Academic Year 2020-21 Total credits required for the degree: 128

## Core Requirements: 45 credits

| Course                | Credits |
|-----------------------|---------|
| CS 1111               | 3       |
| EE 2111               | 3       |
| EE 2112               | 4       |
| EE 2174               | 4       |
| EE 3131               | 4       |
| EE 3140               | 3       |
| EE 3160               | 3       |
| EE 3171               | 4       |
| EE 3180               | 3       |
| EE 3261               | 3       |
| EE 3901               | 2       |
| EE 4250               | 3       |
| ENG 1101 or           | 3/4     |
| ENG 1001 and ENG 1100 | 3/4     |
| ENG 1102              | 3       |

## Math and Science: 28 credits

| Course                    | Credits |
|---------------------------|---------|
| CH 1150                   | 3       |
| CH 1151                   | 1       |
| MA 1160 <b>or</b> MA 1161 | 4/5     |
| MA 2160                   | 4       |
| MA 2321                   | 2       |
| MA 3160                   | 4       |
| MA 3521                   | 2       |
| PH 1100                   | 1       |
| PH 1200                   | 1       |
| PH 2100                   | 3       |
| PH 2200                   | 3       |

#### SELECT Approved Elective: 3 to 4 credits (choose one)

BE2400, BL2010, CS1142, CEE3501, CEE3502, EE3373, ENG2120, ENG3200, ENG4510, MEEM2110, MEEM2150, MEEM2201, MEEM2700, MEEM3210, MEEM3220, MSE2100, MSE4292, PH2300, PH2400, PH3300

| Course | Credits |
|--------|---------|
|        |         |

#### **EE Technical Electives: 3 credits**

Any EE course except CS1000, EE3010, EE3173, EE4000, EE4805, EE4901, EE4910 and those listed in major requirements. No more than 3 credits of EE2000-EE2999. Department approval required for EEnXXE.

| Course |  | Credits |
|--------|--|---------|
|        |  |         |

#### Senior Design Path: 7 credits

Senior Design: 4 credits

(EE 4901 and EE 4910) OR (MEEM 4901 and MEEM 4911)

| Course | Credits |
|--------|---------|
|        | 2       |
|        | 2       |

Approved Electives: Choose at least 3 credits from the list below

| Course | Credits |
|--------|---------|
|        | 3       |

## or Enterprise Design Path: 7 credits

Engineering Design: 6 credits

ENT3950, ENT3960, ENT4950 **and** ENT4960 **or** ENT3960, ENT4950, ENT4960 **and** ENT module from following: ENT2961, ENT2962, ENT3959, ENT3963, ENT3966, ENT3967, ENT3971, ENT3982, ENT3983, ENT4951

| Course | Credits |
|--------|---------|
|        | 1       |
|        | 1       |
|        | 2       |
|        | 2       |

# Approved Elective: Choose at least 1 credit from the list below

| Course | Credits |
|--------|---------|
|        | 1       |

# **List of Approved Electives**

BL1100-BL1999, BL2000-BL2999, BL3000-BL3999, BL4000-BL4999, CH1152-CH1999, CH2000-CH2999, CH3000-CH3999, CH4000-CH4999, CM1000-CM1999, CM2000-CM2999, CM3000-CM3999, CM4000-CM4999, EE1112-EE1999, EE2000-EE2999, EE3000-EE3999, EE4000-EE4999, ENG2000-ENG2999, ENG3000-ENG3999, ENG4000-ENG4999, MA2600, MA2910-MA2999, MA3000-MA3999, MA4000-MA4999, PH1090, PH1091, PH1600, PH1610, PH2300-PH2999, PH3000-PH3999, PH4000-PH4999, BE1000-BE1999, BE2000-BE2999, BE3000, BE3999, BE4000-BE4999, CEE1000-CEE1999, CEE2000-CEE2999, CEE3000-CEE3999, CEE4000-CEE4999, CS1001-CS1999, CS2000-CS2999, CS3000-CS3999, CS4000-CS4999, ENT1000-ENT1999, ENT2000-ENT2999, ENT3000-ENT3999, ENT4000-ENT4999, GE1000-GE1999, GE2000-GE2999, GE3000-GE3999, GE4000-GE4999, MEEM2000-MEEM2999, MEEM3000-MEEM3999, MEEM4000-MEEM4999, MSE1000-MSE1999, MSE2000-MSE2999, MSE3000-MSE3999, MSE4000-MSE4999, UN4000, UN3002-UN3005. The following courses are not allowed: BE2700, BE4770, BL1580, BL1590, BL1710, BL1800, BL3970, BL3990, CM3410, CS4431, EE3010, ENG2060, ENG2990, ENG3060, ENG3530, ENG3990, ENG4070, ENG4300, ENG4900, ENG4905, ENG4910, ENG4990, ENT3958, ENT3964, MA3720, MA3750, MA3811, MA3990, MA4810, MA4820, MA4900, MA4905, MA4945

**Concentration Requirements: 16 credits** 

| Course  | Credits |
|---------|---------|
| EE 3120 | 3       |
| EE 4221 | 3       |
| EE 4222 | 3       |
| EE 4226 | 1       |

## **Electric Power Engineering Conc Electives: 6 credits**

EE4219, EE4220, EE4227, EE4228, EE4262, EE5200, EE5223, EE5224, EE5230, EE5240, EE5250, EE5260, EE5275, EE5290

| Course | Credits |
|--------|---------|
|        | 3       |
|        | 3       |

## Free Electives: 2 credits

Any coursework is allowable, excluding co-curricular and coursework below the 1000-level.

| Course | Credits |
|--------|---------|
|        |         |
|        |         |
|        |         |

## **General Education Core and HASS**

Courses used to complete Core and HASS requirements may not be used to complete other degree requirements. Students must complete 12 credits of Core coursework and 12 credits of Humanities, Fine Arts, and Social Science (HASS) coursework. Repeatable courses may not be repeated for general education credit. Core and HASS courses can be found on the General Education page.

## Core: 12 credits

| Course                                      | Credits |
|---|---------|
| UN 1015                                     | 3       |
| UN 1025 or an upper level modern language   | 3       |
| Critical and Creative Thinking              | 3       |
| Social Responsibility and Ethical Reasoning | 3       |

## HASS: 12 credits

Six of the 12 HASS credits must be at the 3000 or 4000 level (an upper division language course in place of UN1025 does not meet this requirement). No more than three credits may come from the HASS Restricted course list.

| Course   | Credits   |
|--|-----------|
| Communication/ Composition   | Minimum 3 |
| Humanities and Fine Arts   | Minimum 3 |
| Social and Behavioral Sciences                                     | Minimum 3 |
| Course from any list above or from the Restricted HASS course list | 0 to 3    |

## **Co-curricular Activities: 3 credits**

Required for graduation, but not included in the GPA calculation or in the overall credits required for the degree. Only courses on the co-curricular course list are eligible. Half credit (0.5) courses may be repeated to a maximum of one time for co-curricular credit. Find eligible courses on the General Education page.

| Course | Credits |
|--------|---------|
|        |         |
|        |         |
|        |         |
|        |         |
|        |         |