

Michigan Technological University

Bachelor of Science Degree Audit

Major Program: Electrical Engineering, Concentration: Photonics

Program Code EEEP, Academic Year 2019-20

Total credits required for the degree: 128

Major Requirements: 81 credits

Course	Credits
CH 1150	3
CH 1151	1
CS 1111	3
EE 1110	1
EE 1111	1
EE 2111	3
EE 2112	4
EE 2174	4
EE 3131	4
EE 3140	3
EE 3160	3
EE 3180	3
EE 3261	3
EE 3901	2
EE 4250	3
ENG 1101 or ENG 1001 and ENG 1100	3/4
ENG 1102	3
MA 1160 or 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 credits

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, 4000, 4805, 4901, EE4910, and those listed in major requirements

Course	Credits
	3

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

BL1010-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: 20 credits

Course	Credits
EE 2190	3
EE 3190	3
EE 3290	4
EE 4490	4

Choose 6 credits from the following:

Course	Credits
BE 4250	3
BE 4410	3
EE 4240	4
EE 4252	3
EE 4253	3
EE 4259	1
EE 4290	3
EE 4411	3
MSE 4292	3
PH 3410	3
PH 4510	2
PH 4640	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

Free Electives: 0 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