

Bachelor of Science in Electrical Engineering plan*

This suggested plan applies to students entering in Academic Year 2013-2014 who are ready for calculus.

Semester 1			Semester 2		
CH1150&1151	Univ. Chemistry I & Lab I	4	PH2100	Univ. Physics I - Mechanics	3
CH1153	Prob. Solv. Chem. I :optional	1	ENG1102	Engineering Modeling & Design	3
ENG1101	Engineering Analysis	3	MA2160	Calculus with Technology 2	4
MA1160 ¹	Calculus with Technology 1	4	PH1200	Univ. Physics II Lab	1
PH1100	Physics Lab 1	1	EE1110	Essential Math for EE's	1
UN1015	Composition	3	UN1025	Global Issues	3
Total		15/16	Total		15
Semester 3			Semester 4		
MA2321 ²	Linear Algebra	2	EE2112	Electrical Circuits II & Lab	4
MA3521 ²	Differential Equations	2	EE3120 ⁷	Electric Energy Systems <i>or</i>	3
EE 2111	Electrical Circuits I	3	<i>If Photonics</i>	<i>HASS or Approved Elective⁷</i>	3
EE 2174	Digital Logic and Lab	4	MA3160	Multi-variable Calculus	4
EE2241	C++ and Matlab programming	3	PH2200	Univ. Physics 2-Elec&Magnet	3
	Social/Behavioral Sci elective ⁶	3		Arts/Humanities elective ⁶	3
Total		17	Total		17
Semester 5			Semester 6		
EE3131	Electronics & Lab	4	EE3901	Design Fundamentals	2
EE3140	Electromagnetics	3	EE3180	Probability – Signal Analysis	3
EE3160	Linear Systems	3	EE3261	Control Systems	3
	Select Approved electives ³	3	EE3171	Microcontroller Appls & Lab	4
	HASS elective ⁶	3	EE3250	Intro. Communication Theory	3
Total		16	Total		15
Semester 7			Semester 8		
EE4901 ⁴	EE Design Project 1 (part 1)	2	EE4910 ⁴	EE Design Project 2 (part 2)	2
	EE electives ⁵	6		EE electives ⁵	3
	EE electives ⁵	3		EE electives ⁵	3
	HASS elective ⁶	3		HASS elective ⁶	6
	Approved electives ³	3		Free electives	2
Total		17	Total		16
Total			128 Credits		

Students must add 3 units of co-curricular activities (Physical Education), usually taken in six .5 units.

Follow pre-requisites and semester offerings. This is a 'suggested' plan which can vary by individual student; it shows the best route through the system to avoid scheduling conflicts. Students who begin in a pre-calculus course will take ENG1001 and ENG1100 in place of ENG1101 in the first year.

1. MA1160 may be replaced by MA1161

2. MA2320 and MA3520 may replace MA2321 and MA3521

3. Select Approved Electives: 3 credits from a "select approved list", plus 3 credits from Approved electives list: CH1153 may be allowed. Reduce by 2 cr. with enterprise design option (see advisor).

4. Approved Engineering Design courses or Enterprise courses may replace EE4901, and EE4910. See department advisor for details

5. EE Electives: 15 credits of EE courses not listed here and not EE3805, EE4805, EE4901, EE4910.

6. HASS = Humanities, Arts and Social Sciences. Follow university requirements for general distribution electives.

7. If considering the [Photonics concentration](#), postpone EE3120 and take an Approved or HASS elective in semester 4.

* Credits to be double-counted towards BS and Accelerated MS must be 4000-level EE or CpE classroom credits (not senior design nor enterprise nor project credits).

Example Electrical Engineering BS/MS Five-year Academic Plan for coursework-only Master's Degree (152 cr total)

5th Year			
Fall		Spring	
EE5200 Advanced Meth in Power	3	EE5220 Transient Analysis	3
EE5221 Advanced Machinery	3	EE5223 Power System Protection	3
EE5227 Advanced Power Electronics	3	EE5240 Computer Modeling	3
4000-level elective *	3	EE5000-level elective	3
Total (12)		Total (12)	

*The 4000-level elective must satisfy the MS breadth requirement.

Note: The 24 credits chosen for the MS and the 6 “double-counted” (undergrad) credits must meet the requirements of the particular MS Plan, as given in the [ECE grad webpage](#) and the Graduate School webpage:

<http://www.mtu.edu/gradschool/administration/academics/requirements/ms/>