

Electrical Engineering – General Stream (Old course sequences)

Electrical Engineering program old course sequences for year 3 and year 4 students

- 1. Students in the 3rd year and 4th year of 120-credit Electrical Engineering program should follow the old sequences presented in the next pages.
- 2. The 1st year courses crossed out in the following course sequences were offered in academic year 2018-19 and will not be offered anymore.
- 3. The 2nd year courses crossed out in the following course sequences were offered in academic year 2019-20 and will not be offered anymore.
- 4. The year 2 summer and 3rd year courses indicated in the following course sequences will be offered only in academic year 2020-21.
- 5. The 4th year courses indicated in the following course sequences will be offered only in academic years 2020-2021 and 2021-22.





Electrical Engineering – General Stream September Entry (Admitted in Fall 2018 or earlier)

ear 1	Term Fall	Course COEN 212	Title Digital Systems Design I	Credit 3.50	Prerequisite MATH 204	Co-requisi
cai I	Tall	COEN 243	Programming Methodology I	3.00	MATH 204	
		ELEC 273	Rasic Circuit Analysis	3.50	PHYS 205	ENGR 213
		ENGR 201	·		PH13 203	ENGR 213
			Professional Practice and Responsibility	1.50	MATILE	NAATH 204
		ENGR 213	Applied Ordinary Differential Equations	3.00	MATH 205	MATH 204
	Winter	COEN 244	Programming Methodology II	3.00	COEN 243	
		ELEC 242	Continuous-Time Signals and Systems	3.00	ELEC 273; ENGR 213	
		ELEC 311	Electronics I	3.50	ELEC 273	
		ENCS 282	Technical Writing and Communication	3.00	Students must pass the Engineering Writing Test (EWT), or pass ENCS 272 with a grade of C- or higher	
		ENGR 233	Applied Advanced Calculus	3.00	MATH 204, 205	
ar 2	Fall	COEN 231	Introduction to Discrete Mathematics	3.00	MATH 204	
		COEN 311	Computer Organization and Software	3.50	COEN 212, 243	
		ELEC 251	Fundamentals of Applied Electromagnetics	3.00	ELEC 273 or ENGR 273	ENGR 233
		ELEC 342	Discrete-Time Signals and Systems	3.50	ELEC 242 or 264	
		ENGR 290	Introductory Engineering Team Design Project	3.00	ENCS 282; ENGR 213, 233	
	Mintor	ELEC 221	Introduction to Comiconductor Materials and Devices	2.50	CHEM 20E, ENICE 212	
	Winter	ELEC 321	Introduction to Semiconductor Materials and Devices	3.50	CHEM 205; ENGR 213	
		ELEC 331	Fundamentals of Electrical Power Engineering	3.50	ELEC 251, 273	
		ELEC 365	Complex Variables and Partial Differential Equations	3.00	ENGR 213, 233	
		ENGR 202	Sustainable Development and Environmental Stewardship	1.50		
		ENGR 371	Probability and Statistics in Engineering	3.00	ENGR 213, 233	
ar 3	Fall	ELEC 312	Electronics II	3.50	ELEC 311; ELEC 242 or 364	
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		ELEC 351	Electromagnetic Waves and Guiding Structures	3.00	ELEC 251, 365	
		ELEC 367	Introduction to Digital Communications	3.50	ELEC 342 or 364; ENGR 371	
		ELEC 372	Fundamentals of Control Systems	3.50	ELEC 242 or 364	
		ENGR 301	Engineering Management Principles and Economics	3.00		
	Winter	ELEC 390	Electrical Engineering Product Design Project	3.00	Minimum of 45 credits in BEng (Electrical); COEN 244; ELEC 311; ENGR 290, 301	
		COEN 313	Digital Systems Design II	3.50	COEN 212, 231	
			Elective*			
Year 4	Fall	ELEC 490	Capstone Electrical Engineering Design Project	4.00	Minimum of 75 credits in BEng (Electrical) or permission of the Department; ENGR 371; COEN 311; ELEC342 or 364; ELEC 390	
		COEN 352	Data Structures and Algorithms	3.00	COEN 231, 244	
		ELEC 463	Telecommunication Networks	3.50	COEN 244; ELE 342 or 364; ENGR 371	
		ENGR 391	Numerical Methods in Engineering	3.00	ENGR 213, 233; COMP 248 or COEN 243 or MECH 215 or BCEE 231	
			Elective*			
	Winter	ELEC 490	Capstone Electrical Engineering Design Project		Minimum of 75 credits in BEng (Electrical) or permission of the Department; ENGR 371; COEN 311; ELEC342 or 364; ELEC 390	
		ENGR 392	Impact of Technology on Society	3.00	ENCS 282; ENGR 201, 202	
			General Education elective	3.00		
			Elective*			





Electrical Engineering – General Stream January Entry (Admitted in Winter 2019 or earlier)

Year3	Term	Course	Title	Credit	Prerequisite	Co-requisit
ear 1	Winter	COEN 212	Digital Systems Design I	3.50	MATH 204	
		COEN 243	Programming Methodology I	3.00	MATH 204	
		ELEC 273	Basic Circuit Analysis	3.50	PHYS 205	ENGR 213
		ENGR 201	Professional Practice and Responsibility	1.50		
		ENGR 213	Applied Ordinary Differential Equations	3.00	MATH 205	MATH 204
	Summer	COEN 244	Programming Methodology II	3 00	COEN 243	
		ELEC 242	Continuous-Time Signals and Systems	3.00	ELEC 273; ENGR 213	
		ELEC 251	Fundamentals of Applied Electromagnetics	3.00	ELEC 273 or ENGR 273	ENGR 233
		ENGR 202	Sustainable Development and Environmental Stewardship	1.50		
		ENGR 233	Applied Advanced Calculus	3.00	MATH 204, 205	
ear 2	Fall	COEN 231	Introduction to Discrete Mathematics	3.00	MATH 204	
		COEN 311	Computer Organization and Software	3.50	COEN 212, 243	
		ELEC 342	Discrete-Time Signals and Systems	3.50	ELEC 242 or 264	
		ENCS 282	Technical Writing and Communication	3.00	Church and a supply of the Charles o	
		LIVES 202	recrifical writing and constantiation	3.00	Students must pass the Engineering Writing Test (EWT), or pass ENCS 272 with a grade of C- or higher	
		ENGR 371	Probability and Statistics in Engineering	3.00	ENGR 213, 233	
		LINGK 3/1	Probability and Statistics in Engineering	3.00	LNGN 213, 233	
	Winter	COEN 244	Communication of the same	3.50	COL 242 242	
	willer	COEN 311	Computer Organization and Software Introduction to Semiconductor Materials and Devices		COEN 212, 243	
		ELEC 321		3.50	CHEM 205; ENGR 213	
		ELEC 331	Fundamentals of Electrical Power Engineering	3.50	ELEC 251, 273	
		ELEC 365	Complex Variables and Partial Differential Equations	3.00	ENGR 213, 233	
		ENGR 290	Introductory Engineering Team Design Project	3.00	ENCS 282; ENGR 213, 233	
Year 3	Fall	ELEC 312	Electronics II	3.50	ELEC 311; ELEC 242 or 364	
		ELEC 351	Electromagnetic Waves and Guiding Structures	3.00	ELEC 251, 365	
		ELEC 367	Introduction to Digital Communications	3.50	ELEC 342 or 364; ENGR 371	
		ELEC 372	Fundamentals of Control Systems	3.50	ELEC 242 or 364	
		ENGR 301	Engineering Management Principles and Economics	3.00		
	Minton	ELEC 200	Floatrical Fusing oring Dyady at Daging Dyaiget	2.00	Minimum of 45 credits in BEng (Electrical); COEN 244;	
	Winter	ELEC 390	Electrical Engineering Product Design Project	3.00	ELEC 311; ENGR 290, 301	
		00511040	D: 11 IC 1	2.50	00511040 004	
		COEN 313	Digital Systems Design II	3.50	COEN 212, 231	
			Elective*			
					Minimum of 75 credits in BEng (Electrical) or permission	
ear 4	Fall	ELEC 490	Capstone Electrical Engineering Design Project	4.00	of the Department; ENGR 371; COEN 311; ELEC342 or	
cui 4	i un	2226 430	capstone Electrical Engineering Design Project	4.00	364; ELEC 390	
					ENGR 213, 233; COMP 248 or COEN 243 or MECH 215 or	
		ENGR 391	Numerical Methods in Engineering	3.00	BCEE 231	
					5000 231	
		COEN 352	Data Structures and Algorithms	3.00	COEN 231, 244	
		ELEC 463	Telecommunication Networks	3.50	COEN 244; ELE 342 or 364; ENGR 371	
			Elective*			
					Minimum of 75 credits in BEng (Electrical) or permission	
			Capstone Electrical Engineering Design Project		of the Department; ENGR 371; COEN 311; ELEC342 or	
	\M/intor	ELEC 100	Capatone Lieutrical Engineering Design Project			
	Winter	ELEC 490			304: ELEC 390	
	Winter		Impact of Technology on Society	3.00	364; ELEC 390	
	Winter	ELEC 490 ENGR 392	Impact of Technology on Society	3.00	ENCS 282; ENGR 201, 202	
	Winter		Impact of Technology on Society General Education elective Elective*	3.00 3.00		

^{*} A minimum of 17 credits must be chosen from the Electrical Engineering Electives list. For more information, please consult section 71.30.1 of the 2017-2018 Undergraduate Calendar.





Electrical Engineering – General Stream Co-op Entry (Admitted in Fall 2018 or earlier)

Fall	COEN 212 COEN 243	Digital Systems Design I	3.50	MATH 204	
	TOFN 243				
	002	Programming Methodology I	3.00	MATH 204	
	ELEC 273	Basic Circuit Analysis	3.50	PHYS 205	ENGR 213
	ENGR 201	Professional Practice and Responsibility	1.50		
	ENGR 213	Applied Ordinary Differential Equations	3.00	MATH 205	MATH 204
			><		
Winter	COEN 244	Programming Methodology II	3.00	COEN 243	
			3.50		
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	ENGIN 255	Applica Advanced edicales	3.00	111111111111111111111111111111111111111	
Summer	ELEC 251	Fundamentals of Applied Floctromagnetics	3 00	ELEC 272 or ENGD 272	ENGR 233
Julillici					LINGINZ
	ELEC 342	Discrete-Time Signals and Systems	3.30		
	ENCS 282	Technical Writing and Communication	3.00	Students must pass the Engineering Writing Test (EWT), or pass ENCS 272 with a grade of C- or higher	
	ENGR 202	Sustainable Development and Environmental Stewardship	1.50		
	ENGR 371	Probability and Statistics in Engineering		ENGR 213, 233	
			><		
Fall	Work Term 1				
Winter	COEN 231		3.00		
	ELEC 321	Introduction to Semiconductor Materials and Devices	3.50	CHEM 205; ENGR 213	
	ELEC 331	Fundamentals of Electrical Power Engineering	3.50	ELEC 251, 273	
	ELEC 365	Complex Variables and Partial Differential Equations	3.00	ENGR 213, 233	
	ENGR 290	Introductory Engineering Team Design Project	3.00	ENCS 282; ENGR 213, 233	
Summer	ENGR 301	Engineering Management Principles and Economics	3.00		
	ENGR 391	Numerical Methods in Engineering	3.00	ENGR 213, 233; COMP 248 or COEN 243 or MECH 215 or BCEE 231	
	ENGR 392		3.00		
		General Education elective	3.00		
Fall	ELEC 312	Electronics II	3.50	ELEC 311; ELEC 242 or 364	
	ELEC 351	Electromagnetic Waves and Guiding Structures	3.00	ELEC 251, 365	
	ELEC 367		3.50	· · · · · · · · · · · · · · · · · · ·	
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	ELEC 390	Electrical Engineering Product Design Project	3.00	301	
Winter	Work Term 2				
Summer	Work Term 3				
Fall	ELEC 490	Capstone Electrical Engineering Design Project	4.00	Minimum of 75 credits in BEng (Electrical) or permission of the Department; ENGR 371; COEN 311; ELEC342 or 364; ELEC 390	
	COEN 352	Data Structures and Algorithms	3.00	COEN 231, 244	
	ELEC 463	Telecommunication Networks	3.50	COEN 244; ELE 342 or 364; ENGR 371	
		Elective*			
Winter	ELEC 490	Capstone Electrical Engineering Design Project		Minimum of 75 credits in BEng (Electrical) or permission of the Department; ENGR 371; COEN 311; ELEC342 or 364; ELEC 390	
	COEN 313	Digital Systems Design II	3.50	COEN 212, 231	
	Fall Winter Fall Winter Fall Winter Fall	COEN 311 ELEC 242 EIFC 341 ENGR 233 Summer ELEC 251 ELEC 342 ENCS 282 ENGR 202 ENGR 371 Fall Work Term 1 Winter COEN 231 ELEC 321 ELEC 321 ELEC 331 ELEC 365 ENGR 290 Summer ENGR 301 ENGR 391 ENGR 392 Fall ELEC 312 ELEC 351 ELEC 357 ELEC 357 ELEC 372 ELEC 390 Winter Work Term 2 Summer Work Term 3 Fall ELEC 490 COEN 352 ELEC 463	COEN 311 Computer Organization and Software ELEC 242 Continents Time Signals and Systems ELEC 341 Electronics I ENGR 233 Applied Advanced Calculus Summer ELEC 251 Fundamentals of Applied Electromagnetics ELEC 342 Discrete-Time Signals and Systems ENCS 282 Technical Writing and Communication ENGR 202 Sustainable Development and Environmental Stewardship ENGR 371 Probability and Statistics in Engineering Fall Work Term 1 Winter COEN 231 Introduction to Discrete Mathematics ELEC 331 Fundamentals of Electrical Power Engineering ELEC 331 Fundamentals of Electrical Power Engineering ELEC 335 Complex Variables and Partial Differential Equations ENGR 290 Introductory Engineering Team Design Project Summer ENGR 301 Engineering Management Principles and Economics ENGR 391 Numerical Methods in Engineering ENGR 392 Impact of Technology on Society General Education elective Fall ELEC 312 Electronics II ELEC 351 Electronics II ELEC 352 Fundamentals of Control Systems ELEC 367 Introduction to Digital Communications ELEC 372 Fundamentals of Control Systems ELEC 390 Electrical Engineering Product Design Project Winter Work Term 2 Summer Work Term 3 Fall ELEC 490 Capstone Electrical Engineering Design Project Work Term 3 Fall ELEC 490 Capstone Electrical Engineering Design Project Winter ELEC 463 Telecommunication Networks Elective*	COEN 311 Computer Organization and Software ELEC 242 Continends Time Signals and Systems 3.00 ELEC 341 Electronics I 3.50 ENGR 233 Applied Advanced Calculus 3.00 Summer ELEC 251 Fundamentals of Applied Electromagnetics 3.00 ELEC 342 Discrete-Time Signals and Systems 3.50 ENGR 262 Technical Writing and Communication 3.00 ENGR 202 Sustainable Development and Environmental Stewardship 1.50 ENGR 371 Probability and Statistics in Engineering 3.00 Fall Work Term 1 Winter COEN 231 Introduction to Discrete Mathematics 3.00 ELEC 321 Introduction to Discrete Mathematics 3.50 ELEC 331 Fundamentals of Electrical Power Engineering 3.50 ELEC 331 Fundamentals of Electrical Power Engineering 3.50 ENGR 290 Introductory Engineering Team Design Project 3.00 Summer ENGR 301 Engineering Management Principles and Economics 3.00 ENGR 391 Numerical Methods in Engineering 3.00 ENGR 392 Impact of Technology on Society 3.00 General Education elective 3.00 Fall ELEC 312 Electronics II 3.50 ELEC 351 Electromagnetic Waves and Guiding Structures 3.00 ELEC 367 Introduction to Digital Communications 3.50 ELEC 372 Fundamentals of Control Systems 3.50 ELEC 390 Electrical Engineering Product Design Project 3.00 Winter Work Term 2 Work Term 2 Summer Work Term 3 Fall ELEC 490 Capstone Electrical Engineering Design Project 4.00 COEN 352 Data Structures and Algorithms 3.00 ELEC 463 Telecommunication Networks 3.50 ELEC 490 Capstone Electrical Engineering Design Project 4.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 4.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 4.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 5.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 5.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 5.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 5.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 5.00 Winter ELEC 490 Capstone Electrical Engineering Design Project 5.00 Winter 5.00 Winter 6.00 W	CORN 311 Computer Organizationame STRWATE ELEC 273 ENRR 213

^{*} A minimum of 17 credits must be chosen from the Electrical Engineering Electives list. For more information, please consult section 71.30.1 of the 2017-2018 Undergraduate Calendar.

