The Association of Professional Engineers and Geoscientists of Alberta

ELECTRICAL ENGINEERING
COURSE EQUIVALENTS
2016 EDITION

University of Alberta		*University of Calgary*	
16-ELEC-A1	**Circuits**		
ECE 202	Electrical Circuits I	ENEL 343	Electrical Circuits II
&			
ECE 203	Electrical Circuits II		
16-ELEC-A2	**Systems and Control**		
ECE 240	Continous Time Signals & Systems	ENEL 441	Control Systems I
&			
ECE 360	Control Systems I		
16-ELEC-A3	**Signals and Communications**		
ECE 240	Continous Time Signals & Systems	ENEL 471	Analog Communications
&			
ECE 380	Introduction to Communication Systems		
16-ELEC-A4	**Digital Systems and Computers**		
ECE 210	Introductions to Digital Logic Design	ENCM 370	Computer Architecture and Embedded Systems
&		&	
ECE 212	Introduction to Microprosessors	ENEL 453	Digital Systems Design
16-ELEC-A5	**Electronics**		
ECE 302	Electronic Devices	ENEL 361	Electronic Devices
&		&	
ECE 303	Analog Electronics	ENEL 469	Analog Electronic Circuits
&		OR	
ECE 304	Digital Electronics	ENCM 467	Digital Electronics Circuits
16-ELEC-A6	**Power Systems and Machines**		
ECE 330	Introduction to Power Engineering	ENEL 487	Electrical Energy Systems Engineering
&		&	
ECE 332	Electrical Machines	ENEL 582	Modelling and Control of Electric Machines and Drives
16-ELEC-A7	**Electromagnetics**		
ECE 370	Engineering Electromagnetics I	ENEL 476	Electromagnetic Waves and Applications
&			
ECE 476	Engineering Electromagnetics II		
16-ELEC-B1	**Digital Signal Processing**		
ECE 340	Discrete Time signals and Systems	ENEL 593	Digital Filters
&			
ECE 440	Digital Signal Processing of Images		
&			
ECE 442	Introduction to Multimedia Signal Processing		

	University of Alberta	*University of Calgary*	
16-ELEC-B2	**Advancewd Control Systems**		
ECE 460	Control Systems II	ENEL 541	Control Systems II
&			
ECE 464	Medical Robotics and Computer-Integrated Intervention		
16-ELEC-B3	**Digital Communications**		
ECE 485	Digital Communications	ENEL 529	Wireless Communication Systems
&		&	
ECE 486	Wireless Communications	ENEL 571	Didgital Communications
16-ELEC-B4	**Information Technology**		
ECE 487	Data Communications Networks	ENEL 529	Wireless Communications Systems
		&	
		ENEL 573	Telecommunications and Computer Communications
16-ELEC-B5	**Advanced Electronics**		
ECE 402	RF Communication Circuits	ENEL 559	Analog Filter Design
&		**&**	
ECE 478	Microwave Circuits	ENEL 569	Electronic Systems and Applications
16-ELEC-B6	**Integrated Circuit Engineering**		
ECE 403	Integrated Circuit Design	ENEL 567	CMOS Analog Circuit Design
16-ELEC-B7	**Power Systems Engineering**		
ECE 430	Power Systems Analysis	ENEL 586	Power System Protection
&		&	
ECE 433	Power System Stability and Transients	ENEL 587	Power Sysetm Analysis
16-ELEC-B8	**Power Electronics and Drives**		
ECE 401	Power Electronics	ENEL 582	Modelling and Control of Electric Machines and Drives
&		**&**	
ECE 432	Variable Speed Drives	ENEL 585	Introduction to Power Electronics
16-ELEC-B9	**Electromarnetic Fields,**		
ECE 478	Microwave Circuit	ENEL 574	Microwave Engineering
		OR	
		ENEL 575	Radio-frequency and Microwave Passive Circuits
16-ELEC-B10	**Electro-Optical Engineering**		
ECE 471	Photonics I		*No Course Equivalent Offerred*
&			
ECE 472	Photonics II		

Updated September 2026