

POWER ELECTRONICS - GRADUATE CERTIFICATE (ONLINE)

Power electronics is a key enabling technology in essentially all electronic systems and is increasingly important in the grid interface of renewable energy sources and in efficient electrical loads. The necessity for power electronics technology in these rapidly expanding areas creates an increasing need for design engineers equipped with knowledge and skills to actively participate in multidisciplinary teams.

Program Policies

This CU Boulder on Coursera program does not align with standard campus policies. Please refer to the Online Programs (<https://catalog.colorado.edu/online/>) section of the catalog for more information.

Requirements

To earn a graduate certificate (9 credits), students must complete the required specializations/courses (listed below).

Power Electronics Specialization

Code	Title	Credit Hours
ECEA 5700	Power Electronics: Introduction to Power Electronics	0.8
ECEA 5701	Power Electronics: Converter Circuits	1.0
ECEA 5702	Power Electronics: Converter Control	1.2
ECEA 5703	Power Electronics: Magnetics Design	1.0

Modeling and Control of Power Electronics Specialization

Code	Title	Credit Hours
ECEA 5705	Modeling, Control of Power Elec: Avged-Sw Modeling and Sim	0.8
ECEA 5706	Modeling, Control of Power Elec: Tech Dsgn-Oriented Analysis	0.6
ECEA 5707	Modeling, Control of Power Elec: Input Filter Design	0.6
ECEA 5708	Modeling, Control of Power Elec: Current-mode Control	1.2
ECEA 5709	Modeling, Control of Power Elec: Mod/Ctrl 1-Phase Rect/Inv	0.6

Power Electronics Project Course

Code	Title	Credit Hours
ECEA 5715	Power Electronics Capstone Project	1.2