GRADUATE CERTIFICATE IN MACHINE INTELLIGENCE

The certificate program in machine intelligence provides a strong technical education in the software and hardware aspects of machine intelligence. This certificate offers an alternative to a master of science degree program for professionals who wish to align their background with the rapid changes in the scalable and efficient implementation of machine learning and machine intelligence, and who want to expand their education beyond the bachelor's degree but might not have the time to commit to a full graduate degree program.

The training and operation of machine learning systems are continuously increasing in complexity requiring increased computational, energy, and financial resources. Therefore, the implementation of these systems has to be efficient with interdisciplinary considerations at the intersection of algorithms, hardware, and targeted applications.

The objective of this certificate is to provide a coordinated four-course sequence covering the frameworks, systems, and applicability of machine intelligence. Students will get a comprehensive view and hands-on skills related to basic and advanced algorithmic concepts, challenges, and opportunities for efficient implementations in existing and emerging hardware technologies as well their applications and the larger societal impact.

REQUIREMENTS

The following requirements must be fulfilled: 12 credits, including 9 credits in required courses and one 3-credit elective course.

Code	Title	Credits
Required		
ECE 6210	Machine Intelligence	
ECE 6150	Design of Interconnection Networks for Parallel Computer Architectures	
ECE 6882	Reinforcement Learning	
And one of the following:		
ECE 6045	Special Topics in Electrical Engineering	
ECE 6850	Pattern Recognition and Machine Learning	