MTRE 4820L: Machine Learning for Robot Perception Laboratory

1 Credit Hours

Concurrent: MTRE 4820

This is a laboratory course designed to complement the machine learning and computer vision topics also covered in MTRE4820.

MTRE 4911: Design and Integration of Mechatronic Systems

2 Credit Hours

Prerequisite: MTRE 2710 or MTRE 2610

Concurrent: MTRE 4710 or MTRE 4100

The design of mechanical and electrical devices and systems, and cost considerations are covered. The course focuses on reliability, safety, energy and environmental issues, ethics, patents, product liability, time value of money, return on investment, and break-even analysis. The design project is a capstone for the Mechatronics Engineering program. Projects are assigned based on interest, equipment and software availability, and the specific background of the student. Projects require planning, proposal presentation, scheduling, engineering, implementation, and written and oral presentations of project results. Students are encouraged to "design and build" and utilize concepts learned from courses throughout the program

MTRE 4912: Mechatronic Prototype Development

2 Credit Hours

Prerequisite: MTRE 4911

This is a laboratory course designed to complement the mechatronics system design aspects also covered in MTRE 4911. Some aspects covered in this lab are the next. The implementations of mechanical and electrical devices and systems, and cost considerations are covered. The course focuses on reliability, safety, energy and environmental issues, ethics, patents, product liability, time value of money, return on investment, and break-even analysis. The design project is a capstone for the Mechatronics Engineering program. Project proposals are completed and approved prior to the developments. Project implementations require planning, presentation, scheduling, engineering, and written and oral presentations of project results. Students are encouraged to utilize concepts learned from courses throughout the program.