

MA 580- Intelligent Control

Course Code:	MA-580
UTAA Credit (Theoretical-Laboratory hours/week):	3(3-0)
ECTS Credit:	6.0
Department:	Mechanical and Aeronautical Engineering
Language of Instruction:	English
Level of Study:	Graduate
Offered Semester:	Fall and Spring Semesters.

Course Objectives

The aims of this module are to: Introduce intelligent based control systems to overcome the difficulties to model and solve the problems of nonlinear control structures and thus, to use the principles and techniques of neural network based system models and applications

Course Content

In Intelligent Control Systems; General Methods to obtain NN, Classic Back-Propagation and Fast Back-Propagation Algorithms, Radial Basis Function Networks, Hopfield Network, Self Feed-back NNs, Self Organizing Maps (Kohonen N.), Information-Theory Models, General Applications on motor control systems, robotic control systems and control system reliability

Course Learning Outcomes

- 1-Learning intelligent control systems
- 2-Understanding the application areas
- 3-Enhancing the subject area by a sample project on an application study