Aerospace Engineering

Course Title: **Neural Networks** **Number of Credits: 3**

Course Topics:

- Introduction, and basic concepts of the work of artificial neural networks
- MLP network(Activation functions, normalization, training law after waiting for error)
- Hopfield network (application of artificial neural networks in image processing)
- Build a simple neural network
- Neural networks in control, types of control diagram blocks, neural linear feedback method
- Recursive Networks (RNNs) and Convolution Networks (CNNs)
- Fuzzy neural networks

Reading Resources:

- Jacek M. Zurada, Introduction to Artificial Neural Systems, PWS Publishing Company, 1995.
- Laurene Fausett, Fundamentals of Neural Networks: Architectures, Algorithms, and Applications, Prentice Hall International, Inc., 1994.