THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Introduction to Neural Networks

CSE 5526

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Survey of fundamental methods and techniques of neural networks; single- and multi-layer perceptrons; radial-basis function networks; support vector machines; recurrent networks; supervised and unsupervised learning.

Prerequisites and Co-requisites:
Prereq: 3521 or 5521.

Course Goals / Objectives:
- Master basic neural network methods
- Be competent with solving problems using neural network techniques
- Be familiar with enough background about neural networks to take other specialty courses on neural networks

Course Topics:

- Introduction and McCulloch-Pitts networks
- Perceptrons
- Regression and least mean square algorithm
- Multilayer perceptrons
- Radial-basis function networks
- Support vector machines
- Recurrent networks
- Unsupervised learning and self-organization
- Applications
- Current research
- Exam and discussion

Designation:

Elective