

Neural Networks II
Spring, 2009, MW 4:40 -6:30 PM
G.G. Lendaris

COURSE: NEURAL NETWORKS II -- ECE 456/556 & SySc 576

PREREQUISITE: Successful completion of Neural Networks I course.

TEXTBOOKS: Yen & Langari, *FUZZY LOGIC: Intelligence, Control, & Information*, Prentice Hall, 1999.

REFERENCE: *Neural Networks, A comprehensive Foundation*, 2nd Ed., Simon Haykin, Prentice Hall, 1999 (Text used in NN-1).

COURSE CONTENT: Three general components: 1. Selected application contexts for NNs (e.g., controls, equation solving, expert systems, etc.); 2. Fuzzy Systems ideas and relationship to NNs (4 weeks); and 3. some additional NN paradigms (not covered in NN-I).

TERM PROJECT/PAPER:

Student will design a term project, carry it out, prepare a formal report describing the project and results, and give a (formal) class presentation.

GRADING:

1. Homework assignments	20%
2. Term Project/Paper	40%
3. Midterm Examination	none
4. Final Exam (take home)	40%

TERM PROJECT:

You may define a project based on your professional (if you are working off campus) or personal experience and/or interests which applies the neural network methodology. Alternatively, I will provide some open projects you may choose from, or, you may scan the literature to find a topic that resonates with your interest(s). In either case, you will have to have/acquire sufficient PROBLEM-DOMAIN KNOWLEDGE to be able to define and carry out a project properly.

Prepare and submit a written description of your proposed project and submit to me by Wednesday 4/8/09 (in week 2). I will give each of you feedback on the following Monday, 4/13/09.

Each student will present a short (approx. 10 min.) oral description of the term project to the class on Monday of the 5th week (4/27/09). This is intended to provide each of you an opportunity to refine your project description, based on feedback from the other class members.

Formal presentations of the term projects will be given during the last scheduled class meeting (Wed., 6/3/09) and during the Final Exam time slot (on Mon. 6/8/09). Formal reports are due at beginning of the last class period, Wed., 6/3/09.