

SSIE 631 Foundations of Neural Networks Tentative Course Outline, Fall 2009

Course Description:

This course is designed to introduce students to the theory and practical applications of artificial neural networks. Topics include simple learning rules, backpropagation networks, associative networks, competitive networks, adaptive resonance theory, radial basis function networks, Hopfield networks and others. Validation and modeling building issues will also be discussed. Prerequisite: SSIE 505 and SSIE 520 or equivalents.

Lecture: T/R 8:30 - 9:55 EB J15

Instructor: Sarah Lam, EB L6, 777-4754, sarahlam@binghamton.edu
Office Hours: T/R 10:05-11:30, W 10:50-11:50, & by Appointment

Texts: Haykin, S., *Neural Networks and Learning Machines*, 3rd edition, Prentice-Hall, 2008.

Fausett, L., *Fundamentals of Neural Networks: Architectures, Algorithms, and Applications*, Prentice-Hall, 1994.

There will be supplemental assigned readings.

Course Activities and Grading:

<u>Activity</u>	<u>%</u>
Article Reviews	20
Homework	30
Exam(s)	25
Project	25

Students are obligated to abide by Binghamton University's policy on academic honesty (<http://bulletin.binghamton.edu/>), the Watson School Academic Honesty Code ([http://watson.binghamton.edu/Watson Academic Honesty Policy.pdf](http://watson.binghamton.edu/Watson_Academic_Honesty_Policy.pdf)) and the SSIE Departmental Honor Code. Failure to abide by these policies will possibly be suspended for one full semester.