

97-1 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	類神經模糊系統	Serial No. / ID	1316 / EDR5155
Dept.	電機工程學系博士班	School System / Class	研究所博士班1年1班
Lecturer	吳幸珍	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	NO
Time / Place	(二)678 / H726	Language	Chinese

Introduction
<p>Neuro-Fuzzy is the first course to focus on soft-computing – a concept which has direct bearing on machine intelligence. This course is to provide graduate student involved in fuzzy systems and neural-network systems with a comprehensive, well-organized, and up-to-date account of basic principles underlying the soft-computing integrated systems. Fuzzy sets and fuzzy logic are developed as a mean for representing, manipulating, and utilizing uncertain information and to provide a framework for handling uncertainties and imprecision in real world application while neural networks are developed to provide computational power, fault tolerance, and learning capability to the system.</p>

Outline
<p>I. Fuzzy Set Theory</p> <ol style="list-style-type: none"> 1. Basics of fuzzy sets (Lin-2) 2. Fuzzy relations (Lin-3) 3. Fuzzy arithmetic (Lin-5) 4. Fuzzy logic and approximate reasoning (Lin-6) 5. Fuzzy logic control systems (Lin-7) 6. Applications of fuzzy theory (Lin-8) <p>II. Convolution</p> <ol style="list-style-type: none"> 7. Genetic algorithms (Lin-14) <p>III. Neural Networks</p> <ol style="list-style-type: none"> 8. Artificial neurons, neural networks and architectures (Kumar-1,2,3) 9. Geometry of binary threshold neurons and their networks (Kumar-4) 10. Supervised learning I: perceptrons and LMS (Kumar-5) 11. Supervised learning II: backpropagation and beyond (Kumar-6) 12. Neural networks: a statistical pattern recognition perspective (Kumar-7) 13. Radial basis function network (Kumar-8.2) <p>11. Final Exam.</p>

Prerequisite
no