CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

| PRO | OGRAM AREASBIOLOGICAL AND PHYSICAL SCIENCES, MATH AND COMPUTER SCIENCE |
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| 1. | Catalog Description of the Course. [Include the course prefix, number, full title, and units. Provide a course narrative |
| | including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be |
| | repeated to a maximum of units); time distribution (Lecture hours, laboratory hours); non-traditional grading |
| | system (Graded CR/NC, ABC/NC). Follow accepted catalog format.] |

COMP 469. ARTIFICIAL INTELLIGENCE/ NEURAL NETS (3)

Three hours of lecture in the lab per week. Prerequisites: COMP 350 and COMP 362.

An exploration of the use of computers to perform computations normally associated with intelligence, pattern formation and recognition using various backpro iterations. Stacks, decision trees and other modern mining tools and computational models for knowledge representation will be covered. Other topics may include natural language and imagining.

2. Mode of Instruction.

| Lecture | Units | Hours per Unit | Benchmark Enrollment 24 |
|------------|-------|-------------------|-------------------------------|
| | 3 | 1 | 24 |
| Seminar | · | | |
| Laboratory | | | |
| Activity | | | |

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) [Use as much space as necessary]

The course is an elective course for Computer Science majors.

Through this course, students will:

- 1. Be able to identify the basic components of human intelligence.
- 2. Be able to write computer programs that simulate basic board games and strategies.
- 3. Be able to analyze the components of a natrual language interface.
- 4. Be able to analyze the components of a computer vision system.
- 5. Be able to analyze the logical structure of basic reasoning.
- 6. Be able to build, in software, a rule based system.
- 7. Be able to identify the components of a neural network.
- 8. Be able to apply a neural network to a a simple classification problem.
- 9. Be able to organize and express ideas clearly and convincingly in oral and written forms.

This course is not designed to satisfy the University Writing or Language requirements.

4. Is this a General Education Course NO
If Yes, indicate GE category:

| A (English Language, Communication, Critical Thinking) | |
|--|--|
| B (Mathematics & Sciences) | |
| C (Fine Arts, Literature, Languages & Cultures) | |
| D (Social Perspectives) | |
| E (Human Psychological and Physiological Perspectives) | |

- **5.** Course Content in Outline Form. [Be as brief as possible, but use as much space as necessary]
- 1. Human Intelligence.
- 2. Logical Reasoning.

| 6. | References. [Provide 3 - 5 references on which this course is based and/or support it.] | | | |
|-----|--|--|--|--|
| 1. | Artificial Intelligence, Rich and Knight McGraw Hill 1991 0-07-100894-2 | | | |
| 7. | List Faculty Qualified to Teach This Course. | | | |
| | Computer Science faculty with coorperation of Psychology faculty. | | | |
| 8. | Frequency. a. Projected semesters to be offered: FallX_ Spring _X Summer | | | |
| 9. | New Resources Required. | | | |
| | a. Computer (data processing), audio visual, broadcasting needs, other equipment | | | |
| | Use of existing computer lab. | | | |
| | b. Library needs | | | |
| | none | | | |
| | c. Facility/space needs | | | |
| | none | | | |
| 10. | O. Consultation. Attach consultation sheet from all program areas, Library, and others (if necessary) | | | |
| 11. | If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification | | | |
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| Pro | oposer of Course Date | | | |
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Formal Logic.
 Natural Language Processing.
 Computer Vision.
 Speech Recognition.
 Neural Networks.