# CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS COURSE MODIFICATION PROPOSAL

Courses must be submitted by October 15, 2013, and finalized by the end of the fall semester to make the next catalog (2014-15) production

Date (Change date each time revised): 2/23/2014

PROGRAM AREA(S): COMPUTER SCIENCE

Directions: All of sections of this form must be completed for course modifications. Use YELLOWED areas to

enter data. All documents are stand alone sources of course information.

**1. Indicate Changes and Justification for Each.** [Mark an X by all change areas that apply then please follow-up your X's with justification(s) for each marked item. Be as brief as possible but, use as much space as necessary.]

x Course title

Prefix/suffix

Course number

<u>Units</u>

Staffing formula and enrollment limits

Prerequisites/Corequisites

x Catalog description

x Mode of Instruction

Course Content

Course Learning Outcomes

x References

GE

x Other Add lab components to the course

Reactivate Course

## **Justification:**

- 1. The course needs a refresh in this very fast evolving field.
- 2. Over the last 20 years, neural networks has become one of the many equally important areas of Artificial Intelligence such as Rule-based Systems, Swarm Intelligence, Genetics Algorithms, Fuzzy Systems, etc. Therefore, the need for distinguishing it in the title of the course has ceased.
- **3.** Due to the increasingly complex issues involved in writing programs for artificial intelligence, students need to have more hands on experience in a supervised lab environment to master the material.

### 2. Course Information.

[Follow accepted catalog format.] (Add additional prefixes i f cross-listed)

OLD

Prefix COMP Course# 469

Title Artificial Intelligence and Neural Networks Units (3) 3 hours lecture per week

hours blank per week

Prerequisites: COMP 350 and COMP 362
Consent of Instructor Required for Enrollment
Corequisites:

Catalog Description (Do not use any symbols):

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.

General Education Categories:

Grading Scheme (Select one below):

x A - F

Credit/No Credit

Optional (Student's Choice)

Repeatable for up to units

Total Completions

Multiple Enrollment in Same Semester Y/N

Course Level:

x Undergraduate

NEW

Prefix COMP Course# 469

Title Introduction to Artificial Intelligence Units (2 + 1)

2 hours lecture per week

3 hours laboratory per week (1 unit)

Prerequisites: COMP 350 and COMP 362
Consent of Instructor Required for Enrollment

Corequisites:

Catalog Description (Do not use any symbols):

A hands-on exploration of the use of computers to perform computations normally associated with intelligence, pattern formation and recognition using a variety of symbolic and sub-symbolic methods.

Knowledge acquisition, representation, and maintenance will be covered.

General Education Categories:

Grading Scheme (Select one below):

x A - F

Credit/No Credit

Optional (Student's Choice)

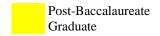
Repeatable for up to units

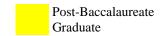
Total Completions

Multiple Enrollment in Same Semester Y/N

Course Level:

x Undergraduate





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	Units	Hours Per Unit	Default Section Size	Graded		Units	Hours Per Unit	Default Section Size	Graded	CS No. (filled out by Provost Office)
Lecture	<u>3</u>	<u>1</u>		X	Lecture	<u>2</u>	<u>1</u>		X	
Seminar		<u>1</u>			Seminar		<u>1</u>			
Lab		<u>3</u>			Lab	<u>1</u>	<u>3</u>		X	
Activity		<u>2</u>			Activity		<u>2</u>			
Field Studies					Field Studies					
Indep Study					Indep Study					
Other blank					Other blank					
Online					Online					

## 4. Course Attributes:

General Education Categories: All courses with GE category notations (including deletions) must be submitted to the GE website: <a href="http://summit.csuci.edu/geapproval">http://summit.csuci.edu/geapproval</a>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

A (English Language, Communication, Critical Thinking)

A-1 Oral Communication

A-2 English Writing

A-3 Critical Thinking

B (Mathematics, Sciences & Technology)

**B-1 Physical Sciences** 

B-2 Life Sciences - Biology

B-3 Mathematics – Mathematics and Applications

B-4 Computers and Information Technology

C (Fine Arts, Literature, Languages & Cultures)

C-1 Art

C-2 Literature Courses

C-3a Language

C-3b Multicultural

**D** (Social Perspectives)

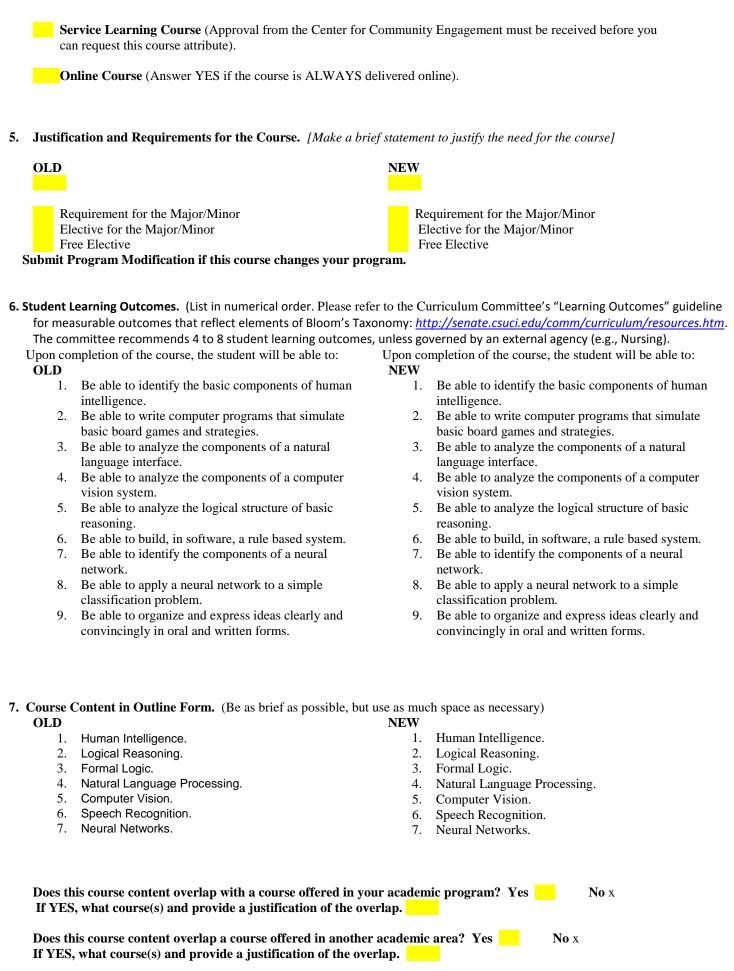
E (Human Psychological and Physiological Perspectives)

**UDIGE/INTD Interdisciplinary** 

Meets University Writing Requirement (Graduation Writing Assessment Requirement)

Meets University Language Requirement

American Institutions, Title V Section 40404: Government US Constitution US History Regarding Exec Order 405, for more information: <a href="http://senate.csuci.edu/comm/curriculum/resources.htm">http://senate.csuci.edu/comm/curriculum/resources.htm</a>



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Overlapping cou	rses require	Chairs	signatures.

8.	Cross-listed Courses (Please note each prefix in item No. 1) Beyond three disciplines consult with the Curriculum Committee.  A. List cross-listed courses (Signature of Academic Chair(s) of the other academic area(s) is required).  B. List each cross-listed prefix for the course:  C. Program responsible for staffing:
9.	References. [Provide 3-5 references] OLD
	1. Artificial Intelligence, Rich and Knight McGraw Hill 1991
	NEW  1. Artificial Intelligence: A Modern Approach (3rd Edition) by Stuart Russell and Peter Norvig, Prentice Hall, 2009  2. Introduction to Artificial Intelligence by Wolfgang Ertel, Nathanael T. Black, Springer, 2011  3. Artificial Intelligence in the 21st Century by Stephen Lucci, Danny Kopec, Mercury Learning & Information, 2013  4. Artificial Intelligence: The Basics by Kevin Warwick, Routledge, 2012
10	. Tenure Track Faculty qualified to teach this course. Any CS faculty
11	. Requested Effective Date or First Semester offered: Fall 2015
12	. New Resource Requested: Yes No x If YES, list the resources needed.
	<ul> <li>A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.) Use of existing Computer Science labs</li> <li>B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.) N/A</li> <li>C. Facility/Space/Transportation Needs: N/A</li> <li>D. Lab Fee Requested: Yes No x (Lab fee requests should be directed to the Student Fee Committee)</li> </ul>
	E. Other. N/A
13	Will this course modification alter any degree, credential, certificate, or minor in your program? Yes  If, YES attach a program update or program modification form for all programs affected.  Priority deadline for New Minors and Programs: October 1, 2013 of preceding year.  Priority deadline for Course Proposals and Modifications: October 15, 2013.  Last day to submit forms to be considered during the current academic year: April 15 <sup>th</sup> .
AJ	Bieszczad 2/24/2014
	oposer(s) of Course Modification  pe in name. Signatures will be collected after Curriculum approval.

## **Approval Sheet**

Course: COMP 469 Introduction to Artificial Intelligence
If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

Program Chair			
	Signature	Date	
Program Chair			
	Signature	Date	
Program Chair			
	Signature	Date	
General Education Chair			
<u> </u>	Signature	Date	
Center for Intl Affairs Director			
	Signature	Date	
Center for Integrative Studies Director			
	Signature	Date	
Center for Multicultural Engagement Director			
	Signature	Date	
Center for Civic Engagement and Service Learning Director			
	Signature	Date	
Curriculum Chair			
	Signature	Date	
AVP			
L L	Signature	Date	