A. Protocol

Course Name: Artificial Intelligence  
Course Number: CSC420  
Credits: 3  
Prerequisites: CSC 328 Data Structures with a C- or better

Maximum Class Size (face-to-face): 35  
Maximum Class Size (online): N.A.

B. Objectives of the Course:
Upon completion of this course the student will be able to:

1) Describe artificial intelligence.  
2) Compare and contrast intelligent agents.  
3) Describe and discuss knowledge.  
4) Create an appropriate knowledge base for a given application.  
5) Construct selection criteria using predicate calculus.  
6) Compare and contrast various searching techniques.  
7) Appraise various reasoning categories for a given knowledge base.  
8) Discuss various forms and stages of learning.  
9) Appraise the role of logic programming in expert systems applications.  
10) Describe the role of knowledge engineering in expert systems development.  
11) Construct objects, relationships, facts, rules, variables, input facilities, and file processing using a logic programming language.  
12) Compose solutions with functional logic, resolution and unification, and negation as failure using a logic programming language.

C. Catalog Description:
This course offers a selective survey of key concepts and applications of artificial intelligence, and an introduction to a language commonly used for building AI systems. Prerequisite: CSC 328 Data Structures with C- or better. Three credits.

D. Outline of the Course:
1) Introduction to AI and its relationship to other disciplines.  
2) Intelligent Agents  
3) Agent Applications  
4) Knowledge.  
   a. Definite  
   b. Uncertain  
   c. Searching  
   d. Representing  
   e. Engineering  
5) Predicate Calculus  
   a. First Order  
   b. Propositional Inference  
6) Reasoning.  
   a. Uncertainty  
   b. Probabilistic  
7) Learning.  
   a. Observations
b. Statistical
   c. Reinforcement

8) Computation with functional logic.
9) Programming (Lisp or PROLOG)

E. Teaching Methodology:

1) Traditional Classroom Methodology:
   This course will be taught using the lecture/discussion method and cooperative group
   method during appropriate sections of the course.

2) Online Methodology:
   This course will not be taught online.

F. Text:
   Coppin Artificial Intelligence Illuminated ISBN 139780763732301

G. Assessment Activities:

1) Traditional Classroom Assessment
   The final grade will be determined as a percentage from the following evaluation methods
   with varying weights at the discretion of the instructor:

   a. Examinations
   b. Quizzes
   c. Assignments
   d. Programs
   e. Attendance
   f. Performance

2) Online Assessment
   No online assessments will be given.

H. Accommodations for Students with Disabilities:

**Accommodations for Students with Disabilities**

Students with disabilities:
- Reserve the right to decide when to self-identify and when to request accommodations.
- Will register with the Office for Students with Disabilities (OSD) each semester to receive
  accommodations.
- Might be required to communicate with faculty for accommodations, which specifically involve the
  faculty.
- Will present the OSD Accommodation Approval Notice to faculty when requesting
  accommodations that involve the faculty.

Requests for approval for reasonable accommodations should be directed to the Office for Students with
Disabilities (OSD). Approved accommodations will be recorded on the OSD Accommodation Approval
notice and provided to the student. Students are expected to adhere to OSD procedures for self-identifying,
providing documentation and requesting accommodations in a timely manner.

Contact Information:
- Location: Azorsky Hall – Room 105
- Phone: (724) 938-5781
- Fax: (724) 938-4599
- Email: osdmail@calu.edu
- Web Site: [http://www.calu.edu/current-students/studentservices/disability/index.htm](http://www.calu.edu/current-students/studentservices/disability/index.htm)