Peruvian Computing Society (SPC)
School of Computer Science
Sillabus 2022-I

1. COURSE

CS361. Computational Vision (Elective)

2. GENERAL INFORMATION

2.1 Credits	:	4
2.2 Theory Hours	:	2 (Weekly)
2.3 Practice Hours	:	2 (Weekly)
2.4 Duration of the period	:	16 weeks
2.5 Type of course	:	Elective
2.6 Modality	:	Face to face
2.7 Prerrequisites	:	CS262. Machine learning. (7^{th} Sem)

3. PROFESSORS

Meetings after coordination with the professor

4. INTRODUCTION TO THE COURSE

Research in Artificial Intelligence has led to the development of numerous relevant tonic, aimed at the automation of human intelligence, giving a panoramic view of different algorithms that simulate the different aspects of the behavior and the intelligence of the human being.

5. GOALS

- Evaluate the possibilities of simulation of intelligence, for which the techniques of knowledge modeling will be studied.
- Build a notion of intelligence that later supports the tasks of your simulation.

6. COMPETENCES

a) An ability to apply knowledge of mathematics, science. (**Usage**)

7. SPECIFIC COMPETENCES

a15) Use count theory definitions to solve sorting or selection problems in a set of single and repeated elements.

a17) Define functions by recognizing dependent and independent variables by recognizing functions as parameters

a22) Apply operations on matrices to build algorithms.

a23) Apply probability theory and Bayes' theorem to the construction of probability network models(*Probabilistic graphical models*).

a24) Apply sampling and cross validation techniques

a25) Apply informed and uninformed search computer techniques.

a26) Apply computer vision techniques.

a27) Apply natural language processing techniques.

a28) Apply machine learning techniques.

8. TOPICS

Unit 1: Fundamental Issues (2)	
Competences Expected: a	
Topics	**Learning Outcomes**
• ... • ...	• ... [Usage] • ... [Usage]
Readings : [De 06], [Pon+14]	

9. WORKPLAN

9.1 Methodology

Individual and team participation is encouraged to present their ideas, motivating them with additional points in the different stages of the course evaluation.

9.2 Theory Sessions

The theory sessions are held in master classes with activities including active learning and roleplay to allow students to internalize the concepts.

9.3 Practical Sessions

The practical sessions are held in class where a series of exercises and/or practical concepts are developed through problem solving, problem solving, specific exercises and/or in application contexts.

10. EVALUATION SYSTEM

********* EVALUATION MISSING ********

11. BASIC BIBLIOGRAPHY

[De 06] L.N. De Castro. *Fundamentals of natural computing: basic concepts, algorithms, and applications*. CRC Press, 2006.

[Pon+14] Julio Ponce-Gallegos et al. *Inteligencia Artificial*. Iniciativa Latinoamericana de Libros de Texto Abiertos (LATIn), 2014.