

Course Syllabi

1. TICS-00043 COMPUTER GRAPHICS

2. 96 credits hours.

3. Bibliography

- Learn Computer Vision Using OpenCV. In Learn Computer Vision Using OpenCV, Gollapudi, S., 2019

4. Specific Course Information

- a. Subject aimed at providing the student with knowledge about the use of graphic tools and artificial intelligence to manipulate images and videos. Sorting, segmenting and tracking objects in such images.
- b. Prerequisites:
 - TICS-00065 DISTRIBUTED SYSTEMS

5. Learning Objectives of the Course

- a. Understand the basic knowledge necessary to be able to use artificial intelligence tools to identify, manipulate, classify, segment and track objects in images or videos.
 - Present the basic concepts of graphical computing, which are useful for the representation and visualization of objects.
 - Know deep learning tools to classify, segment and identify objects in images or videos
 - Know and apply techniques to be able to track objects in images and videos
- b. Learning Outcomes
 - Learn about the main tools of artificial intelligence oriented to image manipulation
 - Learn about the most used methods in tracking objects within images
 - Learn about recent developments in the field of graphic computing
 - It is able to use deep learning tools to identify, classify and segment images
 - It is able to use deep learning tools to identify, classify and segment images
 - Learn about recent developments in the field of graphic computing
 - Learn about the most used methods in tracking objects within images
 - Learn about recent developments in the field of graphic computing

6. Course Topics

- Introduction
- Training and processing of images
- Software for graphical generation
- Artificial intelligence and the vision by computer
- OpenCV for python
- Deep learning for vision by computer
- Handling of images and segmentation
- Recognition and detection of objects
- Movement and object analysis