Computer Vision aims at modeling the world from digital images acquired using video or infrared cameras, and other imaging sensors. We will focus on images acquired using digital cameras. We will introduce basic processing techniques and discuss their field of applicability.

**Content**

**Introduction**
- History of Computer Vision
- Human vs Machine Vision
- Image formation

**Extracting 2D Features**
- Contours
- Texture
- Regions

**3D Shape Recovery**
- From one single image
- From multiple images

**Learning Prerequisites**

**Recommended courses**
- Foundations of Image Science

**Learning Outcomes**

By the end of the course, the student must be able to:
- Choose relevant algorithms in specific situations
- Perform simple image-understanding tasks

**Teaching methods**
Ex cathedra lectures and programming exercises using matlab.

Assessment methods
With continuous control

Resources
Bibliography

Ressources en bibliothèque
• Computer Vision: Algorithms and Applications / Szeliski
• Multiple View Geometry in Computer Vision / Zisserman

Websites
• http://cvlab.epfl.ch/

Moodle Link
• http://moodle.epfl.ch/course/view.php?id=472