

# COURSE DETAIL

## APPLIED COMPUTER VISION

**Country**

Germany

**Host Institution**

Technical University Berlin

**Program(s)**

Technical University Berlin

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

130

**UCEAP Course Suffix**

A

**UCEAP Official Title**

APPLIED COMPUTER VISION

**UCEAP Transcript Title**

APPLIED COMP VISION

**UCEAP Quarter Units**

5.50

**UCEAP Semester Units**

3.70

### **Course Description**

The course's goal is to enable participants to acquire and process digital images in technical applications in a context-aware manner. The course introduces the basics of digital image processing, the acquisition of images in computing environments, and the extraction of semantic contents from the images. The goal of the course is the exemplary coverage of an interdisciplinary breadth, not necessarily an in-depth treatment of a specific domain. Fundamentals like sensor calibration, feature detection (e.g. edge extraction), matching and classification are taught. Integrated practical exercises cover operating a camera from a single-board computer and using a smartphone camera in a computer vision setting. Furthermore, exemplary machine learning approaches are used for “understanding” the images acquired previously. Software to be developed make use of the OpenCV Python library.

### **Language(s) of Instruction**

English

### **Host Institution Course Number**

0433 L 171

### **Host Institution Course Title**

APPLIED COMPUTER VISION

### **Host Institution Course Details**

<https://moseskonto.tu-berlin.de/moses/modultransfersystem/bolognamodule/beschre...>

### **Host Institution Campus**

### **Host Institution Faculty**

### **Host Institution Degree**

### **Host Institution Department**

Institut für Technische Informatik und Mikroelektronik

**Course Last Reviewed**

2024-2025

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