COURSE DETAIL

COMPUTER VISION
Country Sweden
Host Institution Lund University
Program(s) Lund University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics Engineering Computer Science
UCEAP Course Number 170
UCEAP Course Suffix
UCEAP Official Title COMPUTER VISION
UCEAP Transcript Title COMPUTER VISION
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course provides an overview of the theory of and practically useful methods in computer vision, with applications within e.g. vision systems, non-invasive measurements, and augmented reality. Participants develop problem solving skills, with and without a computer, using mathematical tools taken from many areas of the mathematical sciences, in particular geometry, matrix theory, algebraic geometry, optimization, mathematical statistics, invariant theory and transform theory. Course topics include projective geometry, geometric transformations, modelling of cameras. camera calibration. epipolar geometry. stereo vision, photogrammetry. model fitting., robust metrics, minimal solvers, 3D-modelling. geometry of surfaces and their silhouettes. deformable models, and visualization. Assumed prior knowledge: FMAF05 Systems and Transforms, or equivalent (for example FMAF10).

Language(s) of Instruction
English

Host Institution Course Number
FMAN95

Host Institution Course Title
COMPUTER VISION

Host Institution Course Details
https://kurser.lth.se/lot/course-syllabus-en/26_27/FMAN95

Host Institution Campus
Lund

Host Institution Faculty
Engineering

Host Institution Degree

Host Institution Department

Course Last Reviewed
2025-2026

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