THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Computer Vision for Human-Computer Interaction

CSE 5524

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate

Course Components:
Lecture

Course Description:
Computer vision algorithms for use in human-computer interactive systems; image formation, image features, segmentation, shape analysis, object tracking, motion calculation, and applications.

Prerequisites and Co-requisites:
Prereq: 2331, or Sr or Grad standing.

Course Goals / Objectives:
- Master fundamental computer vision algorithms
- Be competent with computer vision application design and evaluation
- Be familiar with Matlab programming environment
- Be exposed to original research and applications in computer vision

Course Topics:

- Introductory computer vision
- Image formation
- Noise removal
- Edge detection
- Pyramids
- Region segmentation
- 2-D shape
- Template matching
- Motion
- Tracking
- 3-D
- Event analysis
- Features
- Stereo
- Clustering
- Applications
- Motion capture
- Current research

Designation:

Elective