



# Masters of Science in Computer Vision

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CENTER FOR RESEARCH IN COMPUTER VISION | CRCV  
COLLEGE OF ENGINEERING & COMPUTER SCIENCE  
UNIVERSITY OF CENTRAL FLORIDA • ORLANDO, FL



# Why MSCV at UCF?

Study under the guidance of world renowned researchers

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Computer Vision at UCF ranked #10 in the USA in 2020 according to CSRankings.org

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CRCV faculty received \$3.8 million of research funding in FY2020

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National Academy of Inventors names UCF Computer Vision Pioneer and Director of CRCV as Fellow

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UCF team won worldwide competition, Activities in Extended Video Challenge for 2020 sponsored by NIST

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Computer Vision ranked 13th on Indeed's 2019 "Best Jobs in the U.S." list

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US Bureau of Labor Statistics estimates a 19% growth between 2016-2026 for computer and information research scientists

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*"The world is producing more visual data than ever before, so the demand and applications for computer vision are expanding at a rapid pace."*

— MUBARAK SHAH, CRCV DIRECTOR

**T**he Master of Science in Computer Vision (MSCV) Program aims to provide technical skills and domain knowledge to the future professionals who seek to acquire expertise in Computer Vision and its related areas. This involves proficiency in acquiring, processing, analyzing, and understanding images, videos, 3D data, and other types of high-dimensional data of the real world. The program consists of a total of 30 credit hours. The fast-growing interests and investments in Artificial Intelligence (AI) in the United States and around the world have to be powered by a well-prepared workforce. This program contributes to meeting the need created by the United States' shortage of AI personnel.

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## ADMISSION REQUIREMENTS

For admission, a 3.0 GPA and an undergraduate degree in Computer Science, Computer Engineering, and Mathematics is desirable but not required. Applicants without a strong undergraduate background in Computer Science must demonstrate an understanding of the material covered in the following undergraduate courses by either taking these courses or by being tested on the material.

- EEL 4768 Computer Architecture
- COP 4020 Programming Languages I
- COP 4600 Operating Systems
- COT 4210 Discrete Computational Structures

Applicants who lack background in the above courses may show knowledge in the following courses:

- CAP 4453 Intro to robot vision
- COP 3503C Computer Science II
- MAS 3105 Matrix Algebra
- STA 4163 Statistical Methods II





**Dr. Mubarak Shah**  
Trustee Chair Professor  
Director, CRCV



**Dr. Abhijit Mahalanobis**  
Associate Professor  
CRCV



**Dr. Yogesh Rawat**  
Assistant Professor  
CRCV



**Dr. Ulas Bagci**  
Courtesy Assistant Professor  
CRCV



**Dr. Niels da Vitoria Lobo**  
Associate Professor  
Computer Science



**Dr. Hassan Foroosh**  
Professor  
Computer Science

## Computer Vision Faculty

Dr. Mubarak Shah is Trustee Chair Professor of Computer Science and the founding director of the Center for Research in Computer Vision (CRCV) at UCF. He is a fellow of the National Academy of Inventors, IEEE, AAAS, IAPR, and SPIE.

CRCV is also home to computer vision faculty members Drs. Abhijit Mahalanobis and Yogesh Rawat as well as Courtesy Faculty, Dr. Ulas Bagci.

Drs. Niels da Vitoria Lobo and Hassan Foroosh are both faculty members in the Computer Science faculty who specialize in the area of computer vision.

## DEGREE REQUIREMENTS

The MS degree will be 30 credit hours at the graduate level. There are 8 required courses of 3 hours each (thus totaling 24 credit hours). The required project course is one of the 8 required courses. The remaining 2 additional courses (6 credit hours) would be selected from a list of 6 restricted electives, each of which is 3 credit hours. No thesis is required, but one of the required courses is a project course that meets the independent learning requirement.

### Required Courses:

1. CAP 5415 - Computer Vision
2. CAP 5610 - Machine Learning
3. CAP 6411 - Computer Vision Systems
4. CAP 6412 - Advanced Computer Vision
5. CAP 6419 - 3D Computer Vision

### Elective Courses:

1. CAP 6908 - Independent Study I
2. CAP 5516 - Medical Image Computing
3. STA 6106 - Statistical Computing I
4. COT 6505 - Computational Methods/Analysis I
5. CAP 6908 - Independent Study II

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## APPLICATION DEADLINES

MSCV	Domestic	International
*Fall Priority	Jan 15	Jan 15
Fall	Jul 1	Feb 23
Spring	Dec 1	Jul 1

\*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.





UCF

# Center for Research in Computer Vision

UNIVERSITY OF CENTRAL FLORIDA

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## FOR MORE INFORMATION

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