

**UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE  
DEPARTMENT OF COMPUTER ENGINEERING  
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY**

Module name	<b>Computer Vision</b>	
Module level	Undergraduate	
Code	EC184604	
Courses (if applicable)	Computer Vision	
Semester	6 / Spring (Genap)	
Contact person	Dr. Eko Mulyanto	
Lecturer	Dr. Eko Mulyanto	
Language	Indonesia	
Relation to curriculum	Undergraduate degree program, mandatory, 6 <sup>th</sup> semester.	
Type of teaching, contact hours	Lecture, < 60 students, 170 minutes * SKS	
Workload	<ol style="list-style-type: none"> <li>1. Lectures: 3 x 50 = 150 minutes (2.5 hours) per week.</li> <li>2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week.</li> <li>3. Private study: 3 x 60 = 180 minutes (3 hours) per week.</li> </ol>	
Credit points	3 credit points (sks).	
Requirements according to the examination regulations	A student must have attended at least 75% of the lectures to sit in the exams.	
Mandatory prerequisites		
Learning outcomes and their corresponding PLOs	<p>CLO-1 Students are able to explain computer vision concepts</p> <p>CLO-2 Students are able to describe intuitively and mathematically the geometry and physics of image formation.</p> <p>CLO-3 Student are able to implement convolution and understand what kind of filtering operations can be implemented as a convolution</p> <p>CLO-4 Students are able to implement computer vision algorithms in to solve the problem in the topic of reconstruction and recognition the object from image and video.</p>	<p>PLO-3 PLO-4</p> <p>PLO-3 PLO-4</p> <p>PLO-5</p> <p>PLO-6</p>
Content	In this course, students will learn about computer vision concepts, and usage of stereo camera and its problems.	

Study and examination requirements and forms of examination	<ul style="list-style-type: none"> <li>• In-class exercises</li> <li>• Quiz 1 and 2</li> <li>• Assignment 1, 2, 3</li> <li>• Mid-term examination</li> <li>• Final examination</li> </ul>
Media employed	LCD, whiteboard, websites (myITS Classroom).
Assessments and Evaluation	<p>CO-1: Question no 1 in midterm exam (15%)</p> <p>CO-2: Question no 2 in midterm exam (15%)</p> <p>CO-3: Assignment 1 (5%), question no 4 in midterm exam (20%), Quiz 2 (5%)</p> <p>CO-4: Question no 1 in final exam (20%), question no 2 in final exam (20%)</p>
Reading List	<ol style="list-style-type: none"> <li>1. Forysh, Ponce, "Computer Vision Modern Approach ", Prentice Hall 2003</li> <li>2. Nikos Paragios, Yunmey Chen, "Handbook Of Mathematical Model in Computer Vision", Springer,2006</li> <li>3. Steven Harrington, "Computer Graphics A Programming Approach Second Edition", McGraw-Hill International Editions1987.</li> <li>4. Max K. Agoston, MA, MS, PhD, "Computer Graphics and Geometric Modeling Implementation and Algorithms", SpringerVerlag London 2005</li> </ol>