HANDBOOK

BACHELOR OF INFORMATICS PROGRAM
DEPARTMENT OF INFORMATICS
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Module name	**Computer Vision**
Module level	Undergraduate
Code	IF184956
Courses (if applicable)	**Computer Vision**
Semester	7
Contact person	-
Lecturer	-
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program; optional; 7th semester. 2. International undergraduate program; optional; 7th semester.
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 40 students
Workload	1. Lectures: 3 x 50 = 150 minutes (2 hours 30 minutes) per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Private study: 3 x 60 = 180 minutes (3 hours) per week.
Credit points	3 credit points (sks).
Requirements according to the examination	A student must have attended at least 80% of the lectures to sit in the exams.

regulations		
Mandatory prerequisites	-	
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:	
	CO1 Students are able to explain computer vision problems in writing.	

	CO2 Students are able to make MATLAB code to solve computer vision problems.
	CO3 Students are able to explain the theories and principles in computer vision.
	CO4 Students are able to do independent research on certain topics, write research reports with a small scope, and present them orally.
	CO5 Students are able to criticize various methods to solve computer vision problems.
Content	Knowledge:
	Mastering the concepts and principles of intelligent systems including representation and reasoning techniques, search techniques, agents, data mining, and machine learning, as well as intelligent application development in various fields, and mastering the concepts and principles of computational science including information management, multimedia data processing, and numerical analysis.
	Specific Skill:
	Able to design and build applications by applying the principles of intelligent systems and computational science to produce smart application products in various fields.
Study and examination requirements and forms of examination	Mid-terms examination and Final examination.
Media employed	LCD, whiteboard, websites, books (as references), etc.
Assessments and Evaluation	

Reading List	Richard Szeliski, "Computer Vision: Algorithms and Applications", Springer-Verlag, London, 2011. David A. Forsyth dan Jean Ponce, "Computer Vision: A Modern Approach, 2nd Edition", Prentice Hall, 2012. Christian Wöhler, "3D Computer Vision: Efficient Methods and Applications", Springer-Verlag, Berlin Heidelberg, 2009. Francisco Escolano, Pablo Suau, Boyán Bonev, "Information Theory in Computer Vision and Pattern Recognition", Springer Verlag, London, 2009.