



Module Description

Module name	Augmented Reality
Module level, if applicable	Bachelor of Informatics
Code, if applicable	333D4224
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	6 th
Person responsible for the module	Dr. Ir. Zahir Zainuddin., M.Sc
Lecturer	1. Dr. Ir. Zahir Zainuddin., M.Sc 2. Dr. Eng. Intan Sari Areni., ST., MT
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is an elective course and offered in the 6 th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [project-based learning]. Teaching forms: [lecture], [tutorial]. CH : 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 181.33 hours in one semester, which consist of: - 53.33 hours for lecture, - 64 hours for structured assignments, - 64 hours for private study,
Credit points	4 credit points (equivalent with 6.8 ECTS)
Requirements according to the	Students have participated in at least 80% of the learning activities (Academic Regulations, Chapter VII)



examination regulations	
Recommended prerequisites	-
Module objectives/intended learning outcomes	<p>After completing the course, Students are able:</p> <p>Intended Learning Outcomes (ILO):</p> <p>ILO 1 : Have the knowledge of fundamental Computing Science that includes basic theory and concept of computer science, Mathematics and Statistics, Programming Algorithm, Software Engineering and Information System</p> <p>ILO 4 : Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements by applying computer science theory and software development fundamentals.</p> <p>ILO 7 : Communicate their ideas in a convincing and effective manner, either in written or orally, to propose solutions.</p> <p>Course Learning Objective (CLO):</p> <p>After completing this course, students are expected to be able to understand the theory of Augmented Reality (AR) both software and hardware, able to design and build a basic virtual environment, apply good interaction methods, and perform modeling, and be able to create 3-dimensional AR applications with and without markers.</p> <p>Sub CLO :</p> <p>ILO 1 => CLO 1 : Students are able to explain the meaning of Augmented Reality and the history of its development, and basic theory and software related to AR.</p> <p>ILO 4 => CLO 2 : Students are Able to design simple AR application with marker and markerless, and animation.</p> <p>ILO 7 => CLO 3 : Students are able to communicate and presenting the AR project</p>
Content	<p>Students will learn about :</p> <ol style="list-style-type: none"> 1. The history and development of Augmented Reality and the introduction of supporting hardware and software 2. Introduction to AR-related theory and software 3. Marker recognition with AR software 4. Simple AR app 5. AR device creation with 3-dimensional objects and 3-dimensional AR



	6. AR software creation with real-time objects with AR animation 7. AR with Markerless
Forms of Assessment	Assessment techniques: [participation]. Assessment forms: [report], [presentation]. Report = 60%, Presentation = 40% ILO 1 => CLO 1 : 5% (Report) ILO 4 => CLO 2 : 55% Report) ILO 7 => CLO 3 : 40% (Presentation)
Study and examination requirements and forms of examination	Study and examination requirements: <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get a final grade. Form of examination: Report and Presentation
Media employed	Zoom/Gmeet, LMS Unhas (sikola.unhas.ac.id), e-book, and Tutorial module.
Reading list	Main : <ol style="list-style-type: none"> 1. --, Augment's Essential Guide To Augmented Reality, accessible at http://www.augment.com/augmented-reality-ebook/ 2. Steven K. Feiner, Augmented Reality: A New Way Of Seeing, 2002, Scientific American, Inc. Accessible at http://web.cs.wpi.edu/~gogo/courses/cs525A/papers/Feiner_ScientificAmerican-0402-48.pdf