

HANDBOOK

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

Module name	Virtual Reality and Augmentation	
Module level	Undergraduate	
Code	IF184932	
Courses (if applicable)	Virtual Reality and Augmentation	
Semester	7	
Contact person		
Lecturer		
Language	Bahasa Indonesia dan English	
Relation to curriculum	<ol style="list-style-type: none"> 1. Undergraduate degree program; optional; 7th semester. 2. International undergraduate program; optional; 7th semester. 	
Type of teaching, contact hours	<ol style="list-style-type: none"> 1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 40 students 	
Workload	<ol style="list-style-type: none"> 1. Lectures: 3 sks 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	Human and Computer Interaction.	
	After completing this module, a student is expected to:	

Learning outcomes and their corresponding PLOs	CO1 The students are able to comprehend the theory of Virtual Reality (VR) and Augmented Reality (AR) as a whole: software and hardware.	
	CO2 The students are able to design and build basic virtual environments, apply good interactions, and do modeling.	
	CO3 The students are able to make 3D VR and AR applications.	
Content	<p>Knowledge:</p> <p>Mastering the concepts and principles of computer graphics including modeling, rendering, animation and visualization, as well as mastering the concepts and principles of human and computer interaction</p> <p>Specific Skill:</p> <p>Able to build applications using the principles of computer graphics including modeling, rendering, animation and visualization, as well as applying the principles of human and computer interaction as well as evaluating the efficiency to build applications with appropriate interfaces.</p>	
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	<ul style="list-style-type: none">• Grigore, C Burdea & Philippe, Coiffet, "Virtual Reality Technology", Wilye Interscience, 2003.• William R. Sherman, Alan B.Craig, "Understanding Virtual Reality", Morgan-Kaufmann, Inc., 2003.
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