



MODULE HANDBOOK DESCRIPTION

Module designation	Special Topics on Computer
Code	FBD0013
Semester(s) in which the module is taught	3/ third year
Person responsible for the module	Giri Wahyu Wiriasto, S.T., M.T.
Language	Indonesian
Relation to curriculum	Free elective for Computer Engineering
Teaching methods	Project Base Method
Workload (incl. contact hours, self-study hours)	Contact Hours every week, each week of the 16 weeks/semester : (per week includes) <ul style="list-style-type: none">• 2 x 50 minutes : Lecture• 2 x 60 minutes : Exercise and Assignment• 2 x 60 minutes : Self-learning Total Study hours = 5 hours and 40 minutes/week
Credit points	2 SKS (~ 3.2 ECTS)
Required and recommended prerequisites for joining the module	-

<p>Module objectives/Program Learning Outcomes (PLO)</p>	<ol style="list-style-type: none"> 1. Student are able to explain and analyze Immersive Design: Immersive design is the art of creating an environment that feels real and allows the user to feel like they are actually in that environment. Immersive design principles may include spatial sound, realistic lighting, intuitive user interface design, and realistic physics. 2. Student are able to explain and analyze Spatial Sound: Spatial sound refers to sound design that is tied to the position of objects in a virtual environment 3. Student are able to explain and analyze 4. Student are able to explain and analyze Realistic Lighting: Lighting is an important aspect of creating a realistic virtual environment. Lighting can be used to create a sense of depth, highlight important areas, and evoke emotions 5. Student are able to explain and Intuitive User Interface Design: In a virtual reality environment, the user interface needs to be designed to work seamlessly with the user's movement and actions. 6. Student are able to explain and analyze Realistic Physics: Realistic physics can help create a more immersive experience by making objects in the virtual environment behave in a way that is consistent with the real world. 7. Student are able to explain and analyze User Experience (UX): User experience design is the process of designing a product or service with the user's needs and desires in mind. 8. Student are able to explain and analyze Programming: Programming is the process of writing instructions that a computer can execute. In virtual reality, programming is important for creating interactive experiences, handling user input, and manipulating objects in the virtual space. 	<p>PLO-3</p>
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	<ol style="list-style-type: none"> 1. Ability to design and implement: UX Controller 2. Ability to design education VR content 3. User-Centered Design: User-centered design is an approach to design that focuses on the needs, goals, and desires of the user. This can involve conducting user research to better understand user needs, and using that research to inform design decisions. 4. Wireframing: Wireframing is the process of creating a visual representation of a user interface before it is fully designed. Wireframes are often used to quickly test and iterate on different design ideas. 5. Prototyping: Prototyping involves creating a working model of a product or service to test and refine design ideas. In virtual reality, prototyping may involve creating a rough version of an environment or interface to test user interactions and get feedback. 	PLO-4
	<ol style="list-style-type: none"> 1. Students are able to continuously learn about Content development with the continuously aspect like 3d Programming, etc 	PLO9
Content	<ol style="list-style-type: none"> 1. Introduction to Virtual Reality. 2. Virtual Reality Hardware and Software 3. Creating Virtual Reality Content 4. Storytelling and Narrative Design 5. Interactivity and Gameplay Design 6. Virtual Reality for Education and Training 7. Virtual Reality for Entertainment 8. Ethics and Social Implications of Virtual Reality 9. Virtual Reality Project Development 	
Examination forms	<p>Presentation design project, quiz Project simulation</p>	
Study and examination requirements	<p>The final grade in the module is composed of:</p> <ol style="list-style-type: none"> 1. Per-meeting score 16 meeting = 50% 2. Project = 50% <p>Students must have a final grade of 65% or higher to pass.</p>	
Reading list	<ol style="list-style-type: none"> 1. "Virtual Reality Development: 10 Things To Know" by Marcus Clarke 2. "How to Build VR Experiences: A Beginner's Guide" by Laura Mae Martin 3. "Content Creation for Virtual Reality: A Guide to Best Practices" by Anselm Hook 4. "Virtual Reality for Education: A Beginner's Guide" by Chris Lee 5. "Virtual Reality Development: Tools, Best Practices, and More" by Alex Jasin 	